



University  
of Cyprus

**RESEARCH AT THE UNIVERSITY OF CYPRUS**  
RESEARCH PROFILE AND PUBLICATIONS 2005-2007

FACULTY OF ECONOMICS AND MANAGEMENT



FACULTY OF ENGINEERING



FACULTY OF HUMANITIES



FACULTY OF LETTERS



**FACULTY OF PURE AND APPLIED SCIENCES**



FACULTY OF SOCIAL SCIENCES AND EDUCATION





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## INTRODUCTION

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This publication lists the research activity of the Faculty of Pure and Applied Sciences of the University of Cyprus undertaken between 2005-2007. It is the first time that the publication on the research activity is presented separately for each faculty of the University of Cyprus. The book presents information for each member of the Faculty's academic staff that is directly or indirectly related to research, such as membership in professional societies, international organizations or editorial boards, and participation in research programmes. The internal research programmes listed in this publication are programmes that have been approved by the Senate of the University of Cyprus.

Publications make up a sizeable part of the book and only published books, chapters and articles are included, while publications "in press" or "forthcoming" are not. The number of journal publications and conference proceedings is limited to a selection of the best ten publications by each member of the academic staff. For the first time, research profiles also include a new optional category named "distinguished publications", which includes a maximum of three selected publications before 2005 that are considered by members of the academic staff to be of high importance for their academic career.

Moreover, the number of authors in all publications is limited to three. In cases when authors are more than three, the symbol "et al" signifies that the member of the academic staff is listed first in the publication title, but a number of other not-listed authors also exist. The symbol "..." signifies that the member of the academic staff is listed second or third in the publication title, but a number of other not-listed authors also exist. Regarding electronic publications, only those accessible through a website are listed.

Members of the academic staff are listed in alphabetical order within departments and the information outlined in all research profiles is based on electronic data received directly from members of the academic staff.

### **The book contains three appendices:**

- Appendix I lists all the doctoral titles awarded by the Faculty of Pure and Applied Sciences within the period 2005-2007.
- Appendix II presents a list of abbreviated terms listed in this publication.
- Appendix III lists an index of the academic staff of the Faculty of Pure and Applied Sciences in alphabetical order by surname.

For more information on the research activity of the Faculty of Pure and Applied Sciences, visit the University of Cyprus website at [www.ucy.ac.cy](http://www.ucy.ac.cy).

## MESSAGE FROM THE DEAN

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Research, teaching, and cultural contribution form the pillars of the Faculty of Pure and Applied Science. In its 19 years of existence the Faculty of Pure and Applied Sciences has made significant achievements in these areas and especially in the area of research. The research work of our faculty has facilitated international recognition of the University, with numerous awards of excellence. Growth has also been achieved both with respect to the number of Faculty members which is currently 73, plus 18 postdoctoral fellows, and in the number of Departments, which has increased from three to five (Biological Sciences, Mathematics and Statistics, Computer Science, Physics and Chemistry).

This volume covers the research profile and publications of the five Departments of the Faculty of Pure and Applied Sciences and the Oceanography Center. Summary numbers of the academic publications of the five Departments and the Center during the period 2005-2007 are as follows:

	Total
Books (Authorship)	7
Books (Editing)	15
Chapters in Books	43
Selected Journal Publications	398
Selected Conference Proceedings	135
Distinguished Publications (before 2005)	97

The total number of research projects awarded to the Faculty is 278 with a total budget in excess of 23 million Euro. External funding was obtained primarily from the European Union and the Cyprus Research Promotion Foundation, whereas internal funding was from the University state budget. Summary numbers during the period 2005-2007 are as follows:

	No. of projects	Funding in Euro
External Funding	254	21,559,000
Internal Funding	24	1,886,000
Total	278	23,445,000

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Two patents were filed in by Faculty from the Department of Chemistry, one on synthesis and anticancer properties of vitamin E molecules by Dr. Keramidas, and one on catalyst technology by Dr. Efstathiou. Moreover, the University has signed a license agreement with the largest European construction company in the field of chemical technology.

All Departments have revised both their undergraduate and graduate programmes of study towards meeting the demanding science and technology needs of the 21st century. From 2005 to 2007, a total of 38 Ph.D. titles were awarded, whereas the total number of Master students graduated was 176. Moreover, the number of both undergraduate and graduate students will increase to 500 and 208, respectively, by the year 2011.

Our Faculty members offer a wide spectrum of activities to the community. These activities include collaborations and consulting with local industry, providing expertise in Parliamentary Committees, and organizing National and International Olympiads, as well as of numerous workshops and seminars open to the public, among many others.

Our vision for the future is that our Faculty will continue to strengthen towards excellence in both research and teaching while continuing its contribution to the advancement of technology and culture.

Constantinos S. Pattichis  
Dean

FACULTY OF PURE AND APPLIED SCIENCES  
**DEPARTMENT OF BIOLOGICAL SCIENCES**

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## ACADEMIC STAFF

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*Professor*

CONSTANTINOS DELTAS  
*Professor*

PANTELIS GEORGIADES  
*Assistant Professor*

LEONTIOS G. KOSTRIKIS  
*Associate Professor*

VASILIS PROMPONAS  
*Lecturer*

NIOVI SANTAMA  
*Associate Professor*

PARIS SKOURIDES  
*Lecturer*

## DEPARTMENT OF BIOLOGICAL SCIENCES

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The Department of Biological Sciences, established in 2002, is research-oriented and our faculty actively pursues research in areas at the forefront of science. Currently there are seven faculty members, three of whom joined the Department in 2005, and this number is expected to grow. The 21st century has been coined as the century of Biology. Major advances are taking place in fields such as Molecular Biology, Molecular Genetics, Embryology, Biotechnology and, after the decoding of the human genome, Bioinformatics.

The Department of Biological Sciences carries out important research activity in a wide range of fields in which major advances are currently taking place. These include Molecular Biology, Molecular Genetics, Embryology and Biotechnology. Members of the Department cooperate and participate in research programmes with other universities and research centres. All of our faculty members, whose research interests fall within the above fields, head their own laboratories. Specifically, the Laboratory of Cancer Biology and Chemoprevention is working to identify new molecular targets for antitumor drugs. The identification of natural food components that may prevent or delay the process of carcinogenesis is the main focus of the laboratory. The Molecular and Medical Genetics Laboratory is investigating inherited kidney disease and familial Mediterranean fever. The Laboratory of Biotechnology and Molecular Virology aims to understand the implications of viral and host determinants on the transmission and the progression of HIV-1 as well as the dynamics of cellular and viral drug-resistance in patients treated with antiretroviral therapy. The Laboratory of Molecular Biology and Biochemistry is focused on the kinesin-like superfamily of microtubule-based motor proteins, including determining their role in neurodegenerative disease. The Cytomolecular Genetics and Embryology Laboratory investigates the still unexplained genetic and cellular basis of embryogenesis and embryo survival, with special focus on the influences of extra embryonic tissues and stem cell biology. The Laboratory of Developmental Biology and Bioimaging Technology studies the mechanisms underlying the formation of complex embryonic architecture and also explores applications of nanotechnology in the life sciences. The Bioinformatics Research Laboratory focuses on the elucidation of protein sequence to structure/function relationships through large-scale comparative analysis of genomic data. The research activities of the various laboratories are funded by the European Union and the Cyprus Research Promotion Foundation.

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In the past two years, members of our Department have organized international conferences and forums while several of our faculty members have been invited to present their research in international conferences as main or keynote speakers. Although the Department of Biological Sciences is very new, it is very promising; its faculty members pursue cutting-edge research in many areas of biology with applications in medicine. Consequently, research performed in the Department of Biological Sciences contributes to the improvement of human health and will also help the technological advancement of Cyprus.

Constantinos Deltas  
Chairperson

**ANDREAS CONSTANTINOU** Professor  
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■ **STUDIES**

National University of Athens, Greece, B.S. in Biology, 1975  
University of Toledo, U.S.A., M.S. in Biology, 1980  
Medical College of Ohio, U.S.A., Ph.D. in Biochemistry, 1985

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

New York Academy of Sciences • American Association for Cancer Research  
• European Association for Cancer Research • American Association for the  
Advancement of Science • Sigma Xi • International Society of Cancer  
Chemoprevention

■ **EDITORIAL BOARDS**

*In Vivo, International Journal of Experimental and Clinical Pathophysiology and  
Drug Research*  
*Nutrition and Cancer, an International Journal* (Associate Editor)

■ **RESEARCH INTERESTS**

Role of Nutrition in Carcinogenesis; Cancer Chemoprevention; Interactions  
Between Botanicals and Drugs; Molecular Targets of Antitumor Drugs;  
Phytoestrogens and Selective Estrogen Receptor Modulators (SERMs);  
Nuclear Organization

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

Mechanism of action of 2-methoxyestradiol in human cancer T-lymphocytes  
Jurkat: The role of bcl-2 and NF-kB  
Cooperating Organization: University of Ioannina, Greece  
Funding: RPF, Cyprus

Cytotoxic and antiproliferative mechanisms of Phenoxodiol, a new synthetic  
flavonoid with anticancer activity, in lymphocytes  
Cooperating Organization: University of Athens, Greece  
Funding: RPF, Cyprus

Prevention and therapy of prostate cancer with selenium-polyphenolic  
products  
Cooperating Organizations: University of Crete, Greece; Institute of  
Biomedical Research of National Academy of Athens, Greece  
Funding: RPF, Cyprus

Identification of new medicinal plants with potential applications in cancer  
chemoprevention and treatment  
Cooperating Organization: "Gr. T Popa" University of Medicine and  
Pharmasi, Iasi, Romania. Funding: RPF, Cyprus

Development of a novel nutraceutical product for the adjuvant treatment of inflammatory bowel disease

Cooperating Organization: Yasoo Health Limited. Funding: RPF, Cyprus

Evaluation of the therapeutic antiinflammatory substances in cells and animal models of chronic inflammatory disease

Cooperating Organization: Yasoo Health Limited. Funding: RPF, Cyprus

Synergistic activity of natural antioxidants in the prevention and therapy of prostate cancer

Cooperating Organization: Yasoo Health Limited. Funding: RPF, Cyprus

Molecular Mechanism of Cancer Chemoprevention by Tamoxifen and Equol  
Funding: Leventis Foundation, Cyprus

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

Tonetti DA, et al., The effect of the phytoestrogens genistein, daidzein, and equol on the growth of tamoxifen-resistant T47D/PKC alpha. *Nutr Cancer*, 58:222-229, 2007

Constantinou AI, et al., The soy isoflavone daidzein improves the capacity of tamoxifen to prevent mammary tumors, *European J Cancer*, 41: 647-654, 2005

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Constantinou AI, Squinto, SP, Jungmann, JA, The phosphoform of regulatory subunit RII of cyclic AMP-dependent protein kinase possesses intrinsic topoisomerase activity, *Cell*, 43: 429-437, 1985

Constantinou AI, Kiguchi K, Huberman E, Induction of differentiation and DNA strand breakage in human HL-60 and K-562 leukemia cells by genistein, *Cancer Res.*, 50: 2618-2624, 1990

Constantinou AI, Huberman E, Genistein, an inducer of tumor cell differentiation: possible mechanisms of action, *Proc. Soc. Exper. Biol. Med.*, 208:109-115, 1995

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### ■ STUDIES

National and Kapodistrian University of Athens, Greece, B.Sc. in Pharmacy, 1982  
Rutgers, The State University of New Jersey, U.S.A., Ph.D., 1988

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Hellenic Society of Medical Geneticists, Greece • European Society of Human Genetics, Europe • Hellenic Society of Nephrology, Greece • Hellenic College of Nephrology and Hypertension, Greece • Cyprus Society of Human

Genetics, Cyprus • Cyprus Association of Clinical Laboratory Directors and Clinical Scientists, Cyprus

#### ■ EDITORIAL BOARDS

*HIPPOKRATIA* (Member of Advisory Committee), Greece, Hippokratio General Hospital of Thessaloniki

#### ■ RESEARCH INTERESTS

Applications of Molecular Medical Diagnostics; Inherited Kidney Diseases and Others; Molecular Epidemiology and Genetic Map of Cyprus; Cystic Fibrosis and Familial Mediterranean Fever; Inherited Thrombophilic Factors

#### ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

Small Interfering RNAs as Novel Tools for Treating Polycystic Kidney Disease

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Cloning of the MCKD1 gene that is mutated in Medullary Cystic Kidney Disease

Cooperating Organizations: Nicosia General Hospital, Cyprus; University of Heidelberg, Germany; Rabin Medical Center, Israel

Funding: RPF, Cyprus

Correlation of genetic polymorphisms with atherosclerosis -

A epidemiologic study

Funding: RPF, Cyprus

Investigation of the role of c-myc oncogene in the pathogenesis of Polycystic Kidney Disease and as a potential target for therapy

Cooperating Organizations: University of Heidelberg, Germany; The University of Oklahoma Health Sciences Center, U.S.A

Funding: RPF, Cyprus

Clinical and molecular investigation of Focal Segmental Glomerulosclerosis

Cooperating Organizations: Medical Services of the Ministry of Health, Cyprus; Aristotle University of Thessaloniki, Greece; "Agia Sophia" Childrens Hospital, Greece

Funding: RPF, Cyprus; Cyprus Kidney Association

A murine model for Polycystic Kidney Disease Type 2

Funding: RPF, Cyprus

## PUBLICATIONS

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#### ■ SELECTED JOURNAL PUBLICATIONS

Yiallourous P. K., et al., Cystic fibrosis mutational spectrum and genotypic/phenotypic features in Greek-Cypriots, with emphasis on dehydration as presenting symptom, *Clin Genet*, 71:290-292, 2007

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Gout A. M., et al., Analysis of published PKD1 gene sequence variants, *Nat Genet*, 39:427-428, 2007

Voskarides K., et al., COL4A3/COL4A4 mutations producing focal segmental glomerulosclerosis and renal failure in thin basement membrane nephropathy, *J. Am Soc. Nephrol*, 18:3004-3016, 2007

Deltas C., MTHFR gene and atheromatic mutations C677T and A1298C. Cardiovascular significance and correlation with nephrosclerosis, *Iatriki Kypros*, A quarterly publication of the Pancyprian Medical Association, 23 (1-2):12-17, 2007 (in Greek)

Deltas C., Molecular pathology of Familial Hematuria in Cypriot families. Ancestral founder mutations in Cypriot villages, *Aristotelis*, A biannual publication of Pharmacists graduates of the Aristotle University of Thessaloniki, 21: 8-15, 2007 (in Greek)

Feldman M., et al., Molecular investigation and longterm clinical progress in four patients from two Greek Cypriot families with recessive distal renal tubular acidosis and sensorineural deafness due to mutations in the ATP6V1B1 gene, *Clin Genet*, 69:135-144, 2006

Wolf M.T., et al., Fuchshuber A, Hildebrandt F. Medullary cystic kidney disease type 1: mutational analysis in 37 genes based on haplotype sharing, *Hum Genet*, 119:649-658, 2006

Felekis K, Deltas C., RNA Interference: A Powerful laboratory tool and its therapeutic implications, *Hippokratia*, 10: 112-115, 2006

Koupepidou P, Deltas C., Christofides T. C., "...", The MTHFR 677TT and 677CT/1298AC genotypes in Cypriot patients may be predisposing to hypertensive nephrosclerosis and chronic renal failure, *International Angiology*, 24:287-294, 2005

Rossou E., et al., Multiplex molecular diagnosis of MEFV mutations in patients with familial Mediterranean fever using LightCycler Real-Time PCR, *Clin Chem*, 51:1725-1727, 2005

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Mochizuki T, et al., PKD2, a Gene for Polycystic Kidney Disease that Encodes an Integral Membrane Protein, *Science*, 272:1339-1342, 1996

Christodoulou K, et al., Chromosome 1 Localization of a Gene for Autosomal Dominant Medullary Cystic Kidney Disease (ADMCKD), *Hum Mol Genet*, 7:905-911, 1998

Koptides M, et al., Genetic Evidence for a Trans-Heterozygous Model for Cystogenesis in Autosomal Dominant Polycystic Kidney Disease, *Hum Mol Genet*, 12:447-452, 2000

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#### ■ STUDIES

Queen Mary, University of London, U.K., B.Sc. in Molecular Biology, 1992  
UCL, University of London, U.K., Ph.D. in Developmental Biology, 1996  
University of Cambridge, U.K., Post-Doctorate in Developmental Genetics, 2001  
University of Toronto/Mount Sinai Hospital, Canada, Post-Doctorate in Developmental Genetics, 2005

## ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

British Society for Developmental Biology, U.K. • Corpus Christi College, University of Cambridge, U.K.

## ■ RESEARCH INTERESTS

Stem Cell Biology/Regenerative BioMedicine; Embryology/Pregnancy Complications/Embryo viability; Developmental Biology; Developmental Genetics/Functional Genomics/Epigenetics; Molecular Embryology

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

Georgiades P., et al., Trophoblast-specific gene manipulation using lentivirus-based vectors, *BioTechniques, International Journal of Life Science Methods*, Vol. 42, 317-325, 2007

Georgiades P. and Rossant J., Ets2 is necessary in trophoblast for normal embryonic anteroposterior axis development, *Development*, Vol. 133, 1059-1068, 2006

### ■ SELECTED CONFERENCE PROCEEDINGS

Georgiades P., New genetic and cellular insights on the earliest events of embryogenesis, *Proceedings of the 2nd Bioscience Conference*, University of Patras, Greece, 38-38, 2007

**LEONTIOS G. KOSTRIKIS** Associate Professor  
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### ■ STUDIES

New York University, U.S.A., B.A. in Biochemistry, 1987  
New York University, U.S.A., M.Sc. in Biochemistry, 1989  
New York University, U.S.A., M.Ph., 1990  
New York University, U.S.A., Ph.D. in Biochemistry, 1993

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Society of Microbiology, U.S.A. • International AIDS Society, U.S.A. • European Federation of Biotechnology, E.U. • European Biosafety Association, E.U. • The New York Academy of Sciences, U.S.A. • The American Association for the Advancement of Science, U.S.A. • Marie Curie Fellow Association, European Committee

### ■ EDITORIAL BOARDS

*Current HIV Research*, U.S.A., Bentham Science

## ■ RESEARCH INTERESTS

Molecular Epidemiology of HIV-1 and HCV; Biotechnology of Nucleic Acids; Molecular Diagnostics; Drug Design and Discovery

## ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

Molecular Epidemiology of Human Immunodeficiency Virus Type-1 (HIV-1) infection in Cyprus: Phylogenetic distribution, spread of drug resistance and implications of HIV-1 'Minor- Drug Resistant Variants' on antiretroviral treatment

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Design, Synthesis and Biological Evaluation of HIV-1 and HCV Inhibitors.

Marie Curie International Reintegration Grant

Funding: FP7, E.U.

Implications of HCV Diversity on Disease Progression.

Framework Programme for Research and Technological Development 2006

Funding: RPF, Cyprus

Evaluation of HIV-1 Provirial Load as a Prognostic Marker of Clinical Progression in Patients Receiving Highly Active Antiretroviral Therapy. Cooperation between Cyprus and Italy.

Funding: RPF, Cyprus

Implications of HCV Variation in Viral Tissue Tropism, Pathogenesis and Persistence.

Research Cooperation with Distinguished Overseas Scientists.

Funding: RPF, Cyprus

European Cohort Coordinating Network on HIV Drug Resistance (EuroHIVResistance)

Coordination Action

Funding: FP6, E.U.

Development of New Technologies for the Detection of Emerging and Re-emerging Infectious Agents.

Funding: Birch Biomedical Research, U.S.A.

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

Loizidou E., et al., HIV-1 Integrase: From Biology to Chemotherapeutics, *Current HIV Research*, Vol. 5, 365-388, 2007

Anastassopoulou C., Kostrikis L. G., Global Genetic Variation of HIV-1 Infection, *Current HIV Research*, Vol. 4, 365-373, 2006

Anastassopoulou C., Kostrikis L. G., Viral Correlates of HIV-1 Disease, *Current HIV Research*, Vol. 3, 113-132, 2005

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Kostrikis L. G., et al., Quantitation of Human Immunodeficiency Virus Type I DNA Forms with the Second Template Switch in Peripheral Blood Predicts Disease Progression Independently of Plasma RNA Load, *Journal of Virology*, Vol. 76 (20), 10099-10108, 2002

Kostrikis L. G., et al., A Chemokine Receptor CCR2 Allele Delays HIV-1 Disease Progression and is Associated with a CCR5 Promoter Mutation, *Nature Medicine*, Vol. 4 (3), 350-353, 1998

Kostrikis L. G., et al., Spectral Genotyping of Human Alleles, *Science*, Vol. 279 (5354), 1228-1229, 1998

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### ■ STUDIES

University of Athens, Greece, B.Sc. in Physics, 1997

University of Athens, Greece, Ph.D. in Biological Sciences, 2004

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

International Society for Computational Biology, U.S.A.

### ■ EDITORIAL BOARDS

*International Journal of Computational Intelligence in Bioinformatics and Systems Biology* (Guest Editor for Special Issue on: Classify the Classifiers: Investigating the Optimum Classification Technique Per Case in Bioinformatics), U.K., Inderscience Publishers

### ■ RESEARCH INTERESTS

Membrane Protein Topology-Structure Prediction; Low Complexity, Compositionally Biased Regions; Sequence Database Search; Computational Comparative Genomics; Computational Synthetic/Systems Biology

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Development of novel bioinformatics methods for recognizing space-neighbouring transmembrane  $\alpha$ -helices in polytopic transmembrane proteins from their amino acid sequences

Cooperating Organization: University of Athens, Greece

Funding: RPF, Cyprus

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

Bagos P.G., Liakopoulos T.D., Promponas V.J., "...", Prediction of  $\beta$ -barrel Outer Membrane Proteins, *Proceedings of the Indian National Academy of Sciences, Part B* (Biological Sciences), India, 71:1, 19-41, 2005

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Promponas V.J., et al., CAST: an iterative algorithm for the Complexity Analysis of Sequence Tracts, *Bioinformatics*, U.K., 16:10, 915-922, 2000

Pasquier C.M., Promponas V.J., Palaios, G., "...", A novel method for predicting transmembrane segments in proteins based on a statistical analysis of the SwissProt database: the PRED-TMR algorithm, *Protein Engineering*, U.K., 12:5, 381-385, 1999

Papasaiikas, P.K., et al., PRED-GPCR: GPCR recognition and family classification server, *Nucleic Acids Research*, U.K., W380-382, 2004

## NIOVI SANTAMA Associate Professor Department of Biological Sciences

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### ■ STUDIES

University of Athens, Greece, Degree in Biology, 1987

University of Sussex, U.K., M.Sc. in Genetic Manipulation and Molecular Biology, 1988

University of Sussex, U.K., Ph.D. in Neuroscience, 1992

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

European Molecular Biology Conference (EMBC), Germany (National Delegate of Cyprus) • European Research Council (ERC), Belgium (Panel Member) • European Molecular Biology Organisation (EMBO) (Young Investigator Award National Contact Point)

### ■ RESEARCH INTERESTS

Motor Proteins and the Cytoskeleton; Motor Protein Receptors; Neurodegenerative Disease in Humans; RNA Metabolism and Nuclear Architecture

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Kinesin Molecular Motors and Neurodegenerative Disease: The case of ALS (Amyotrophic Lateral Sclerosis)

Cooperating Organizations: European Molecular Biology Organisation (EMBL), Germany; The German Cancer Research Centre (DKFZ), Germany; The Cyprus Institute of Neurology and Genetics

Funding: Telethon Foundation, Cyprus

- Molecular Motors: Their role in the neurodegenerative disorder ALS  
Cooperating Organizations: European Molecular Biology Organisation (EMBL), Germany; The German Cancer Research Centre (DKFZ), Germany; The Cyprus Institute of Neurology and Genetics  
Funding: RPF, Cyprus
- Structure/function relationship of a novel nuclear protein as a putative target for human neurodegenerative disorders  
Cooperating Organizations: Wellcome Trust Biocentre, University of Dundee, U.K.; National Hellenic Research Foundation, Greece  
Funding: RPF, Cyprus
- Protein complexes of CINAP: composite molecular targets for the understanding of human disease  
Cooperating Organizations: Wellcome Trust Biocentre, University of Dundee, U.K.; National Hellenic Research Foundation, Greece; Remedica Ltd, Cyprus; Muscular Dystrophy Association, Cyprus  
Funding: RPF, Cyprus
- Factors that influence centrosome association of KIFC5A motor protein and its binding partners Nubp1 and Nubp2 in mammalian cells  
Cooperating Organization: Institute of Structural Biology, Grenoble, France  
Funding: RPF, Cyprus

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

- Lederer, C.W., Torrisi, A., Santama, "...", Comprehensive expression profiling of motor cortex in sporadic amyotrophic lateral sclerosis. Pathways and genes differentially expressed in the motor cortex of patients with sporadic ALS, *BMC Genomics*, 8:26, 1-26, 2007
- Pantelidou, M., et al., Differential expression analysis of molecular motors in ALS motor neuron disease, *Neurobiology of Disease*, 26: 577-589, 2007
- Lederer, C.W. and Santama, N., ALS-The tools of the trait, *Biotechnology J.*, 2:608-621, 2007
- Christodoulou, A., et al., Motor protein KIFC5A interacts with Nubp1 and Nubp2 and is implicated in the regulation of centrosome duplication, *J. Cell Science*, 119: 2035-2047, 2006
- Santama, N., et al., Characterization of hCINAP, a novel coilin-interacting protein encoded by a transcript from the transcription factor TAF1D32 locus, *J. Biological Chemistry*, 280:36429-36441, 2005

### ■ SELECTED CONFERENCE PROCEEDINGS

- Pantelidou, M., et al., Differential expression analysis of molecular motors in ALS motor neuron disease, *Proceedings of the 58th Meeting of the Hellenic Society of Biochemistry and Molecular Biology*, Vol. 53, 533-536, 2006

**PARIS SKOURIDES** Lecturer  
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■ **STUDIES**

Brandeis University, U.S.A., B.A. in Biochemistry, 1997  
The Rockefeller University, U.S.A., Ph.D. in Biology, 2004

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

New York Academy of Sciences

■ **RESEARCH INTERESTS**

Developmental Biology, Nano-Biotechnology and Biological Imaging

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

Novel Quantum Dot Imaging technologies for the study of morphogenesis  
and other biological processes

Funding: E.U. (Marie Curie Grant)

Colloid and Interface Chemistry for Nanotechnology. Research Promotion  
Foundation Grant, Microbiology of Green Coal Production

Funding: COST Action, E.U.

**PUBLICATIONS**

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■ **SELECTED JOURNAL PUBLICATIONS**

Demetriou MC, et al., Spatially and temporally regulated alpha6 integrin cleavage  
during *Xenopus laevis* development, *Biochem Biophys Res Commun.*, 779-85, 2007

■ **DISTINGUISHED PUBLICATIONS (before 2005)**

Dubertret B, et al., In vivo imaging of quantum dots encapsulated in phospholipid  
micelles. *Science*, 1759-62, 2002

Skourides P., Perera S.A., Ren R., Polarized distribution of Bcr-Abl in migrating myeloid  
cells and co-localization of Bcr-Abl and its target proteins, *Oncogene*, 1165-76, 1999

FACULTY OF PURE AND APPLIED SCIENCES

**DEPARTMENT OF CHEMISTRY**



## ACADEMIC STAFF

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NIKOS CHRONAKIS

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ANGELOS M. EFSTATHIOU

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SOPHIA C. HAYES

*Lecturer*

CONSTANTINA P. KAPNISSI - CHRISTODOULOU

*Lecturer*

ANASTASIOS D. KERAMIDAS

*Associate Professor*

PANAYIOTIS KOUTENTIS

*Assistant Professor*

EPAMEINONDAS B. LEONTIDIS

*Associate Professor*

IOANNIS PASHALIDIS

*Assistant Professor*

COSTAS S. PATRICKIOS

*Professor*

EFTYCHIA PINAKOULAKI

*Lecturer*

ANASTASIOS TASIOPOULOS

*Assistant Professor*

CHARIS R. THEOCHARIS

*Professor*

## DEPARTMENT OF CHEMISTRY

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The Department of Chemistry was established in 2000 after existing as a Sector of the Department of Natural Sciences since 1992. At present, the Department has 13 faculty members, seven postdoctoral researchers, four technicians and two secretaries. There are 125 undergraduate students and 47 graduate students currently enrolled. 31 of these are Ph.D. students, constituting the largest Ph.D. programme of a department at the University of Cyprus. Up to now, 34 Ph.D. and 20 M.A. students have graduated from the Department. The ten research and three teaching laboratories of the Department are fully equipped. Instruments such as a single crystal X-ray diffractometer, powder XRD, multinuclear 300 MHz NMR, etc., are part of the Department's infrastructure, which values at approximately four million Euros. During the last ten years, the academic staff of the Department has published more than 250 papers in refereed international journals and registered two patents. This research is supported by various funding organizations, including the European Union, the Cyprus Research Promotion Foundation, and local industry. The current total funding from research programmes received by the Department is calculated at approximately 3.5 million Euros. Our Faculty is committed to reaching our set mission of teaching excellence at all levels and the production of a large body of basic and applied research that demonstrates our dedication to academic excellence. The outstanding level of research activity and development that has been achieved in just a few years promises an exciting future for the Department of Chemistry.

The Chemistry Department undertakes other significant non-fundamental research activities and contributes in matters concerning Cypriot society as described below.

1. The Department collaborates with local industry and other bodies in areas of mutual interest, carrying out applied research directed to their specific needs.
2. The Department provides consultancy services to local industry.
3. The Department organized the 8<sup>th</sup> Panhellenic Symposium on Catalysis in Cyprus and the 7<sup>th</sup> Greece-Cyprus Chemistry Conference in Cyprus.

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4. The Department organizes short courses for industry on the use of NMR Spectroscopy and the “three-way” catalytic technology used in gasoline-driven cars. In addition, the Department has organized meetings addressing secondary school teachers.
5. Members of the Department have participated actively in the successful preparation of Greek Cypriot students in International Chemistry Olympiads.
6. Members of the Department have delivered lectures as a part of the Aglantzia and Larnaca Open Universities.
7. Members of the Department have appeared in front of Parliamentary Committees to offer expert technical advice.

Anastasios D. Keramidas  
Chairperson

## NIKOLAOS CHRONAKIS Lecturer

### Department of Chemistry

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#### ■ STUDIES

University of Crete, Greece, B.Sc. in Chemistry, 1994  
University of Crete, Greece, Ph.D. in Organic Chemistry, 2000

#### ■ RESEARCH INTERESTS

Inherently Chiral C<sub>60</sub>Trisadducts; New Addition Patterns of C<sub>60</sub>; Macrocyclic Oligo-Malonates; C<sub>60</sub> Helical Polymers; Chiral Photosensitization

#### ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

Design and Synthesis of Novel [60] Fullerene Helically Chiral Polymers

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Synthesis of Optically Active Fullerene Derivatives: A Study in Chiral Photosensitization  
Cooperating Organizations: University of Erlangen-Nürnberg, Germany; University of Geneva, Switzerland. Funding: RPF, Cyprus

Synthesis, Characterization and Catalytic Activity of Inherently Chiral Fullerene Derivatives  
Cooperating Organizations: University of Erlangen, Nürnberg, Germany; University of Geneva, Switzerland. Funding: RPF, Cyprus

#### ■ PATENTS

Andreas Hirsch, Florian Beuerle and Nikos Chronakis, Method of Synthesis of Water Soluble Fullerene Polyacids Using a Malonate Reactant, U.S. PATENT No 2006/047167, 2006

## PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

- N. Chronakis, et al., A chiral dumbbell shaped bis(fullerene) oligoelectrolyte, *Chem. Commun.*, 607-609, 2007
- P. Witte, et al., Water solubility, antioxidant activity and cytochrome C binding of four families of exohedral adducts of C<sub>60</sub> and C<sub>70</sub>, *Org. Biomol. Chem.*, 5, 3599-3613, 2007
- N. Chronakis, A. Hirsch, Macrocyclic Malonates. A New Family of Tethers for the Regio- and Diastereoselective Functionalization of [60] Fullerene, *Comptes Rendus de l'Académie des Sciences, CHIMIE (Review)*, 9, 862-867, 2006
- N. Chronakis, et al., Macrocyclic Cyclo-[n] Malonates: Synthetic Aspects and Observation of Columnar Arrangements by X-Ray Crystallography, *Eur. J. Org. Chem.*, 2296-2308, 2006

S. Kotsiris, et al., Application and evaluation of solvent-free matrix-assisted laser desorption/ionization mass spectrometry for the analysis of derivatized fullerenes, *Eur. J. Mass Spectrom.*, 12, 397-408, 2006

N. Chronakis, A. Hirsch, Regio- and stereoselective synthesis of enantiomerically pure [60]fullerene trisadducts with an inherently chiral e,e,e addition pattern, *Chem. Commun.*, 3709-3711, 2005

F. Beuerle, N. Chronakis, A. Hirsch, Regioselective synthesis and zone selective deprotection of [60]fullerene trisadducts with an e,e,e addition pattern, *Chem. Commun.*, 3676-3678, 2005

## ANGELOS M. EFSTATHIOU Professor

### Department of Chemistry

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#### ■ STUDIES

National Technical University of Athens, Greece, B.Sc. in Chemical Engineering, 1981

University of Connecticut, U.S.A., M.Sc. in Chemical Engineering, 1985

University of Connecticut, U.S.A., Ph.D. in Chemical Engineering, 1989

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Technical Chamber of Greece • Hellenic Catalytic Society, Greece

#### ■ EDITORIAL BOARDS

*The Open Environmental Engineering Journal*, U.S.A., Bentham Science Publishers Ltd.

#### ■ RESEARCH INTERESTS

Development of Novel Catalytic Materials; In Situ Catalyst Surface Characterisation; Environmental Catalysis - Air De-pollution Technologies; Mechanistic Studies - Use of Operando Techniques; Modelling of Transient Kinetic Experiments

#### ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

An in-depth Investigation of Catalytic Applications of Novel Carbon Nanotube-Supported Metal Catalysts: The Case of H<sub>2</sub> Lean de-NO<sub>x</sub> and Tar Steam Reforming

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Experimental and Theoretical Mechanistic Studies of the Water Gas-Shift Reaction

Cooperating Organizations: Computational Sciences Research Center, U.S.A.; Instituto de Catalysis y Petroleoquímica (ICP/CSIC), Spain

Funding: RPF, Cyprus

- Biomass Fluidised Bed Gasification with in-situ Hot Gas Cleaning  
Cooperating Organizations: ZSW, Germany; ICEHT/FORTH, Greece; Technical University of Vienna, Austria; University of Stuttgart, Germany; Paul Scherrer Institut, Switzerland; Biomasse-Kraftwerk Guessing, Austria; GE Jenbacher GmbH and Co OHG, Germany; Institute for Energy Technology, Norway  
Funding: FP6, E.U.
- Mobile Laboratory for Environmental Pollution Measurements and Emission Control Systems Evaluation  
Cooperating Organizations: CERTH/CPERI, Greece; National Research Council of Italy/Istituto Motori, Italy  
Funding: FP6, E.U.
- Hydrogen Production via Catalytic Steam Reforming of Bio-Oil Derived from Biomass Gasification  
Cooperating Organization: Aristotle University of Thessaloniki, Greece.  
Funding: RPF, Cyprus
- Photoelectrolytic Oxidation and Immobilization of Organic Pollutants in Aqueous Media Using Solar Energy  
Cooperating Organization: Aristotle University of Thessaloniki, Greece.  
Funding: RPF, Cyprus
- Dinitrification of Industrial Effluent Streams  
Cooperating Organizations: CNRS, France; Proplan Ltd, Cyprus; ICP/CSIC, Spain. Funding: RPF, Cyprus
- Hydrogen Production by Steam Reforming of Non-recyclable Organic Solvents  
Cooperating Organizations: Ambrosia Ltd, Cyprus; ICP/CSIC, Spain, Proplan Ltd, Cyprus. Funding: RPF, Cyprus
- Development of an Industrial Catalytic Converter of NO<sub>x</sub> to N<sub>2</sub> Using Hydrogen Under Strongly Oxidizing Conditions  
Cooperating Organizations: CERECO Ltd, Cyprus; ICP/CSIC, Spain; Electricity Authority of Cyprus; Proplan Ltd, Cyprus  
Funding: RPF, Cyprus
- Regeneration of Three-Way Commercial Catalytic Converters  
Cooperating Organization: KTH, Sweden; ICP/CSIC, Spain; Proplan Ltd, Cyprus; Stelco Ltd, Cyprus. Funding: RPF, Cyprus
- Development of Nanostructured Supported Ag-Pt and Ag-Rh Catalysts for the Selective Reduction of NO and N<sub>2</sub>O Decomposition  
Cooperating Organization: National Center of Scientific Research "Demokritos", Greece  
Funding: RPF, Cyprus

## ■ PATENTS

A.M. Efstathiou, C.N. Costa, J.L.G. Fierro, Catalyst for the Reduction of NO to N<sub>2</sub> with Hydrogen under NO<sub>x</sub> Oxidation Conditions, Spanish Patent No. ES 2 192 985 B1 (2005); US Patent No. 7,105,137 B2, 2006

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

- Constantinou, C.L., Costa, C.N., Efstathiou, A.M., The Remarkable Effect of Oxygen on the N<sub>2</sub> Selectivity of Water Catalytic Denitrification by Hydrogen, *Environmental Science and Technology*, American Chemical Society, U.S.A., 41, 950-956, 2007
- Olympiou, G., et al., Mechanistic Aspects of the Water-Gas Shift Reaction on Alumina-Supported Noble Metal Catalysts: In situ DRIFTS and SSITKA-Mass Spectrometry Studies, *Catalysis Today*, Elsevier Science, The Netherlands, 127, 304-318, 2007
- Costa, C.N., Efstathiou, A.M., Low-Temperature H<sub>2</sub>-SCR of NO on a Novel Pt/MgO-CeO<sub>2</sub> Catalyst, *Applied Catalysis B: Environmental*, Elsevier Science, The Netherlands, 72, 240-252, 2007
- Costa, C.N., Efstathiou, A.M., Mechanistic Aspects of the H<sub>2</sub>-SCR of NO on a Novel Pt/MgO-CeO<sub>2</sub> Catalyst, *Journal of Physical Chemistry C*, American Chemical Society, U.S.A., 111, 3010-3020, 2007
- Costa, C.N., et al., Industrial H<sub>2</sub>-SCR of NO on a Novel Pt/MgO-CeO<sub>2</sub> Catalyst, *Appl. Catal. B: Environ.*, Elsevier, The Netherlands, 75, 147-156, 2007
- Christou, S.Y., et al., Reactivation of an Aged Commercial Three-Way Catalyst by Oxalic and Citric Acid Washing, *Environmental Science and Technology*, American Chemical Society, U.S.A., 40(6), 2030-2036, 2006
- Lambrou, P.S., Efstathiou, A.M., The Effects of Fe on the Oxygen Storage and Release Properties of Model Pd-Rh/CeO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> Three-Way Catalyst, *Journal of Catalysis*, Elsevier Science, The Netherlands, 240, 182-193, 2006
- Polychronopoulou, K., et al. Absorption Enhanced Reforming of Phenol by Steam over Supported-Fe Catalysts, *Journal of Catalysis*, Elsevier Science, The Netherlands, 241, 132-148, 2006
- Lambrou, P.S., Efstathiou, A.M., The Effects of Fe on the Oxygen Storage and Release Properties of Model Pd-Rh/CeO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> Three-Way Catalyst, *J. Catal.*, Elsevier, The Netherlands, 240, 182-193, 2006
- Anastasiadou, T., et al., The Selective Catalytic Reduction of NO by CH<sub>4</sub> on La<sub>2</sub>O<sub>3</sub>-CaO Mixed Oxides: Catalytic, Kinetic and Photoluminescence Studies, *Journal of Physical Chemistry B*, American Chemical Society, U.S.A., 109, 13693-13703, 2005
- Polychronopoulou, K., et al., Novel Fe-Mn-Zn-Ti-O Mixed-Metal Oxides for the Low-Temperature Removal of H<sub>2</sub>S From Gas Streams in the Presence of H<sub>2</sub>, CO<sub>2</sub>, and H<sub>2</sub>O, *Journal of Catalysis*, Elsevier Science, The Netherlands, 236, 205-220, 2005
- Savva, P.G., et al., Hydrogen Production by Ethylene Decomposition over Ni Supported on Novel Carbon Nanotubes and Carbon Nanofibers, *Catalysis Today*, Elsevier Science, The Netherlands, 102, 78-84, 2005

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Lambrou, P.S., et al., Dynamics of Oxygen Storage and Release on Commercial Aged Pd-Rh Three-Way Catalysts and Their Characterization by Transient Experiments, *Appl. Catal. B: Environ.*, Elsevier, The Netherlands, 54, 237-250, 2004

Efstathiou, A.M., et al, Reforming of Methane with Carbon Dioxide to Synthesis Gas over Supported Rhodium Catalysts: 2. A Steady-State Tracing Analysis: Mechanistic Aspects of the Carbon and Oxygen Reaction Pathways to Form CO, *Journal of Catalysis*, Elsevier, The Netherlands, 158, 64-75, 1996

**SOPHIA C. HAYES** Lecturer  
Department of Chemistry

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### ■ STUDIES

Luther College, U.S.A., B.A. in Chemistry and Art, 1996

University of Washington, U.S.A., Ph.D. in Physical Chemistry, 2001

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Chemical Society, U.S.A.

### ■ RESEARCH INTERESTS

Protein Folding and Aggregation Mechanism; Photochemistry of Small Halogen-Containing Molecules; Photophysics of Semiconducting Conjugated Polymers

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Development of the Infrastructure of a Molecular Spectroscopy Laboratory  
Funding: RPF, Cyprus

## PUBLICATIONS

### ■ Ph.D. THESIS

S.C. Hays, Chlorine Dioxide Photochemistry in Solution: Time-Resolved Resonance Raman and Femtosecond Pump-Probe Studies

### ■ DISTINGUISHED PUBLICATIONS

J. C. Bolinger, S. C. Hayes and P. J. Reid, Time Resolved Infrared Absorption Studies of Geminate Recombination and Vibrational Relaxation in OCIO Photochemistry, *Journal of Chemical Physics*, 121, 4795, 2004

S. C. Hayes, C. L. Thomsen and P. J. Reid, The Production and Decay Kinetics of ClOO in Water and Freon-11: A Time-Resolved Resonance Raman Study, *Journal of Chemical Physics*, 115, 24, 11228-11238, 2001

S. C. Hayes, et al., Femtosecond UV Pump Near-IR Probe Studies of the Solvent-Dependent Excited-State Decay Dynamics of Chlorine Dioxide, *Journal of Physical Chemistry A*, 105, 9819-26, 2001

**CONSTANTINA P. KAPNISSI-CHRISTODOULOU** Lecturer  
Department of Chemistry

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■ **STUDIES**

University of Cyprus, Cyprus, B.Sc. in Chemistry, 1999

Louisiana State University, U.S.A., Ph.D. in Analytical Chemistry, 2004

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

American Chemical Society (ACS), U.S.A. • Pancyprian Union of Chemists, Cyprus • Division of Analytical Chemistry of the European Association for Chemical and Molecular Sciences (DAC-EuCheMS), Europe (Cyprus Representative)

■ **RESEARCH INTERESTS**

Separation of Cholinesterase Inhibitors by Use of Open-Tubular Capillary Electrochromatography (OT-CEC) and Micellar Electrokinetic Chromatography (MEKC); Chiral Separation of Amino Acids Serine and Aspartate by Use of MEKC; Separation of Cholesterol and its Ester Derivatives by Use of OT-CEC; Analytical Separations by Use of CE/MS

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

Separation of Amino Acids and Cholinesterase Inhibitors by the Use of Chromatography and Capillary Electrochromatography  
Funding: RPF, Cyprus

**PUBLICATIONS**

■ **SELECTED JOURNAL PUBLICATIONS**

Kapnissi-Christodoulou, C. P., et al., Investigation of Polyelectrolyte Multilayer Coatings in Open-Tubular Capillary Electrochromatography Using Laser Scanning Confocal Microscopy, *Electrophoresis*, 26, 783-789, 2005

## ANASTASIOS D. KERAMIDAS Assistant Professor

### Department of Chemistry

TEL.: 22892764, FAX: 22892801, E-mail: akeramid@ucy.ac.cy

#### ■ STUDIES

University of Ioannina, Greece, B.Sc. in Chemistry, 1988  
University of Ioannina, Greece, Ph.D. in Chemistry, 1992

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Chemical Society, U.S.A.

#### ■ RESEARCH INTERESTS

Inorganic and Bioinorganic Chemistry; Mechanisms of Inorganic Reactions; Structural Characterisation of Inorganic Compounds in Solution; Synthesis of Molecules with Electrocatalytic and Photochemical Properties; Pharmaceutical Inorganic Chemistry

#### ■ RESEARCH PROGRAMMES (External Funding, 2005-2007)

New materials for the improvement of the solar cells yield  
Cooperating Organizations: University of Patras, Greece; Technological University of Cyprus; Americanos College, Cyprus; SunPower Ltd, Cyprus  
Funding: RPF, Cyprus

## PUBLICATIONS

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#### ■ CHAPTERS IN BOOKS

Drouza C., Keramidias, A.D., Charge distribution in vanadium p-(hydro/semi) quinonate complexes, K. Kustin, J. C. Pessoa, D. C. Crans (Eds), *Vanadium: The Versatile Metal*, American Chemical Society Symposium, Series 974, 352-363, 2007

#### ■ SELECTED JOURNAL PUBLICATIONS

Karakoglu, I. N., et al., Polyoxomolibdenum(V/VI)-Sulfite Compounds: Synthesis, Structural and Physical Studies, *Inorg. Chem.*, 46, 6002-6010, 2007

Vraka, P. S., et al., Synthesis and Selective Anti-Cancer Effects of  $\alpha$ -,  $\gamma$ -Tocopheryl and  $\gamma$ -Tocotrienyl 2-Phenylselenyl Succinates, *Bioorganic and Medicinal Chemistry*, 14, 2684-2696, 2006

Stathatos, E., et al., Electroluminescence from a volatile europium complex, *Thin Films*, 489-493, 2006

Vraka, P. S., et al., Modulation of apoptotic signals with esterification of selenium and vitamine E in binary compounds, *FEBS Journal*, 273, 115, 2006

Evgeniou, E. M., et al., NMR Investigation of the Interaction of Vanadate with Carbasilatranes in Aqueous Solutions, *Inorganic Chemistry*, 44, 7511-7522, 2005

Chilas, G.I., et al., Oxovanadium(IV)-Sulfite Compounds: Synthesis, Structural, and Physical Studies, *Pure Applied Chemistry*, 77, 1529-1538, 2005

Vraka, P. S., Investigation of cancer cell growth inhibitory effects of new selenium phenolic succinate antioxidants, *FEBS Journal*, 272, 430, 2005

## PANAYIOTIS KOUTENTIS Assistant Professor

### Department of Chemistry

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#### ■ STUDIES

Imperial College of Science, Technology and Medicine, U.K., B.Sc. (Hons) in Chemistry, 1992

Imperial College of Science, Technology and Medicine, U.K., Ph.D. in Organic Chemistry, 1997

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Chemical Society • International Society of Heterocyclic Chemists • Royal Society of Chemistry, Europe

#### ■ RESEARCH INTERESTS

Sulfur-Nitrogen Heterocyclic Chemistry; Organic Radicals and Polyazaacenes; Conjugated and Non-conjugated Heteroarene Polymers; Biologically Active Heteroarenes – Medicinal Chemistry; Chemoinformatics

#### ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

Heterocyclic Organic Magnets (Project Supervisor)

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Chemoinformatic Software Development: Modelling, Virtual biological screening of new molecular structures with desirable characteristics (Scientific Supervisor)

Funding: RPF, Cyprus (ΠΛΥΠΗ/0506/25)

Development of QSAR Models, Design of Biologically Active Compounds and Their Virtual Screening, Application towards the Treatment of Mediterranean Anemia (Scientific Supervisor)

Funding: RPF, Cyprus

New Chemistry of Pyrazoles: Biologically Active Compounds (Project Supervisor)

Funding: RPF, Cyprus

Heterocyclic Conjugated Polymers: New Organic Metals (Project Supervisor)

Funding: RPF, Cyprus

Synthetic Analogues of Marine Alkaloids (Project Supervisor)

Funding: RPF, Cyprus

Heterocyclic High Spin Magnets (Project Supervisor)

Funding: RPF, Cyprus

New Synthesis of Isothiazoles: Biologically Active Compounds (Supervisor)

Funding: RPF, Cyprus

New Organic Magnets (Project Supervisor)

Funding: RPF, Cyprus

## PUBLICATIONS

---

### ■ SELECTED JOURNAL PUBLICATIONS

G. Melagraki, et al., Identification of a series of novel derivatives as potent HCV inhibitors by a ligand – based virtual screening optimized procedure, *Bioorg. Med. Chem.*, 15, 7237-7247, 2007

I.C. Christoforou and P.A. Koutentis, 3,4,5-Triarylisothiazoles via C-C Coupling Chemistry, *Org. Biomol. Chem.*, 5, 1381-1390, 2007

G. Melagraki, et al., Optimization of Biaryl Piperidine and 4-Amino-2-biarylurea MCH1 Receptor Antagonists using QSAR Modeling, Classification Techniques and Virtual Screening, *J. Comput. Aided Mol. Des.*, 21, 251-267, 2007

A. Afantitis, et al., A Novel QSAR Model for Evaluating and Predicting the Inhibition Activity of Dipeptidyl Aspartyl Fluoromethylketones, *QSAR Comb. Sci.*, 25, 928-935, 2006

I.C. Christoforou and P.A. Koutentis, New Regiospecific Isothiazole C-C Coupling Chemistry, *Org. Biomol. Chem.*, 4, 3681-3693, 2006

A. Afantitis, et al., A Novel QSAR Model for Predicting Induction of Apoptosis by 4-Aryl-4H-chromenes, *Bioorg. Med. Chem.*, 14, 6686-6694, 2006

A. Afantitis, et al., Investigation of substituent effect of 1-(3,3-diphenylpropyl)-piperidinyl phenylacetamides on CCR5 binding affinity using QSAR and virtual screening techniques, *J. Comput. Aided Mol. Des.*, 20, 83-95, 2006

A. Afantitis, et al., Prediction of Intrinsic Viscosity in Polymer - Solvent Combinations using a QSPR model, *Polymer*, 47, 3240-3248, 2006

I.C. Christoforou, P.A. Koutentis, S.S. Michaelidou, 1,2,3-Dithiazole chemistry in heterocyclic synthesis, *Arkivoc*, (VII) 207-223, 2006

P.A. Koutentis, The Preparation and Characterization of 5-Substituted-4-chloro-1,2,3-dithiazolium Salts and their Conversion into 4-Substituted-3-chloro-1,2,5-thiadiazoles, *Molecules*, 10, 346-359, 2005

**EPAMEINONDAS B. LEONTIDIS** Associate Professor  
Department of Chemistry

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■ **STUDIES**

Metsovion National Technical University of Athens, Greece, Diploma in Chemical Engineering, 1985

Massachusetts Institute of Technology, Boston, U.S.A., Ph.D. in Chemical Engineering, 1990

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

Technical Chamber of Greece • Panhellenic Union of Chemical Engineers, Greece • American Chemical Society (ACS), U.S.A. • ΣΞ Society of Scientists and Engineers, U.S.A. • European Colloids and Interfaces Society (ECIS), Europe • Pancyprrian Union of Chemists (PUC), Cyprus (President), European Association for the Chemical and Molecular Sciences (EuCheMS), Brussels (Executive Committee Member)

■ **RESEARCH INTERESTS**

Physical Chemistry of Colloids and Interfaces; Nanomaterials and Organic / Inorganic Hybrid Materials; Molecular Simulation Methods; Langmuir Monolayers and Langmuir-Blodgett Films

■ **RESEARCH PROGRAMMES (University of Cyprus, 2005-2007)**

Investigation of the Anionic Hofmeister Effect using model lipid interfaces

■ **RESEARCH PROGRAMMES (External Funding, 2005-2007)**

ROVAF (POBAΦ): New sorbents for the removal of boron from desalination water

Cooperating Organizations: Geological Survey Department; Caramondani Desalination Plants. Funding: RPF, Cyprus

AISTHEIO (AΙΣΘΕΙΟ): SO<sub>2</sub> sensors based on thin films of metallorganic surfactants

Cooperating Organizations: Department of Labor Safety, Ministry of Labor; University of Ioannina, Greece; Vassilikon Cement Industry. Funding: RPF, Cyprus

ANYABA (ANYABA): Development and optimization of novel materials for the removal of boron from desalinated water

Cooperating Organizations: University of Patras, Greece; Caramondani Desalination Plants. Funding: RPF, Cyprus

ELAIOS (ΕΛΑΙΟΣ): Study on the quality and stability of virgin olive oil. The role of endogenous enzymes and antioxidants – applications in biotechnology  
Cooperating Organization: National Institute of Research, Athens, Greece.  
Funding: RPF, Cyprus

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

Aroti, A., Leontidis, E., Dubois, M., "...", Monolayers, bilayers and micelles of zwitterionic lipids as model systems for the study of specific anion effects, *Colloids Surf. A*, Elsevier Publishing Company, Vol. 303(1-2), 144-158, 2007

Aroti, A., Leontidis, E., Dubois, M., "...", Effects of monovalent anions of the Hofmeister series on DPPC lipid bilayers. Part I. Osmotic Stress experiments and in-plane equation of state, *Biophys. J.*, Biophysical Society of America, Vol. 93, 1580-1590, 2007

Leontidis, E., et al., Effects of monovalent anions of the Hofmeister series on DPPC lipid bilayers. Part II. Modelling the perpendicular and lateral equation of state, *Biophys. J.*, Biophysical Society of America, Vol. 93, 1591-1607, 2007

Archontis, G., Leontidis, E., Dissecting the Stabilization of Iodide at the Air-Water Interface into Components: A Free Energy Analysis, *Chem. Phys. Lett.*, Elsevier Publishing Company, Vol. 420, 199-203, 2006

Orphanou, M., Leontidis, E., Kyprianidou-Leodidou T., "...", Formation mechanism of nanotubes comprising layers of PbS nanoparticles in polymer-surfactant solutions, *J. Colloid Int. Sci.*, Elsevier Publishing Company, Vol. 302, 170-177, 2006

Moleski, R., Leontidis, E., Krumeich, F., Controlled production of ZnO nanoparticles from zinc glycerolate in a sol-gel silica matrix, *J. Colloid Int. Sci.*, Elsevier Publishing Company, Vol. 302, 246-253, 2006

Archontis G., Leontidis E., Andreou G., Attraction of iodide ions by the free water surface, as revealed by simulations with a polarizable force field, based on Drude oscillators, *J. Phys. Chem. B.*, American Chemical Society, Vol. 109, 17957-17966, 2005

Evgeniou, E., Keramidas A.D., Pergantis SA., Leontidis E., NMR Investigation of the Interaction of Vanadate with Carbasilatrane in Aqueous Solutions, *Inorg. Chem.*, American Chemical Society, Vol. 44, 7511-7522, 2005

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Leodidis E.B., Hatton T.A., Amino Acids in AOT Reversed Micelles. 1. Determination of Interfacial Partition Coefficients Using the Phase-Transfer Method, *J. Phys. Chem.*, Amer. Chem. Soc., U.S.A., Vol. 94, 6400-6411, 1990

Leontidis E., Hofmeister Anion Effects on Surfactant Self-Assembly and the Formation of Porous Solids, *Curr. Opin. Colloid Int. Sci.*, Elsevier, The Netherlands Vol. 7, 81-91, 2002

Leontidis E., et al., Composite Nanotubes Formed by Self-Assembly of PbS Nanoparticles, *Nanoletters Amer. Chem. Soc.*, U.S.A., Vol. 3, 569-572, 2003

**IOANNIS PASHALIDIS** Associate Professor  
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■ **STUDIES**

Technical University of Munich, Germany, Diploma in Chemistry, 1987  
Technical University of Munich, Germany, Ph.D. in Environmental  
Radiochemistry, 1991

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

Pancyprian Association of Chemists • Chemists Registration Council, Cyprus  
(Secretary) • Bioethics Committee for Clinical Research in Cyprus • Radiation  
Protection Association, Germany • EUCHEMS Division of Nuclear and  
Radiochemistry, Europe • International Nuclear Society (INCS)

■ **RESEARCH INTERESTS**

Aquatic Chemistry of Heavy Metals; Radiochemistry of Natural Actinides;  
Radioanalytical Chemistry

■ **RESEARCH PROGRAMMES (University of Cyprus, 2005-2007)**

A Combined Theoretical and FTIR Spectroscopic Investigation of the  
Adsorption of Boric Acid on Metal Oxides  
(Principal Coordinator/Investigator)

■ **RESEARCH PROGRAMMES (External Funding, 2005-2007)**

Network of Excellence for Actinide Sciences (Co-investigator in ACTINET IP-  
Projects)  
Funding: FP6, E.U.

Fundamental Processes of Radionuclide Migration (Contractor)  
Funding: FP6, E.U.

Assessment of the Radiological Impact on the Environment nearby a  
Phosphate Fertilizer Industry (Principal Coordinator/Investigator)  
Funding: RPF, Cyprus

Infrastructure Development of the Molecular Spectroscopy Lab (FASMA)  
(Co-investigator)  
Funding: RPF, Cyprus

Improved computational system for the forecast of radiological impacts in  
buildings (Co-investigator)  
Funding: RPF, Cyprus

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

Lysandrou M., Charalambides A., Pashalidis I., Radon emanation from phosphogypsum and related mineral samples in Cyprus, *Radiation Measurements*, 42, 1583-1585, 2007

Fokianos K., Sarrou I., Pashalidis I., Increased radiation exposure by granite used as natural tiling rock in Cypriot houses, *Radiation Measurements*, 42, 446-448, 2007

Konstantinou M., Kolokassidou K. and Pashalidis I., Sorption of Cu(II) and Eu(III) Ions from Aqueous Solution by Olive Cake, *Adsorption*, 13, 33-40, 2007

Georghiou G. and Pashalidis I., Boron in groundwaters of Nicosia (Cyprus) and its treatment by reverse osmosis, *Desalination*, 215, 104-110, 2007

Kolokassidou K. and Pashalidis I., Potentiometric Investigations on the Interaction of humic Acid with Cu(II) and Eu(III) Ions, *Radiochimica Acta*, 94, 1-4, 2006

### ■ SELECTED CONFERENCE PROCEEDINGS

Kolokassidou K., Pashalidis, I., The effect of Humic Acid on the Solid Phase Stability and Solubility of UO<sub>2</sub>(OH)<sub>2</sub>, *11th International Conference on Chemistry and Migration Behaviour of Actinides and Fission Products in the Geosphere (MIGRATION'07)*, Munich, Germany, 48-49, 2007

Konstantinou M. and Pashalidis I., Adsorption of hexavalent uranium on Dunite, *International Conference Protection and Restoration of the Environment VIII*, Chania, Greece, 263-264, 2006

Georghiou G. and Pashalidis I., Boron in Ground waters of Nicosia (Cyprus) and its treatment by reverse osmosis, *MEDA WATER International Conference on Sustainable Water Management*, Rational Water Use, Wastewater Treatment and Reuse, Marrakech, Morocco, 1-2, 2006

Konstantinou M., Kassetta G., and Pashalidis I., Boron Adsorption on Alumina (Al<sub>2</sub>O<sub>3</sub>) and Magnesia (MgO) in Aqueous Solutions – A Comparative Study, *First International Conference on Sustainable Urban Wastewater Treatment and Reuse, SUWTR 2005*, Nicosia, Cyprus, 1-2, 2005

Konstantinou M. and Pashalidis I., Adsorption of Hexavalent Uranium on Biomass By-product, *1st International Nuclear Chemistry Congress*, Kusadasi, Turkey, 135-136, 2005

**COSTAS S. PATRICKIOS** Professor  
Department of Chemistry

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### ■ STUDIES

National Technical University of Athens, Greece, B.Sc. in Chemical Engineering, 1988

Massachusetts Institute of Technology, U.S.A., M.Sc. in Chem. Eng. Pract., 1990

Massachusetts Institute of Technology, U.S.A., Ph.D., 1993

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Chemical Society, U.S.A. • Polymer Network Group, International (Committee Member) • Materials Research Society, U.S.A.

### ■ RESEARCH INTERESTS

Synthesis-Characterisation of Block Copolymers; Synthesis-Characterisation of Model Networks; Synthesis-Characterisation of ABC Terpolymers; Group Transfer Polymerisation; Reversible Addition-Fragmentation Chain Transfer Polymerisation

### ■ RESEARCH PROGRAMMES (University of Cyprus, 2005-2007)

Hydrophilic Shell-cross-linked Polymer Networks for Drug Delivery

### ■ RESEARCH PROGRAMMES (External Funding, 2005-2007)

Amphiphilic Star-Shaped Polymers: Synthesis, Characterisation and Evaluation as Emulsifiers (ΠΟΛΥΦΥΤΟ)

Funding: RPF, Cyprus

Hydrolyzable Networks Based on Mixtures of Degradable Cross-Linkers: Synthesis, Characterisation and Application, (ΔΙΠΛΟΛΥΣΗ)

Funding: RPF, Cyprus

Amphiphilic Model Networks: Synthesis, Characterisation, Modelling and Applications (CHAMELEON), (Principal Investigator)

Funding: FP5, E.U.

Synthesis, Characterisation, Modeling and Application of Amphiphilic Hydrogels Based on Polyisobutylene (ΠΟΛΥΠΛΕΓΜΑ)

Funding: RPF, Cyprus

Synthesis, Characterisation and Application of Amphiphilic Hydrogels Prepared Using Controlled Radical Polymerization RAFT, (ΠΟΛΥΤΖΕΛ)

Funding: RPF, Cyprus

Multiblock Copolymers: Synthesis, Characterisation and Application, (ΠΟΛΥΑΔΡΟ)

Funding: RPF, Cyprus

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

Kali, G., et al., Synthesis and Characterization of Anionic Amphiphilic Model Conetworks Based on Methacrylic Acid and Methyl Methacrylate: Effects of Composition and Architecture, *Macromolecules*, 40, 2192-2200, 2007

Georgiou, T.K., Patrickios, C.S., Groh, P.W. "...", Amphiphilic Model Conetworks of Polyisobutylene Methacrylate and 2-(Dimethylamino)ethyl Methacrylate Prepared by the Combination of Quasi-Living Carbocationic and Group Transfer Polymerizations, *Macromolecules*, 40, 2335-2343, 2007

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Vamvakaki, M., Patrickios, C.S., Lindner, P. "...", Amphiphilic Networks Based on Cross-Linked Star Polymers: A Small-Angle Neutron Scattering Study, *Langmuir*, 23, 10433-10437, 2007

Themistou, E., Patrickios, C.S., Synthesis and Characterization of Polymer Networks and Star Polymers Containing a Novel, Hydrolyzable Acetal-Based Dimethacrylate Cross-Linker, *Macromolecules*, 39, 73-80, 2006

Kafouris, D., Themistou, E., Patrickios, C.S., Synthesis and Characterization of Star Polymers and Cross-Linked Star Polymer Model Networks with Cores Based on an Asymmetric, Hydrolyzable Dimethacrylate Cross-Linker, *Chem. Mater.*, 18, 85-93, 2006

Krasia, T.C., Patrickios, C.S., Amphiphilic Polymethacrylate Model Co-Networks: Synthesis by RAFT Radical Polymerization and Characterization of the Swelling Behavior, *Macromolecules*, 39, 2467-2473, 2006

Triftaridou, A.I., Vamvakaki, M., Patrickios, C.S., Synthesis of Amphiphilic (ABC)n Multiarm Star Triblock Terpolymers, *Macromolecules*, 38, 1021-1024, 2005

Georgiou, T.K., et al., Synthesis, Characterization and Evaluation as Transfection Reagents of Double-Hydrophilic Star Copolymers: Effect of Star Architecture, *Biomacromolecules*, 6, 2990-2997, 2005

#### ■ SELECTED CONFERENCE PROCEEDINGS

Triftaridou, A.I., et al., Three Different Types of Quasi-Model Networks: Synthesis by Group Transfer Polymerization and Characterization, *Polym. Bull.*, 58, 185-190, 2007

Hadjiantoniou, N., et al., Synthesis and Characterization of Three-Component Polyelectrolytic Amphiphilic Model Networks, *Macromol. Symp.*, 227, 135-142, 2005

**EFTYCHIA PINAKOULAKI** Lecturer  
Department of Chemistry

TEL.: 22892782, FAX: 22892801, E-mail: effiep@ucy.ac.cy

#### ■ STUDIES

University of Crete, Greece, B.Sc. in Chemistry, 1998

University of Crete, Greece, Ph.D. in Chemistry, 2002

#### ■ RESEARCH INTERESTS

Time-Resolved FTIR Spectroscopy; Gas Sensor Proteins; Protein Dynamics; Catalytic Mechanisms of Metalloenzymes; Nitrate and Nitrite Chemistry

#### PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

Varotsis, C., et al., The structure of the hyponitrite species in the heme Fe-Cu<sub>B</sub> center of ba<sub>3</sub> oxidase from *Thermus thermophilus*. *Angew. Chem. Int. Ed.*, 46, 2210-2214, 2007

Daskalakis, V., Pinakoulaki, E., "... Probing the environment of Cu<sub>β</sub> in heme-copper oxidases, *J. Phys. Chem. B*, 111, 10502-10509, 2007

Pinakoulaki, E., et al., Recognition and Discrimination of Gases by the Oxygen-sensing Signal Transducer Protein HemAT as Revealed by FTIR Spectroscopy, *Biochemistry*, 45, 7763-7766, 2006

Pinakoulaki, E., et al., Two ligand binding sites in the O<sub>2</sub>-sensing signal transducer HemAT: Implications for ligand recognition/discrimination and signaling, *Proc. Natl. Acad. Sci., U.S.A.*, 103, 14796-14801, 2006

Pinakoulaki, E., et al., Structural Dynamics of Heme-Copper Oxidases and Nitric Oxide Reductases: Time-resolved Step-Scan Fourier Transform Infrared and Time-resolved Resonance Raman Studies, *J. Raman Spectrosc*, 36, 337-349, 2005

Pinakoulaki, E., et al., Detection of the His-Heme Fe<sup>2+</sup>-NO Species in the Reduction of NO to N<sub>2</sub>O by ba<sub>3</sub>-Oxidase from *Thermus thermophilus*, *J. Am. Chem. Soc.*, 127, 15161-15167, 2005

## ANASTASIOS TASIPOULOS Assistant Professor

### Department of Chemistry

TEL.: 22892765, FAX: 22892801, E-mail: atasio@ucy.ac.cy

#### ■ STUDIES

University of Ioannina, Greece, B.Sc. Chemistry, 1995

University of Ioannina, Greece, Ph.D. in Inorganic Chemistry, 1999

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Association of Greek Chemists, Greece • American Chemical Society, U.S.A.

#### ■ RESEARCH INTERESTS

Synthesis and Characterisation of Paramagnetic Clusters; Synthesis and Characterisation of New Single - Molecule Magnets; Synthesis and Characterisation Models of Metalloenzymes; Synthesis and Characterisation of New Coordination Polymers

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Synthesis and Characterization of New Single – Molecule Magnets  
Cooperating Organizations: Institute of Materials Science, NCSR  
"Demokritos", Greece. Funding: RPF, Cyprus

Molecular Nanomagnets based on 3d metal ions: Synthesis,  
Magnetostructural Characterization and Organization on Surfaces  
Cooperating Organization: Department of Chemistry, University of  
Florida, U.S.A.. Funding: RPF, Cyprus

Synthesis and Characterization of new Magnetic Coordination Polymers based on 3d metal ions  
Cooperating Organizations: Institute of Materials Science, NCSR "Demokritos", Greece. Funding: RPF, Cyprus

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

- Abhudaya Mishra, Anastasios J. Tasiopoulos, "...", High nuclearity mixed MnIII/4f and MnIV/5f metal clusters: Preparation and properties of bimetallic complexes with [Mn<sub>10</sub>Ce<sub>4</sub>O<sub>10</sub>(OMe)<sub>6</sub>]<sup>18+</sup> and [Mn<sub>10</sub>Th<sub>6</sub>O<sub>22</sub>(OH)<sub>2</sub>]<sup>18+</sup> cores, *Inorganic Chemistry*, ACS Publications, U.S.A., 3105-3115, 2007
- Eleni E. Moushi, et al., A Large [Mn<sub>10</sub>Na]<sub>4</sub> Loop of Four Linked Mn<sub>10</sub> Loops, *Inorganic Chemistry*, ACS Publications, U.S.A., 3795-3797, 2007
- Constantina Papatriantafyllopoulou, Guillem Aromi, Anastasios J. Tasiopoulos, "...", Use of the Sulfate Ligand in 3d-metal Cluster Chemistry: A Family of Novel Hexanuclear Nickel(II) Complexes with 2-pyridyl Oxime Ligands, *European Journal of Inorganic Chemistry*, Wiley-VCH, Weinheim, Germany, 2761-2774, 2007
- Anastasios J. Tasiopoulos, et al., Mixed Transition Metal - Lanthanide Complexes at High Oxidation States: Heteronuclear CeIVMnIV Clusters, *Inorganic Chemistry*, ACS Publications, U.S.A., 9678-9691, 2007
- Theocharis C. Stamatatos, et al., 4-(Hydroxymethyl) pyridine and pyrimidine in manganese benzoate chemistry: Preparation and characterization of hexanuclear clusters featuring the {Mn<sub>4</sub>IIIMn<sub>2</sub>III(μ<sub>4</sub>-O)<sub>2</sub>}<sup>10+</sup> core, *Polyhedron*, Elsevier, 1737 - 1746, 2006
- Fanitsa A. Theophanous, Anastasios J. Tasiopoulos, "...", Evidence for the Formation of the (Ph<sub>3</sub>P)<sub>2</sub>Pt Complex of 3,7 Dimethyltricyclo [3.3.0.0<sup>3,7</sup>] oct-1(5)-ene, the Most Highly Pyramidalized Alkene in a Homologous Series. Isolation and X-ray Structure of the Product of the Ethanol Addition to the Complex, *Organic Letters*, ACS Publications, U.S.A., 3001-3004, 2006
- Theocharis C. Stamatatos, Eleanna Diamantopoulou, Anastasios J. Tasiopoulos, "...", Enneanuclear Ni(II) complexes from the use of the flexible ligand 2-pyridine-aldoxime: The nature of the inorganic anion does not affect the chemical and structural identity of the cationic cluster, *Inorganica Chimica Acta*, Elsevier, 4149-4157, 2006
- Eleni E. Moushi, et al., A Family of 3D Coordination Polymers Composed of Mn<sup>19</sup> Magnetic Units, *Angewandte Chemie International Edition*, Wiley-VCH, Weinheim, Germany, 7722-7725, 2006
- Anastasios J. Tasiopoulos, et al., [Mn<sub>12</sub>O<sub>12</sub>(OMe)<sub>2</sub>(O<sub>2</sub>CPh)<sub>16</sub>(H<sub>2</sub>O)<sub>2</sub>]<sub>2</sub>- Single-Molecule Magnets and Other Manganese Compounds from a Reductive Aggregation Procedure, *Inorganic Chemistry*, ACS Publications, U.S.A., 6324-6338, 2005
- Wolfgang Wernsdorfer, Muralee Murugesu, Anastasios J. Tasiopoulos, "...", Field-sweep-rate dependence of the coercive field of single-molecule magnets: A classical approach with applications to the quantum regime, *Physical Review B*, American Physical Society, U.S.A., Article Number: 212406, 2005

**CHARIS R. THEOCHARIS** Professor  
Department of Chemistry

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■ **STUDIES**

Brunel University, U.K., Bachelor of Technology in Applied Chemistry, 1979  
University of Cambridge, U.K., Ph.D. in Physical Chemistry, 1982

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

Royal Society of Chemistry, U.K., cchem FRSC (Fellow) • Society of Chemical Industry, U.K. • International Adsorption Society, U.S.A. • American Chemical Society • Pancyprrian Union of Chemists, Cyprus

■ **EDITORIAL BOARDS**

*Journal of Chemical Technology and Biotechnology*, U.K., Wiley InterScience  
*Chemistry Education Research and Practice Editorial Board*, U.K., RSC

■ **RESEARCH INTERESTS**

Surface and Bulk Properties of Ceria and Doped Ceria; Surface Texture and Properties of the Oxides and Hydroxides of Calcium and Magnesium; Adsorption Behaviour of MFI-Type Zeolites; Study of MOF's; Chemometric Investigation of Various Cypriot Products.

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

ZIBANTAYT, KOUMANTYP, MELISSA, ALCOOL  
Funding: RPF, Cyprus

**PUBLICATIONS**

---

■ **SELECTED JOURNAL PUBLICATIONS**

Davide Ballabio, et al., A Classification Model Built By Means Of Artificial Neural Networks For The Characterization Of The Traditional Cypriot Spirit Zivania, *Chemometrics And Intelligent Laboratory Systems*, 87, 78-84, 2007

A. Tillirou, and C.R. Theocharis, Preparation of Mesoporous Ceria in the Presence of Non-Aqueous Phases, *Studies in Surface Science and Catalysis*, Elsevier Science Publishers, 160, 639-644, 2006

C. Attipa, and C.R. Theocharis, Preparation and Characterization of Nanoporous Ceria Containing Heteroatoms, *Studies in Surface Science and Catalysis*, Elsevier Science Publishers, 160, 615-620, 2006

E. Panayi and C.R. Theocharis, Study of the Anomalous Behaviour of MFI Zeolites Towards Nitrogen Adsorption, *Studies in Surface Science and Catalysis*, Elsevier Science Publishers, 160, 273-278, 2006

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E. Hapeshi, and C.R. Theocharis, Preparation and Characterization of Nanoporous Solids With Composition  $C_xMn_{1-x}O_2 \cdot y$  With x Values 0 to 1, *Studies in Surface Science and Catalysis*, Elsevier Science Publishers, 160, 645-650, 2006

P. Petrakis, et al., Authenticity of the traditional cyprus spirit "Zivania" on the basis of  $^1H$  NMR Spectroscopy Diagnostic Parameters and Statistical Analysis, *J. Agric. Food Chem.*, 53, 5293-5303, 2005

C. R. Theocharis, G. Kyriacou, and M. Christophidou, Preparation and Characterization of Nanoporous Ceria Containing Heteroatoms, With and Without a Matrix, *Adsorption*, 11, 763-767, 2005

R. I. Kokkinofa and C. R. Theocharis, Chemometric Characterization of the Cypriot spirit "Zivania", *J. Agric. Food Chem.*, 53, 5067-5073, 2005

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

C.R. Theocharis, et al., The Solid State Photodimerisation of 2,5 Dibenzylidene cyclopentanone (DBCP): A Topochemical Reaction that Yields Amorphous Product, II, *J. Chem. Soc. Perkin Trans*, 71 76, 1984

M.R. Gelsthorpe and C.R. Theocharis, The Efficient Removal of Organic Templating Molecules from Aluminophosphate Molecular Sieves, *J. Chem. Soc. Chem. Commun*, 781 782, 1986

C.R. Theocharis, Coordination Polymers Based on 2,5 Dibenzylidene Cyclopentanone, Which are Photochemically Cross Linkable, *J. Chem. Soc. Chem. Commun*, 80 81, 1987



FACULTY OF PURE AND APPLIED SCIENCES  
**DEPARTMENT OF COMPUTER SCIENCE**

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## ACADEMIC STAFF

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ANDREAS S. ANDREOU

*Assistant Professor*

CHRIS CHRISTODOULOU

*Assistant Professor*

YIORGOS L. CHRYSANTHOU

*Associate Professor*

MARIOS D. DIKAIAKOS

*Associate Professor*

YANNIS DIMOPOULOS

*Associate Professor*

PARASKEVAS EVRIPIDOU

*Professor*

CHRYSSIS GEORGIU

*Lecturer*

ANTONIOS C. KAKAS

*Professor*

MARIOS MAVRONICOLAS

*Professor*

GEORGE-ANGELOS PAPADOPOULOS

*Professor*

ELPIDA KERAVNOU-PAPAILIOU

*Professor*

CONSTANTINOS S. PATTICHIS

*Professor*

ANNA PHILIPPOU

*Associate Professor*

ANDREAS PITSILLIDES

*Professor*

GEORGE SAMARAS

*Professor*

YIANNAKIS SAZEIDES

*Assistant Professor*

CHRISTOS N. SCHIZAS

*Professor*

PEDRO MOURA TRANCOSO

*Assistant Professor*

VASOS VASSILIOU

*Lecturer*

## DEPARTMENT OF COMPUTER SCIENCE

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The Department of Computer Science attaches major importance to research since it is through research that it can accomplish two of its foremost missions: to contribute to the development of Computer Science, and to strengthen the contribution of Computer Science to the development of local industry and Cypriot society at large. Computer Science not only investigates the basic theoretical issues related to the discipline, but also seeks to identify practical methods that will provide the basis for effective solutions to problems of a more general nature. It is hoped that through the development of such methods, Computer Science research will significantly improve our quality of life.

In 2003, the Department moved to the new campus of the University where it has its own spacious, state-of-the-art facilities. The Department's move to the new facilities coincided with a rapid increase in its research projects and units, funded mainly by the European Union (Fifth and Sixth Research Framework Programmes) and the Cyprus Research Promotion Foundation. This fortunate coincidence has helped to consolidate and further develop the research activities of the Department. In the context of its strategic planning, the Department has established and began operating the following thirteen Research Laboratories:

1. Component – Based Systems
2. Computer Architecture Laboratory
3. E-Commerce Laboratory
4. Graphics and Hypermedia Laboratory
5. High Performance Computing Systems Laboratory
6. Laboratory for Artificial Intelligence and Intelligent Systems
7. Laboratory for Foundations of Computing Systems and Theoretical Computer Science
8. Medical Informatics Laboratory
9. Mobile and Wireless Computing Laboratory
10. Multimedia Research and Development Laboratory
11. Networks Laboratory
12. Pervasive Computing Laboratory
13. Software Engineering and Internet Technologies Laboratory

../..

These laboratories currently employ about 55 full-time researchers. During the years 2005 – 2007, faculty members of the Department have utilised these laboratories for 22 research programmes, with a total budget of € 5,763,275.

Some general areas of the Department's research activities include: Algorithms and Complexity, Artificial Computational Intelligence, Computer Architecture, Computer Graphics, Computer Networks, Databases, Intelligent Systems, Internet Technologies, Medical Information Systems and Telemedicine, Mobile Computing, Parallel and Distributed Systems, Software Engineering and System Specification and Verification. By strengthening its collaborations with other universities and research organizations abroad and by organizing international conferences in Cyprus, the Department continues to broaden the areas of its research activities.

George Papadopoulos  
Chairperson

## ANDREAS S. ANDREOU Assistant Professor Department of Computer Science

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### ■ STUDIES

University of Patras, Greece, B.Sc., 1993  
University of Patras, Greece, Ph.D., 2000

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

IEEE Computer Society, International • ACM – Association for Computing Machinery, International

### ■ RESEARCH INTERESTS

Software Engineering; Web Engineering and Mobile Software Engineering; Intelligent Information Systems; Computational Intelligence in Software Engineering

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Nature-GIS: A European thematic network for Protected Areas/Nature Preservation and Geographical Information  
Cooperation with 18 European universities and other organizations.  
Funding: E.U.

La Navigation du Savoir: Network of Multimedia Poles for the Transmission of Marine Knowledge  
Cooperation with 14 European universities and other organizations.  
Funding: E.U.

GENESIS: Enterprise Application Interoperability - Integration for SMEs, Governmental Organizations and Intermediaries in the New European Union  
Cooperation with 13 European private enterprises and other organizations. Funding: E.U.

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

Stephanos Mavromoustakos and Andreas S. Andreou, WAQE: A Web Application Quality Evaluation Model, *International Journal of Web Engineering and Technology (IJWET)*, Vol. 3, No. 1, 96-120, 2007

Andreas S. Andreou and Marios Tziakouris, A Quality Framework for Developing and Evaluating Original Software Components, *Information and Software Technology*, Vol. 49, Issue 2, 122-141, 2006

A.S. Andreou, N.H. Mateou, and G.A. Zombanakis, Soft Computing for Crisis Management and Political Decision Making: The Use of Genetically Evolved Fuzzy Cognitive Maps, *Soft Computing Journal*, Vol. 9, Issue 3, 194-210, 2005

A.S. Andreou, et al., Key issues for the design and development of mobile commerce services and applications, *International Journal of Mobile Communications*, Vol.3, No 3, 303-323, 2005

#### ■ SELECTED CONFERENCE PROCEEDINGS

Efi Papatheocharous and Andreas S. Andreou, Software Cost Estimation Using Artificial Neural Networks With Inputs Selection, *Proceedings of the 9th International Conference on Enterprise Information Systems (ICEIS2007)*, Funchal-Madeira, Portugal, 398-407, 2007

A.S. Andreou, K.A. Economides and A.A. Sofokleous, An automatic software test-data generation scheme based on data flow criteria and genetic algorithms, *Proceedings of the 7th IEEE International Conference on Computer and Information Technology*, Fukushima, Japan, 867-872, 2007

Constantinos Stylianou and Andreas Andreou, A Hybrid Software Component Clustering and Retrieval Scheme Using an Entropy-based Fuzzy k-Modes Algorithm, *Proceedings of the IEEE International Conference on Tools with Artificial Intelligence (ICTAI)*, Vol. 1, Patra, Greece, 202-209, 2007

Andreas S. Andreou, Dimitrios G. Vogiatzis, George A. Papadopoulos, Intelligent Classification and Retrieval of Software Components, *Proceedings of the 30th Annual International Computer Software and Applications Conference (COMPSAC'06)*, 37-40, Chicago, U.S.A., 2006

Andreas S. Andreou, Constantinos Leonidou, Nonparametric Analysis Of Software Reliability: Revealing the Nature of Software Failure Dataseries, *Proceedings of the 7th International Conference on Enterprise Information Systems (ICEIS2005)*, Vol. I, 138-145, Miami, U.S.A., 2005

N.H. Mateou, C. Stylianou and A.S. Andreou, Hybrid Fuzzy Cognitive Map Modeller: A Novel Software Tool for Decision Making, *Proceedings of the 4th IEEE International Workshop on Soft Computing as Transdisciplinary Science and Technology (WSTST05)*, Springer-Verlag, Murooran, Japan, 851-862, 2005

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Andreou, A.S., Promoting Software Quality Through a Human, Social and Organizational Requirements Elicitation Process, *Requirements Engineering Journal*, Vol. 8, 85-101, 2003

Andreou, A.S., Introducing a Process Framework for Implementing Models of Large-Scale Real-World Systems in Software, *Journal of Software Process: Improvement and Practice*, Issue 9, 133-155, 2004

**Editing**

Andreas S. Andreou and George A. Zombanakis (Eds), *Intelligent Information Systems Applied to Complicated Defence Problems: The Greek-Turkish Arms Race and the Cyprus Issue*, Papazissis Publishers IFCF, Athens, 2003

## CHRIS CHRISTODOULOU Assistant Professor Department of Computer Science

TEL.: 22892752, FAX: 22892701, E-mail: cchrist@ucy.ac.cy

**STUDIES**

Queen Mary and Westfield College, University of London, U.K., BEng in Electronic Engineering, 1991

King's College London, University of London, U.K., Ph.D. in Neural Networks/Neuroinformatics/Computational Neuroscience, 1997

**PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

Cyprus Scientific and Technical Chamber (ETEK), Cyprus

**RESEARCH INTERESTS**

Computational Neuroscience and Neuroinformatics; Neural Coding; Neural Networks and their Applications; Machine Learning; Bioinformatics

**RESEARCH PROGRAMMES (University of Cyprus 2005-2007)**

Can self-control through precommitment behaviour be explained by evolutionary game theory within a computational connectionist model? (Principal Investigator)

**PUBLICATIONS****CHAPTERS IN BOOKS**

Banfield, G. and Christodoulou, C., Can Self-Control be Explained through Games? *Modeling Language, Cognition and Action, Progress in Neural Processing*, A. Cangelosi, G. Bugmann, R. Borisjuk (Eds), World Scientific: Singapore, Vol. 16, 321-330, 2005

Draganova, D., Lanitis, A. and Christodoulou, C., Restoration of Partially Occluded Shapes of Faces Using Neural Networks, *Computer Recognition Systems, Advances in Soft Computing*, M. Kurzynski, et al. (Eds), Springer, Berlin, Vol. 30, 767-774, 2005

**DISTINGUISHED PUBLICATIONS (before 2005)**

Bugmann, G., Christodoulou C. and Taylor, J. G., Role of temporal integration and fluctuation detection in the highly irregular firing of a Leaky Integrator neuron with partial reset, *Neural Computation*, 9, 5, 985-1000, 1997

Christodoulou, C., Bugmann, G. and Clarkson, T. G., A spiking neuron model: dynamic applications and learning, *Neural Networks*, 15, 891-908, 2002

Lanitis, A., Draganova, C. and Christodoulou, C., Comparing Different Classifiers for Automatic Age Estimation, *IEEE Transactions on Systems, Man, and Cybernetics; Part B: Cybernetics*, 34, 621-628, 2004

**YIORGOS L. CHRYSANTHOU** Associate Professor  
Department of Computer Science

TEL.: 22892719, FAX: 22892701, E-mail: yorgos@ucy.ac.cy

■ **STUDIES**

Queen Mary and Westfield College, University of London, U.K., B.Sc. in Computer Science and Statistics, 1990

Queen Mary and Westfield College, University of London, U.K., Ph.D. in Computer Graphics, 1996

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

IEEE, U.S.A. • ACM, U.S.A. • Eurographics, Europe

■ **RESEARCH INTERESTS**

Computer Graphics; Virtual Reality; Computer Simulation

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

SCOLIOSIS, Automatic photogrammetry methods for diagnosis and follow-up of scoliosis

Cooperating Organizations: Geoimaging Ltd; Aristotle University of Thessaloniki; Private Clinic K. Kontozis; Prof. Thanasis Zavitsanakis.

Funding: RPF, Cyprus

INTUITION, Network of excellence on VR and VE applications for future workspaces

Cooperating Organizations: 56 European research institutes and companies. Funding: E.U.

TONEMAP, High fidelity images for a VR system with application to military training

Cooperating Organizations: Intercollege, Cyprus; Ministry of Defence, Cyprus. Funding: RPF, Cyprus

KIKIPES, Avatar navigation and animation for large virtual environments

Cooperating Organization: Frederic Institute of Technology, Cyprus. Funding: RPF, Cyprus

## PUBLICATIONS

---

### ■ BOOKS

#### Editing

Ayellet Tal, Andelos Amditis and Yiorgos Chrysanthou (Eds), *Proceedings of the 13th ACM Symposium on Virtual Reality Software and Technology*, ACM Press, U.S.A., 2006

Rudy Darken and Yiorgos Chrysanthou (Eds), *Proceedings of the 12th ACM Symposium on Virtual Reality Software and Technology*, ACM Press, U.S.A., 2005

### ■ SELECTED JOURNAL PUBLICATIONS

A. Lerner, Y. Chrysanthou and Lischinski, Crowd by Example, *Computer Graphics Forum*, 26(3):655–664, 2007

S. Stylianou and Y. Chrysanthou, Crowd Self Organization, Streaming and Short PathSmoothing, *Journal of WSCG*, 14(1):33–40, 2006

A. Lerner, Y. Chrysanthou and D. Cohen-Or, Efficient Cells-and-portals Partitioning, *Computer Animation and Virtual Worlds*, 17(1):21–40, 2006

### ■ SELECTED CONFERENCE PROCEEDINGS

Benjamin Roch, et al., Interactive Local Tone Mapping Operator with the Support of Graphics Hardware, *Spring Conference on Computer Graphics*, Budmerice Castle, Slovakia, 2007, <http://wscg.zcu.cz/WSCG2007/wscg2007.htm>

Zanyi E., Chrysanthou Y., Bashford-Rogers T. "...", High Dynamic Range Display of Authentically Illuminated Byzantine Art from Cyprus, *VAST 2007*, Brighton, U.K., 2007 [www.vast2007.org/](http://www.vast2007.org/)

Georgios Stylianou and Yiorgos Chrysanthou, Integrated levels of detail, *ACM VRST 2005*, Monterey, California, 177–183, 2005

Georgios Stylianou and Yiorgos Chrysanthou, Crest Line Extraction From Point Clouds, *GrafiCon 2005*, Novosibirsk, Russia, 139–144, 2005

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

#### Authorship

Mel Slater, Anthony Steed and Yiorgos Chrysanthou, *Computer Graphics and Virtual Environments: From Realism to Real-Time*, Addison Wesley, U.K., 2002

Y. Chrysanthou and M. Slater, Computing Dynamic Changes to BSP Trees, *Computer Graphics Forum*, Blackwell Publishers, MA, U.S.A., Vol. 11, issue 3, 321–332, 1992

D. Cohen-Or, Y. Chrysanthou, C. Silva, "...", A Survey of Visibility for Walk-through Applications, *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, Published by the IEEE Society, New York, U.S.A., Vol. 9, issue 3, 412–431, 2003

**MARIOS D. DIKAIAKOS** Associate Professor  
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■ **STUDIES**

University of Athens, Greece, Dipl.-ing. in Electrical Engineering, 1988  
Princeton University, NJ, U.S.A., M.A. in Computer Science, 1991  
Princeton University, NJ, U.S.A., Ph.D. in Computer Science, 1994

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

Association for Computing Machinery, U.S.A. (Senior Member) • Computer Society, IEEE, U.S.A. • Technical Chamber of Greece (Chartered Engineer)

■ **RESEARCH INTERESTS**

Network-Centric Computing; Grid Computing; Web Technologies; Vehicular Computing; Software Systems and Tools

■ **EDITORIAL BOARDS**

*Journal of Ubiquitous Computing and Intelligence (JUICI)*, U.S.A., American Scientific Publishers (ASP)

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

SEARCHiN, Marie Curie Programme (Principal Investigator)

Funding: FP6, E.U. (Transfer of Knowledge Action)

g-Eclipse: Specific Targeted Research Project, Grid Technologies (Principal Investigator, PI: Harald Kornmeyer, FZK, Germany)

Funding: FP6-IST, E.U.

EGEE-II: Enabling Grids for E-science and industry in Europe (Principal Investigator, PI: Dr. B. Jones, CERN, Switzerland)

Funding: FP6-IST, E.U.

HEALTHWARE: Standard and interoperable satellite solution to deploy Health care services over wide areas (Principal Investigator, PI: Pascal Lochelongue, Alcatel Space, France)

Funding: FP6-IST, E.U.

eScienceCY: Development of a Cypriot Infrastructure for eScience (Principal Investigator)

Funding: RPF, Cyprus

"SaferNet" European Commission. Safer Internet Programme (Principal Investigator)

Funding: E.U.

CoreGrid: Network of Excellence on Foundations, Software Infrastructures and Applications for large scale distributed, Grid and Peer-to-Peer Technologies (Principal Investigator, PI: Dr. T. Priol, IRISA/INRIA, Rennes, France)

Funding: FP6-IST, E.U.

EGEE: Enabling Grids for E-science and industry in Europe (Principal Investigator, PI: Dr. F. Gagliardi, CERN, Switzerland)

Funding: FP6-IST, E.U.

## PUBLICATIONS

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### ■ BOOKS

#### Editing

Domenico Talia, Angelos Bilas and Marios D. Dikaiakos (Eds), *Knowledge and Data Management in Grids*, Springer, 2006

### ■ CHAPTERS IN BOOKS

Charis Papadakis, et al., A Feedback-based Approach to Reduce Duplicate Messages in Unstructured Peer-to-Peer Networks, *Integrated Research in GRID Computing*, Gortlach, Sergei; Danelutto, Marco (Eds), Springer, 103-118, 2006

Rizos Sakellariou, et al., Scheduling Workflows with Budget Constraints, *Integrated Research in GRID Computing*, Gortlach, Sergei, Danelutto, Marco (Eds), Springer, 189-202, 2006

A. Pitsillides, G. Samaras. M.D. Dikaiakos, "...", A Collaborative Virtual Medical Team for Home Healthcare of Cancer Patients, *M-Health: Emerging Mobile Health Systems*, Robert H. Istepanian, Swamy Laxminarayan, Constantinos S. Pattichis (Eds), *International Topics in Biomedical Engineering Series*, Springer, 247-266, 2006

M. D. Dikaiakos, Y. Ioannidis, R. Sakellariou, Information Services for Large-Scale Grids: A Case for a Grid Search Engine, *Engineering the Grid: status and perspective*, Beniamino DiMartino, et al. (Eds), American Scientific Publishers, 571-583, 2006

### ■ SELECTED JOURNAL PUBLICATIONS

K. Neocleous, M.D. Dikaiakos, P. Fragopoulou, "...", Failure Management in Grids: The Case of the EGEE Infrastructure, *Parallel Processing Letters*, Vol. 17, Issue 4, World Scientific, 391-410, 2007

M. D. Dikaiakos, A. Florides, T. Nadeem, "...", Location-aware Services over Vehicular Ad-Hoc Networks using Car-to-Car Communication, *IEEE Journal on Selected Areas in Communications*, Vol. 25, Issue 8, 1590-1602, 2007

G. Tsouloupas, M. D. Dikaiakos, GridBench: A Tool for the Interactive Performance Exploration of Grid Infrastructures, *Journal of Parallel and Distributed Computing*, Elsevier, Vol. 67, 1029-1045, 2007

M. D. Dikaiakos, Grid Benchmarking: Vision, Challenges and Current Status, *Concurrency and Computation, Practice and Experience*, Wiley, Vol. 19, Issue 1, 89-105, 2007

M. D. Dikaiakos, A. Stassopoulou, L. Papageorgiou, An Investigation of WWW Crawler behavior: Characterization and Metrics, *Computer Communications*, Elsevier, Vol. 28, Issue 8, 880-897, 2005

#### ■ SELECTED CONFERENCE PROCEEDINGS

W. Xing, et al., An ActOn-based Semantic Information Service for EGEE, *Proceedings of the 8th IEEE/ACM International Conference on Grid Computing (Grid2007)*, IEEE Computer Society, 81-88, 2007

A. Stassopoulou and M. D. Dikaiakos, A Probabilistic Reasoning Approach for Discovering Web Crawler Sessions, *Advances in Data and Web Management, Joint 9th Asia-Pacific Web Conference, APWeb 2007, and 8th International Conference, on Web-Age Information Management, WAIM 2007*, Huang Shan, China, Lecture Notes in Computer Science, Vol. 4505, 265-272, 2007

K. H. Gjermundrod, et al., ICGrid: Enabling Intensive Care Medical Research on the EGEE Grid, *From Genes to Personalized HealthCare: Grid Solutions for the Life Sciences*, N. Jacq, et al. (Eds), *Proceedings of HealthGrid*, IOS press, 248-257, 2007

Wei Xing, M. D. Dikaiakos, and R. Sakellariou, A Core Grid Ontology for the Semantic Grid, *Proceedings of the 6th IEEE International Symposium on Cluster Computing and the Grid (CCGrid 2006)*, Singapore, IEEE Computer Society, 178-184, 2006

M. D. Dikaiakos, et al., VITP: A Vehicular Information Transfer Protocol, *Proceedings of the Second ACM International Workshop on Vehicular Ad Hoc Networks (VANET 2005)*, Germany, 30-39, 2005

**YANNIS DIMOPOULOS** Associate Professor  
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#### ■ STUDIES

Athens University of Economics, Greece, B.Sc. in Computer Science, 1987

Athens University of Economics, Greece, Ph.D. in Computer Science, 1992

#### ■ RESEARCH INTERESTS

Knowledge Representation and Reasoning; Non-monotonic Reasoning;  
Artificial Intelligence Planning; Constraint Satisfaction

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Algorithmic Decision Theory. Cooperation between 20 European countries.

Coordinator: University Paris Dauphine, France

Funding: E.U. (COST Action)

## PUBLICATIONS

### ■ SELECTED CONFERENCE PROCEEDINGS

Y. Dimopoulos, F. Athienitou, Learning CP-Networks: A preliminary investigation  
*VLDB'07 Multidisciplinary, Workshop on Advances in Preference Handling*, Vienna, 2007  
<http://www.dcs.bbk.ac.uk/uptw/v/dbw07/mpzet/>

L. Amgoud, Y. Dimopoulos, P. Moraitis, A unified and general framework for  
argumentation-based, Negotiation, *6th International Joint Conference on Autonomous  
Agents and Multi-Agents Systems, (AAMAS'2007)*, Honolulu, Hawaii, 967-974, 2007

Y. Dimopoulos, P. Moraitis, A. Tsoukias, Qualitative Preference Modelling in Constraint  
Satisfaction, *Decision Theory and Multi-agent Planning*, G. Della Riccia, et al. (Eds),  
Springer, 15-29, 2006

Y. Dimopoulos, K. Stergiou, Propagation in CSP and SAT, *12th International Conference  
on Principles and Practice of Constraint Programming, (CP'06)*, Nantes, France, Springer,  
137-151, 2006

Y. Dimopoulos, P. Moraitis, Multi-Agent Coordination and Cooperation through  
Classical Planning, *IEEE/WIC/ACM International Conference On Intelligent Agent  
Technology, (IAT 2006)*, IEEE Press, Hong-Kong, 398-402, 2006

Y. Dimopoulos, et al., The Benchmark Domains of the Deterministic Part of IPC-5,  
Booklet of the 2006 Planning Competition, ICAPS'06, Lake District, U.K., 2006,  
<http://ipcs.ing.unibs.it>

Y. Dimopoulos, P. Moraitis, A. Tsoukias, Extending Variable Importance in Preference  
Networks, *IJCAI-05 Multidisciplinary Workshop on Advances in Preference Handling*,  
Edinburgh, 73-78, 2005

**PARASKEVAS EVRIPIDOU** Professor  
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### ■ STUDIES

University of Southern California, U.S.A., B.Sc. in Electrical Engineering, 1985

University of Southern California, U.S.A., M.Sc. in Computer Engineering, 1986

University of Southern California, U.S.A., Ph.D. in Computer Engineering, 1990

## ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

IEEE, U.S.A. • ACM, U.S.A. • IFIP Working Group 103

## ■ EDITORIAL BOARDS

*International Journal of Parallel Programming*, Netherlands, Springer

## ■ RESEARCH INTERESTS

Parallel/Distributed Processing and Computer Architecture with Specialization on Data-Flow/Data-Driven Systems; Mobile and Pervasive Computing

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Financial Literacy Stimulation (E.U. LLLP Grant Agreement)

Funding: E.U. LLLP

Mediterranean Islands 3-D Aerial Navigation (MED-ISOLAE-3D EC)

Funding: E.U.

STARRS: Sensors for Terrestrial and Airborne Radio-transmitter Rescue Search

Funding: E.U.

OpenIT – CODE: A.1.039

Funding: Community Initiative Programme INTERREG IIIB ARCHIMED

CMPs-based network and storage I/O subsystems

Funding: HiPEAC, European Network of Excellence on High-Performance Embedded Architecture and Compilation

BASE2 Broadband Access Satellite Enabled Education

Funding: E.U.

W-Response: Workflow and RFID enabled system for automated and paperless Warehouse operations IST

Funding: E.U.

DIKTIS: Provision of Tourist Services through Web-service Orchestration

Funding: RPF, Cyprus

DDM-CMP: Data-Driven Multithreading on a Chip Multiprocessor – Development and Implementation

Funding: RPF, Cyprus

AERAS AEIΦO/1104/09

Funding: RPF, Cyprus

MITIS: Development Relationally complete Visual Query Language

Funding: RPF, Cyprus

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

K. Stavrou, C. Kyriacou, P. Evripidou "...", Chip Multiprocessor Based on Data-Driven Multithreading Model, *International Journal of High Performance Systems Architecture*, Vol. 1, No.1, 34 – 43, 2007

Stavros Papastavrou, George Samaras, Paraskevas Evripidou "...", A Decade of Dynamic Web Content: A Structured Survey on Past and Present Practices and Future Trends, *IEEE Communications Surveys and Tutorials*, Vol. 8, no. 2, 52-60, 2006

C. Kyriacou, P. Trancoso, P. Evripidou, CacheFlow: Cache Optimizations for Data Driven Multithreading, *Parallel Processing Letters*, 16(2), 229-244, 2006

C. Kyriacou, P. Evripidou, P. Trancoso, Data Driven Multithreading Using Conventional Microprocessors, *IEEE Transactions on Parallel and Distributed Systems*, 17(10), 1176-1188, 2006

P. Evripidou, G. Samaras, Metacomputing with Mobile Agents, *International Journal of Parallel Programming*, 34(5), 429-458, 2006

### ■ SELECTED CONFERENCE PROCEEDINGS

E. Tamani and P. Evripidou, A Pragmatic and Pervasive Methodology to Web Service Discovery, *OTM 2006 Workshops Proceedings*, Springer, 1285-1294, 2006

K. Stavrou, P. Trancoso, P. Evripidou, Hardware Budget and Runtime System for Data-Driven Multithreaded Chip Multiprocessor, *Asia-Pacific Computer Systems Architecture Conference*, 244-259, 2006

E. Tamani and P. Evripidou, Applying Trust Mechanisms in an agent-based P2P Network of Service Providers and Requestors, *Proceedings of the Sixth IEEE International Symposium on Cluster Computing and the Grid (CCGRID'06)*, 13-23, 2006

P. Papastavrou, G. Samaras, P. Evripidou, "...", CFP Taxonomy of the Approaches for Dynamic Web Content Acceleration, *Proc. of the 9th East-European Conference on Advances in Databases and Information Systems (ADBIS 2005)*, Tallinn, Estonia, 365-378, 2005

S. Polyviou, G. Samaras, P. Evripidou, A Relationally Complete Visual Query Language for Heterogeneous Data Sources and Pervasive Querying, *Proceedings of the 21st International Conference on Data Engineering (ICDE 2005)*, Tokyo, Japan, 471-482, 2005

### ■ DISTINGUISHED PUBLICATIONS (Before 2005)

N. Neophytou, P. Evripidou, Net-dbx: A Web Based Debugger of MPI Programs over Low Bandwidth Lines, *IEEE Transactions on Parallel and Distributed Systems*, Vol. 12, No 9, 986-995, 2001

D. Cann, P. Evripidou, Advanced Array Optimisations for High Performance Functional Languages, *IEEE Transactions on Parallel and Distributed Systems*, 6(3), 229-239, 1995

P. Evripidou, J-L. Gaudiot, Block Scheduling of Iterative Algorithms and Graph Priority in a Simulated Data-flow Multiprocessor, *IEEE Transactions on Parallel and Distributed Systems*, 4(4), 398-413, 1993

## **CHRYSSIS GEORGIU** Lecturer Department of Computer Science

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### ■ STUDIES

University of Cyprus, Cyprus, B.Sc. in Mathematics, 1998

University of Connecticut, U.S.A., M.Sc. in Computer Science and Engineering, 2002

University of Connecticut, U.S.A., Ph.D. in Computer Science and Engineering, 2003

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Association for Computing Machinery (ACM) (Professional Member)

- Institute of Electrical and Electronic Engineers (IEEE) (Affiliated Member)
- European Association for Theoretical Computer Science (EATCS)

### ■ RESEARCH INTERESTS

Distributed and Parallel Computing; Fault-Tolerance and Dependability; Algorithms and Complexity

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

PROODOS: Specification and Verification of Protocols in Ad Hoc Networks using Formal Methods (Scientific Leader)

Funding: RPF, Cyprus

AEOLUS: Algorithmic Principles for Building Efficient Overlay Computers

Funding: FP6-IST, E.U.

DELIS: Dynamically Evolving, Large-Scale Information Systems

Funding: FP6-IST, E.U.

CoreGRID: European Research Network on Foundations, Software

Infrastructures and Applications for Large Scale Distributed, GRID and Peer-to-Peer Technologies

Funding: FP6-IST, E.U.

AUTONOMIC: Sistemas Distribuidos Autonomicos (Autonomic Distributed Systems), Confiabiles y de Altas Prestaciones (Principal Investigator)

Funding: Comunidad de Madrid, Spain

## PUBLICATIONS

---

### ■ BOOKS

#### Authorship

Chryssis Georgiou and Alexander A. Shvartsman, *Do-All Computing in Distributed Systems: Cooperation in the Presence of Adversity*, Springer, New York, U.S.A., 2007

### ■ SELECTED JOURNAL PUBLICATIONS

Chryssis Georgiou, Peter M. Musial, Alex A. Shvartsman, Long-Lived RAMBO: Trading Knowledge for Communication, *Theoretical Computer Science*, Vol. 383, No. 1, Elsevier, 59–85, 2007

Chryssis Georgiou, Alexander Russell, and Alex A. Shvartsman, Failure Sensitive Analysis of Parallel Algorithms with Controlled Memory Access Concurrency, *Parallel Processing Letters*, Vol. 17, No. 2, World Scientific, 153–168, 2007

James Aspens, et al., Eight Open Problems in Distributed Computing, *Bulletin of the European Association for Theoretical Computer Science*, No. 90, 109–126, 2006

Chryssis Georgiou, Dariusz R. Kowalski, and Alex A. Shvartsman, Efficient Gossip and Robust Distributed Computation, *Theoretical Computer Science*, Elsevier, Vol. 347, No. 1, 130–166, 2005

Chryssis Georgiou, Alexander Russell and Alex A. Shvartsman, Work-Competitive Scheduling for Cooperative Computing with Dynamic Groups, *SIAM Journal of Computing*, Society for Industrial and Applied Mathematics, Vol. 34, No. 4, 848–862, 2005

Antonio Fernandez, Chryssis Georgiou, Alexander Russell, "...", The Do-All Problem with Byzantine Processor Failures, *Theoretical Computer Science*, Elsevier, Vol. 333, No. 3, 433–454, 2005

### ■ SELECTED CONFERENCE PROCEEDINGS

Antonio Fernandez, Chryssis Georgiou, Luis Lopez, "...", Reliably Executing Tasks in the Presence of Untrusted Entities, *Proceedings of the 25th IEEE Symposium on Reliable Distributed Systems (SRDS 2006)*, Leeds, U.K., 39–50, 2006

Chryssis Georgiou, Nicolas C. Nicolaou and Alex A. Shvartsman, Fault-Tolerant SemiFast Implementations of Atomic Read/Write Registers, *Proceedings of the 18th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA 2006)*, Cambridge, MA, U.S.A., 281–290, 2006

Chryssis Georgiou, Nancy Lynch, Panayiotis Mavrommatis, "...", Automated Implementation of Complex Distributed Algorithms Specified in the IOA Language, *Proceedings of the 18th International Conference on Parallel and Distributed Computing Systems (PDCS 2005)*, Las Vegas, NV, U.S.A., 128-134, 2005

Chryssis Georgiou, Peter Musial and Alex A. Shvartsman, Developing a Consistent Domain-Oriented Distributed Object Service, *Proceedings of the 4th IEEE International Symposium on Network Computing and Applications (NCA 2005)*, Cambridge, MA, U.S.A., 149–158, 2005

## ANTONIS C. KAKAS Professor Department of Computer Science

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### ■ STUDIES

Imperial College, U.K., B.Sc. in Mathematics, 1980  
Imperial College, U.K., M.Sc. in Computer Science, 1987  
Imperial College, U.K., Ph.D. in Theoretical Physics, 1984

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

European Association of Artificial Intelligence • American Association of Artificial Intelligence • Association of Logic Programming

### ■ EDITORIAL BOARDS

*Journal of Applied Logic* (Scientific Area Editor), Netherlands, Elsevier  
*AI Communications*, Netherlands, IOS Press  
*Journal of Theory and Practice of Logic Programming*, U.K., Cambridge University Press

### ■ RESEARCH INTERESTS

Argumentation; Abductive and Inductive Reasoning; Computational Bioscience; Reasoning about Action and Change; Cognitive Agents

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Computational logic model for the description, analysis and verification of global and open societies of heterogeneous computees (SOCS)  
Funding: FP5-IST, E.U.  
European Network in Computational Logic (CoLogNet)  
Funding: FP5-IST, E.U.  
Working Group on Answer Set Semantics (WASP)  
Funding: FP5, E.U.

## PUBLICATIONS

---

### ■ BOOKS

#### Editing

A.C. Kakas and G. Lakemeyer, *Actions and Change, Proceedings of the Special Track of the 11th International Workshop on Non-Monotonic Reasoning, NMR'2006*, Lake District, U.K., 2006

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P. Flach, A.C. Kakas and O. Ray, *Abduction and Induction in Artificial Intelligence and Scientific Modeling, Proceedings of the ECAI International Workshop on the integration of Abduction and Induction in Artificial Intelligence, AIAI'06, Trento, Italy, 2006*

#### ■ SELECTED JOURNAL PUBLICATIONS

A. Tamaddoni-Nezhad, R.Chaleil, A.C. Kakas, "...", Modelling the effects of toxins in metabolic networks, *IEEE Engineering in Medicine and Biology*, Vol. 26, No 2, 37-47, 2007

A. Tamaddoni-Nezhad, R.Chaleil, A.C. Kakas, "...", Application of abductive ILP to learning metabolic network inhibition from temporal data, *Journal of Machine Learning*, Springer, Vol. 64, no 1-3, 209-230, 2006

A. Bracciali, et al., Crafting the Mind of PROSOCS Agents, *Journal of Applied Artificial Intelligence*, Taylor and Francis, Vol. 20(2-4), 105-131, 2006

P.A. Flach and A.C. Kakas, On the Logic of Scientific Knowledge Development, *Kurt Gödel Society Collegium Logicum*, Vol. IX Gödel Centenary 2006, 19-23, 2006

A.C. Kakas, N. Maudet, P. Moraitis, Modular Representation of Agent Interaction Rules through Argumentation, *Journal of Autonomous Agents and Multiagent Systems*, Springer Verlag, 11(2):189-206, 2005

#### ■ SELECTED CONFERENCE PROCEEDINGS

A.K. Bandar, A.C. Kakas, E. C. Lupu, "...", Using Argumentation Logic for Firewall Policy Specification and Analysis, *Proceedings of the 17th IFIP/IEEE International Workshop on Distributed Systems: Operations and Management*, 185-196, 2006

O. Ray, A. Antoniadis, A. C. Kakas and I. Demetriades, Abductive Logic Programming in the Clinical Management of HIV/AIDS, *Proc. 17th European Conference on Artificial Intelligence*, 437-441, 2006

A.C. Kakas, L. Michael and R. Miller, Modular-E: An Elaboration Tolerant Approach to the Ramification and Qualification Problems, *Lecture Notes on Artificial Intelligence (LNAI)*, Springer, Vol. 3662, 211-226, 2005

I. Papatheodorou, A.C. Kakas and M. J. Sergot, Inference of Gene Relations from Microarray Data by Abduction, *Lecture Notes on Artificial Intelligence (LNAI)*, Springer, Vol. 3662, 389-393, 2005

Y. Dimopoulos, A.C. Kakas, A., P. Moraitis, Argumentation Based Modeling of Embedded Agent Dialogues, *Proceedings of the 2nd International Workshop on Argumentation in Multi-Agent Systems, (ArgMAS'05), AAMAS'05, LNCS, Utrecht, The Netherlands, Vol. 4049, 169-181, 2005*

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Antonis C. Kakas, Robert A. Kowalski, Francesca Toni: Abductive Logic Programming, *J. Log. Comput.*, Oxford University Press, Vol. 2(6), 719-770, 1992

Peter Flach and Antonis C. Kakas (Eds), *Abduction and Induction: essays on their relation and integration*, Kluwer Academic Publishers, 2000

Antonis C. Kakas, Pavlos Moraitis, Argumentation based decision making for autonomous agents, AAMAS '03, *Proceedings of the second international joint conference on Autonomous agents and multiagent systems*, ACM Press, 883-890, 2003

## MARIOS MAVRONICOLAS Professor Department of Computer Science

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### ■ STUDIES

National Technical University of Athens, Greece, Diploma in Electrical Engineering, 1985

Harvard University, U.S.A., M.A. in Computer Science, 1988

Harvard University, U.S.A., Ph.D. in Computer Science, 1992

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Association for Computing Machinery (ACM), (Member of the Special Interest Group for Algorithms and Computation Theory), U.S.A. • European Association for Theoretical Computer Science (EACTS) • Society for Industrial and Applied Mathematics (SIAM), (Member of the Activity Group in Discrete Mathematics), U.S.A.

### ■ EDITORIAL BOARDS

*Networks - An International Journal* (Associate Editor), U.S.A.

*Journal of Interconnection Networks*, U.S.A., John Wiley and Sons, Inc.

*Theoretical Computer Science* (Track A: Algorithms, Automata, Complexity and Games, and Track B: Logic, Semantics and the Theory of Programming), Holland, World Scientific Publishing Co., Inc., Elsevier Science Publishers

*Bulletin of the European Association for Theoretical Computer Science* (Editor for the Distributed Computing Column), U.K., European Association for Theoretical Computer Science (EATCS)

### ■ RESEARCH INTERESTS

Theory of Algorithms and Complexity with focus on Game Theory; Distributed and Parallel Computing; Networking and the Internet

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Algorithmic Principles for Building Efficient Overlay Computers (AEOLUS).  
Funding: FP6, IST, E.U.

Dynamically Evolving Large-scale Information Systems (DELIS).

Funding: FP6, IST, E.U.

Algorithmic Game Theory (AGT)

Cooperation between Cyprus and France. Funding: RPF, Cyprus

## PUBLICATIONS

---

### ■ BOOKS

#### Authorship

M. Mavronicolas, *Distributed Systems*, Greek Open University, Greece, 2005 (in Greek)

### ■ SELECTED JOURNAL PUBLICATIONS

C. Busch, M. Magdon-Ismail and M. Mavronicolas, Universal Bufferless Packet Switching, *SIAM Journal on Computing*, Vol. 37, No. 4, 1139-1162, 2007

C. Busch, M. Magdon-Ismail, M. Mavronicolas, "...", Direct Routing: Algorithms and Complexity, *Algorithmica, Special Issue with selected papers from the 12th Annual European Symposium on Algorithms (ESA 2004)*, Bergen, Norway, S. Albers and T. Radzik (Eds), Vol. 45, No. 1, 45-68, 2006

P. Fatourou, M. Mavronicolas and P. Spirakis, Efficiency of Oblivious versus Nonoblivious Schedulers for Optimistic, Rate-Based Flow Control, *SIAM Journal on Computing*, Vol. 34, No. 5, 1216-1252, 2005

D. Koukopoulos, M. Mavronicolas, "...", The Impact of Network Structure on the Stability of Greedy Protocols, *Theory of Computing Systems, Special Issue with selected papers from the 5th Italian Conference on Algorithms and Complexity (CIAC 2003)*, Rome, Italy, G. Persiano (Ed.), Vol. 39, No. 4, 425-460, 2005

C. Busch, M. Mavronicolas and P. Spirakis, The Cost of Concurrent, Low-Contention Read-Modify-Write, *Theoretical Computer Science, Special Issue with selected papers from the 10th International Colloquium on Structural Information and Communication Complexity (SIROCCO 2003)*, Umea, J. F. Sibeyn and D. Peleg (Eds), Vol. 333, No. 3, 373-400, 2005

### ■ SELECTED CONFERENCE PROCEEDINGS

M. Mavronicolas, B. Monien and K. Wagner, Weighted Boolean Formula Games, *Proceedings of 3rd International Workshop on Internet and Network Economics (WINE 2007)*, X. Deng and F. C. Graham (Eds), Vol. 4858, Lecture Notes in Computer Science, Springer-Verlag, San Diego, U.S.A., 469-481, 2007

M. Mavronicolas et al., Congestion Games with Player-Specific Constants, *Proceedings of 32nd International Symposium on Mathematical Foundations of Computer Science (MFCS 2007)*, L. Kucera and A. Kucera (Eds), Vol. 4708, Český Krumlov, Czech Republic, 633-644, 2007

M. Mavronicolas, L. Michael and P. Spirakis, Computing on a Partially Eponymous Ring, *Proceedings of 10th International Conference On Principles Of Distributed Systems (OPODIS 2006)*, A. A. Shvartsman (Ed.), Vol. 4305, Lecture Notes in Computer Science, Springer-Verlag, Bordeaux, France, 380-394, 2006

M. Mavronicolas, et al., The Price of Defense, *Proceedings of 31st International Symposium on Mathematical Foundations of Computer Science (MFCS 2006)*, R. Kralovic and P. Urzyczyn (Eds), Vol. 4162, Lecture Notes in Computer Science, Springer-Verlag, Bratislava, Slovakia, 717-728, 2006

M. Mavronicolas, et al., A Network Game with Attacker and Protector Entities, *Proceedings of 16th Annual International Symposium on Algorithms and Computation (ISAAC 2005)*, X. Deng and D. Du (Eds), Vol. 3827, Lecture Notes in Computer Science, Springer-Verlag, Hainan, China, 288-297, 2005

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

E. Koutsoupias, M. Mavronicolas and P. Spirakis, Approximate Equilibria and Ball Fusion, *Theory of Computing Systems, Special Issue with selected papers from 9th International Colloquium on Structural Information and Communication Complexity (SIROCCO 2002)*, Andros, Greece, Ch. Kaklamanis and L. M. Kirousis (Eds), Vol. 36, No. 6, 683-693, 2003

C. Busch and M. Mavronicolas, A Combinatorial Treatment of Balancing Networks, *Journal of the ACM*, Vol. 43, No. 5, 794-839, 1996

H. Attiya and M. Mavronicolas, Efficiency of Semi-Synchronous versus Asynchronous Networks, *Mathematical Systems Theory* (currently Theory of Computing Systems), Vol. 27, No. 6, 547-571, 1994

**GEORGE-ANGELOS PAPADOPOULOS** Professor  
Department of Computer Science

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#### ■ STUDIES

University of Aston, Birmingham, U.K., B.Sc. in Computer Science and Mathematics, 1982

University of Aston, Birmingham, U.K., M.Sc. in Computer Science with Applications, 1983

University of East Anglia, Norwich, U.K., Ph.D. in Computer Science, 1989

#### ■ EDITORIAL BOARDS

*Journal of Universal Computer Science* (Editor), Germany, Springer Verlag  
*International Journal of Computers and Their Applications* (Editor), U.S.A., ISCA  
*International Journal of Computers and Applications* (Editor), U.S.A., IASTED

## ■ RESEARCH INTERESTS

Software Engineering; Programming Languages; Distributed and Parallel Systems; Cooperative Information Systems; Internet Technologies

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

MEDFORIST: Euro-Mediterranean Network for Sharing IST Learning Resources

Funding: FP5-EUMEDIS, E.U.

AVICENNA: Avicenna Virtual Campus

Funding: FP5-EUMEDIS, E.U.

MVU: Mediterranean Virtual University

Funding: FP5-EUMEDIS, E.U.

MADAM: Mobility and ADaptation enAbling Middleware (STREP)

Funding: FP6-IST, E.U.

BETSY: BEing on Time Saves energy (STREP)

Funding: FP6-IST, E.U.

e-Thalassa: Information System for Thalassemia Patients

Funding: RPF, Cyprus

ERGADIKTYO: Virtual English School

Funding: RPF, Cyprus

HealthService 24: HealthService24 Continuous Mobile Services for Healthcare

Funding: FP6-eTen, E.U.

EPRI START: Stimulate the participation of SMEs of NMS in IST activities (SA)

Funding: FP6-IST, E.U.

UNITE: Unified eLearning environment for the school (STREP)

Funding: FP6-IST, E.U.

MUSIC: Self-Adapting Applications for Mobile Users in Ubiquitous Computing, Environments (IP)

Funding: FP6-IST, E.U.

## PUBLICATIONS

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### ■ CHAPTERS IN BOOKS

S. Savvides, et al., AEOLOS: Case Study, *Rising to the Digital Challenge: Lessons from Mediterranean Enterprizes*, Centre TIME, Grenoble Ecole de Management, 326-348, 2005

C. D. Nugent, et al., Mobile Management and Prescription of Medication, *M-Health: Emerging Mobile Health Systems*, R. H. Istepanian, S. Laxminarayan, C. S. Pattichis (Eds), Springer Verlag, 601-615, 2005

## ■ SELECTED JOURNAL PUBLICATIONS

N. Chimaris and G. A. Papadopoulos, Implementing a Generic Component-Based Framework for Telecontrol Applications, *Software-Practice and Experience*, John Wiley and Sons, Ltd., Vol. 37 (10), 1087-1132, 2007

G. A. Papadopoulos, A. Stavrou and O. Papapetrou, An Implementation Framework for Software Architectures Based on the Coordination Paradigm, *Science of Computer Programming*, Elsevier Science, Vol. 60 (1), 27-67, 2006

G. A. Papadopoulos, Modeling and implementing asynchronous timed multimedia frameworks using coordination principles, *Future Generation Computer Systems*, Elsevier Science, Vol. 21 (5), 687-698, 2005

## ■ SELECTED CONFERENCE PROCEEDINGS

X. Hu, et al., A Peer-to-Peer based Infrastructure for Context Distribution in Mobile and Ubiquitous Environments, *Third International Workshop on Context-Aware Mobile Systems (CAMS'07)*, Vilamoura, Algarve, Portugal, LNCS 4805, Springer Verlag, 236-239, 2007

A. Zoakou, A. Tzanavari, G. A. Papadopoulos, "...", A Methodology for eLearning Scenario Development: The UNITE Approach, *Sixth European Conference on e-Learning (ECEL 2007)*, Copenhagen Business School, Copenhagen, Denmark, ACI publications, 683-692, 2007

C. P. Chrysostomou and G. A. Papadopoulos, Applying Object-Oriented Principles to the Analysis and Design of Learning Objects, *Sixth European Conference on e-Learning (ECEL 2007)*, Copenhagen Business School, Copenhagen, Denmark, ACI publications, 107-118, 2007

G. Brataas, et al., A Basis for Performance Property Prediction of Ubiquitous Self-Adapting Systems, *International Workshop on the Engineering of Software Services for Pervasive Environments (ESSPE'07)*, Dubrovnik, Croatia, ACM Digital Library, 59-63, 2007

A. Tzanavari, G. A. Papadopoulos and A. Hadjioannou, Web-Based Education in Secondary Schools in Cyprus - A National Project, *2007 World Conference on Educational Multimedia, Hypermedia and Telecommunications (ED-MEDIA 2007)*, Vancouver, Canada, AACE, Chesapeake, VA, 385-390, 2007

N Paspallis, A. Chimaris and G. A. Papadopoulos, Experiences from Developing a Distributed Context Management System for Enabling Adaptivity, *Seventh IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS'07)*, Paphos, Cyprus, LNCS 4531, Springer Verlag, 225-238, 2007

M. Alia, et al., A Utility-based Adaptivity Model for Mobile Applications, *The 2007 IEEE International Symposium on UbiSafe Computing (UbiSafe-07)*, Niagara Falls, Ontario, Canada, IEEE Computer Society Press, 556-563, 2007

**ELPIDA KERAVALOU-PAPALIOU** Professor  
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■ **STUDIES**

Brunel University, U.K., B.Tech in Computer Science, 1982

Brunel University, U.K., Ph.D. in Cybernetics, 1985

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

Artificial Intelligence in Medicine, Europe (Board Member)

■ **RESEARCH INTERESTS**

Artificial Intelligence in Medicine; Diagnostic Reasoning; Knowledge Engineering - Expert Systems; Temporal Information Systems; Hybrid Decision Support Systems

■ **EDITORIAL BOARDS**

*Artificial Intelligence in Medicine (AIM)* (Associate Editor), Elsevier  
*Systems Research and Information Science*, Gordon and Breach

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

NEOGNOS

Cooperating Organizations: Centre for Preventative Medicine in Paediatrics, Cyprus; NetVision, Cyprus; IBM. Funding: RPF, Cyprus

Mediterranean Draught Preparedness and Mitigation Planning (MEDROPLAN)

Cooperating Organizations: Centre International de Hautes Etudes Agronomiques Mediteraneennes, Universidad Politecnica de Madrid, Spain; National Technical University of Athens, Greece; Universita degli Studi di Catania, Italy; Institut Agronomique et Veterinaire Hassan II, Maroco; Ministere de l'Agriculture et des Ressources Hydrauliques, Tunisia; Ministerio de Medio Ambiente Confederacion Hidrografica del Tajo, Spain; Canal de Isabel II, Spain; Fundacion Ecologia y Desarrollo, Spain. Funding: European Commission

## PUBLICATIONS

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### ■ BOOKS

#### Editing

Miksch S., Hunter J. and Keravnou E. (Eds), *Special Issue of Artificial Intelligence in Medicine on AI in Medicine Europe AIME'05*, Vol.39, 97-178, 2007

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Dojat M. and Keravnou E. (Eds), *Special Issue of Artificial Intelligence in Medicine on AI in Medicine in Europe AIME'03*, Vol. 34 No. 1, 1-88, 2005

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Miksch S., Hunter J., Keravnou E. (Eds), *AI in Medicine, 10th Conference on AI in Medicine AIME 2005*, Aberdeen, U.K., Proc, LNAI 3581, Springer, 2005

### ■ CHAPTERS IN BOOKS

Keravnou E.T. and Shahar Y., Temporal Reasoning in Medicine, Fisher M., Gabbay D. and Vila L. (Eds), *Handbook of Temporal Reasoning in Artificial Intelligence*, Elsevier Science B.V., 587-653, 2005

### ■ SELECTED JOURNAL PUBLICATIONS

Keravnou-Papailiou E., Implementing ECTS at the University of Cyprus, *EUA Bologna Handbook*, article C 3.3-2, Raabe Academic Publishers, 1-22, 2007

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Adlassnig K.-P., et al., Temporal Representation and Reasoning in Medicine: Research Directions and Challenges, *Artificial Intelligence in Medicine*, 38(2), 101-113, 2006

### ■ SELECTED CONFERENCE PROCEEDINGS

Keravnou-Papailiou, E., The Development of an Internal Quality Assurance Policy for Research at the University of Cyprus, *Proc. 1st European Forum for Quality Assurance*, Technical University of Munich, Germany, 2006  
[http://www.eua.be/fileadmin/user\\_upload/files/QAForum\\_2006/GS\\_I\\_7\\_Keravnou.pdf](http://www.eua.be/fileadmin/user_upload/files/QAForum_2006/GS_I_7_Keravnou.pdf)

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Keravnou E.T., Temporal Diagnostic Reasoning Based on Time-Objects, *Artificial Intelligence in Medicine (Special Issue on Temporal Reasoning in Medicine)*, Vol. 8, No.3, 235-265, 1996

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#### Editing

Lavrac N., Keravnou E.T., and Zupan B. (Eds), *Intelligent Data Analysis in Medicine and Pharmacology*, Kluwer Academic Publishers, 1997

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Keravnou E.T., A Multidimensional and Multigranular Model of Time for Medical Knowledge-Based Systems, *Journal of Intelligent Information Systems (Special Issue on Intelligent, Temporal Information Systems in Medicine)*, Vol. 13, 73-120, 1999

## CONSTANTINOS S. PATTICHIS Professor

### Department of Computer Science

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#### ■ STUDIES

Higher Technical Institute (HTI), Cyprus, Diploma of Technician Engineer in Electrical Engineering, 1979  
 University of New Brunswick, Canada, Bachelor of Science in Electrical Engineering, 1983  
 University of Texas at Austin, U.S.A., Master of Science in Biomedical Engineering, 1984  
 University of Newcastle Upon Tyne, U.K., Master of Science in Neurology, 1991  
 University of London, Queen Mary and Westfield College, UK, Doctor of Philosophy in Electronic Engineering, 1992

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

IEEE (Senior Member) • Acoustics Speech and Signal Processing (ASSP) • Engineering in Medicine and Biology, and Computational Intelligence Societies

#### ■ EDITORIAL BOARDS

*IEEE Transactions on Information Technology in Biomedicine* (Associate Editor)  
*IEEE Transactions on Neural Networks* (Associate Editor)

#### ■ RESEARCH INTERESTS

Computational Intelligence in Medical and Biological Systems; Medical Image Analysis Systems: Ultrasound, Endoscopy, Microscopy; Biosignal Analysis Systems: Electromyography; M-Health e-Emergency Systems

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Multimodal Biometric Security System (Co-Investigator)

Funding: RPF, Cyprus

A Mediterranean Research and Higher Education Intranet in Medical and Biological Sciences (Principal Investigator)

Funding: E.U. European Regional Development Fund - INTERREG III B Archimed

An INTEgrated broadband telecommunication pilot teleservices-platform for improving health, care provision in the Region of MEDiterranean (Co-Investigator)

Funding: European Regional Development Fund - INTERREG III B Archimed

East Mediterranean Cohesion on Information and Telecommunications  
(Co-Investigator)

Funding: European Regional Development Fund - INTERREG III B  
Archimed

Accident Prediction Early Warning System (Principal Investigator)

Funding: RPF, Cyprus

The Network Digital Video Surveillance Project (Co-Investigator) - Call for  
High Technology and Innovative Incubator Companies

Funding: Ministry of Commerce and Industry, Cyprus

Intraoperative Computer Assisted Tissue Image Analysis (CATIA)  
(Co-Principal Investigator)

Funding: RPF, Cyprus

Video Segmentation and Motion Analysis of the Atherosclerotic Carotid  
Plaque in Ultrasound Imaging (VISEMA) (Co-Principal Investigator) -  
Programme Hosting an Expatriate Researcher

Funding: RPF, Cyprus

Surface EMG Diagnostic System Based on Statistical and Modelling  
(Principal Investigator)

Bilateral cooperation between Cyprus and Slovenia

Funding: RPF, Cyprus

Advanced Telecommunication System for the Direct and Automated  
Notification of Volunteer Blood Donors (Principal Scientific Investigator)

Funding: RPF, Cyprus

Development of Knowledge-based Visual Attention Models for Perceptual  
Video Coding (Principal Investigator)

Funding: RPF, Cyprus

## PUBLICATIONS

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### ■ BOOKS

#### Editing

R.H. Istepanian, S. Laxminarayan, C.S. Pattichis (Eds), *M-Health: Emerging Mobile Health Systems*, Springer, N.Y., U.S.A., 2006

### ■ CHAPTERS IN BOOKS

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M.S. Pattichis, S. Cai, C.S. Pattichis, An Overview of Medical Digital Video Processing Algorithms, *M-Health: Emerging Mobile Health Systems*, R. Istepanian, S. Laxminarayan, C.S. Pattichis (Eds), Springer, N.Y., U.S.A., 345-363, 2006

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P. Rodriguez, V., M.S. Pattichis, C.S. Pattichis, "...", Object-Based Ultrasound Video Processing For Wireless Transmission In Cardiology, *M-Health: Emerging Mobile Health Systems*, R. Istepanian, S. Laxminarayan, C.S. Pattichis (Eds), Springer, N.Y., U.S.A., 491-506, 2006

C. Christodoulou, C.S. Pattichis, E. Kyriacou, "...", Texture and Morphological Analysis of Ultrasound Images of the Carotid Plaque for the Assessment of Stroke, *Applied Medical Image Analysis Methods*, L. Costaridou (Ed.), CRC Press, 87-135, 2005

J.S. Suri, C.S. Pattichis, C. Li, "...", Plaque Imaging Using Ultrasound, Magnetic Resonance and Computed Tomography: A Review, *Plaque Imaging: Pixel to Molecular Level*, J.S. Suri, C. Yuan, D.L. Wilson, S. Laxminarayan (Eds), IOS Press, 1-25, 2005

E. Kyriacou, et al., Ultrasound Imaging in the Analysis of Carotid Plaque Morphology for the Assessment of Stroke, *Plaque Imaging: Pixel to Molecular Level*, J.S. Suri, et al. (Eds), IOS Press, 241-275, 2005

C.S. Pattichis, et al., Wireless Telemedicine Systems: An Overview, *Telemedicine in Practice*, M. Perikouri, P. Giovanas, D. Papadogiannis and Associates (Eds), En Plo Publishers, Greece, 149-169, 2005

## ■ SELECTED JOURNAL PUBLICATIONS

C. Loizou, C.S. Pattichis, M. Pantzaris, "...", Intima Media Segmentation Of The Carotid Artery Bifurcation, *Medical and Biological Engineering and Computing*, Vol. 45, No. 1, 35-49, 2007, <http://www.springerlink.com/content/261359x781871552/>

C.A. Nicolaou, N. Brown, C.S. Pattichis, Molecular Optimization Using Computational Multi-Objective Methods, *Current Opinion in Drug Discovery and Development*, Vol. 10, No. 3, 316-324, 2007

C. Loizou, C.S. Pattichis, M. Pantzaris, "...", Plaque Segmentation of the Carotid Artery Bifurcation, *IEEE Transactions on Information Technology in Biomedicine*, Vol. 11, No. 6, 661-667, 2007

N. Tsapatsoulis, K. Rapantzikos, C. Pattichis, An Embedded Saliency Map Estimator Scheme: Application to Video Encoding, *International Journal of Neural Systems*, Vol. 17, No. 4, 289-304, 2007

M.S. Neophytou, et al., A Standardised Protocol for Preprocessing and Analysis of Endoscopy Images in Gynaecological Cancer, *BioMedical Engineering OnLine*, Vol. 6, 2007, <http://www.biomedical-engineering-online.com/content/6/1/44>

E. Kyriacou, M.S. Pattichis, C.S. Pattichis, "...", e-Emergency m-Health Systems: Current Status and Future Directions, *IEEE Antennas and Propagation Magazine*, Vol. 49, No. 1, 216-231, 2007

E. Kyriacou, C. Pattichis, M. Karaolis, An Integrated System for the Assessment of the Risk of Stroke Based on Clinical Risk Factors and Non-Invasive Investigations and Carotid Plaque Texture Analysis, *IEEE Engineering in Medicine and Biology Magazine*, Special Issue on Image, Signal and Distributed Data Processing for Networked eHealth Applications, Vol. 26, No. 5, 43-50, 2007

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#### ■ SELECTED CONFERENCE PROCEEDINGS

O. Jeromin, M.S. Pattichis, C.S. Pattichis, "...", Variogram Methods for Texture Classification, *Proc. of SPIE Medical Imaging*, San Diego, Vol. 6144D, 61440D-1 – 61440D-12, 2006

E. Kyriakou, C.S. Pattichis, M.S. Pattichis, "...", Classification of Atherosclerotic Carotid Plaques Using Grey Level Morphological Analysis on Ultrasound Images, Artificial Intelligence Applications Innovations, *Proceedings of the 3rd IFIP Conference on Artificial Intelligence Applications and Innovations (AIAI)*, I. Maglogiannis, K. Karpouzis, and M. Bramer (Eds), Athens, Greece, Springer, 737-744, 2006

### ANNA PHILIPPOU Associate Professor Department of Computer Science

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#### ■ STUDIES

University of Oxford, U.K., B.A. in Mathematics and Computation, 1992

University of Warwick, U.K., M.Sc. in Parallel Computers and Computation, 1993

University of Warwick, U.K., Ph.D. in Computer Science, 1996

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Association for Computing Machinery (ACM), U.S.A. • European Association for Theoretical Computer Science (EATCS), Europe • Institute of Electrical and Electronic Engineers (IEEE), U.S.A., E.U.

#### ■ EDITORIAL BOARDS

*Journal of Computing Science and Engineering (JCSE)*, Korea, Korean Institute of Information Scientists and Engineers (KIISE)

#### ■ RESEARCH INTERESTS

Concurrency Theory; Formal Methods; Real-Time Systems; Mobile and Ad-hoc Networks; Algorithmic Game Theory

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Proodos: Formal Methods for Specification and Verification of Ad Hoc Network Protocols

Cooperating Organizations: University of Pennsylvania, U.S.A.; University of Nijmegen, The Netherlands. Funding: RPF, Cyprus

## PUBLICATIONS

---

### ■ CHAPTERS IN BOOKS

A. Philippou and O. Sokolsky, *Handbook of Real-Time and Embedded Systems, Process-Algebraic Analysis of Timing and Schedulability Properties*, 31-1 – 31-20, Chapman and Hall, U.S.A., 2007

### ■ SELECTED JOURNAL PUBLICATIONS

I. Lee, A. Philippou and O. Sokolsky, Resources in Process Algebra, *Journal of Logic and Algebraic Programming*, North Holland, 72(1):98-122, 2007

I. Lee, A. Philippou and O. Sokolsky, A Family of Resource-Bound Real-Time Process Algebras, *Electronic Notes in Theoretical Computer Science*, North Holland, 162:221-226, 2006

### ■ SELECTED CONFERENCE PROCEEDINGS

M. Mavronicolas, et al., The Price of Defense and Fractional Matchings, *Proceedings of the 8th International Conference on Distributed Computing and Networking (ICDCN 2006)*, Germany, 115-126, 2006

M. Mavronicolas, et al., The Price of Defense, *Proceedings of the 31st International Symposium on Mathematical Foundations of Computer Science (MFCS 2006)*, Germany, 717-728, 2006

A. Philippou and G. Michael, Verification Techniques for Distributed Algorithms, *Proceedings of the 10th International Conference on Principles of Distributed Systems (OPODIS 2006)*, Germany, 172-186, 2006

Ch. Georgiou, Th. Pavlides and A. Philippou, Network Uncertainty in Selfish Routing, *CD-ROM Proceedings of the 20th IEEE International Parallel and Distributed Processing Symposium (IPDPS 2006)*, Greece, 2006

<http://ieeexplore.ieee.org/iel5/10917/34366/01639342.pdf>

M. Mavronicolas, V. Papadopoulou, A. Philippou, "...", A Network Game with Attacker and Protector Entities, *Proceedings of the 16th International Symposium on Algorithms and Computation (ISAAC 2005)*, Germany, 288-297, 2005

M. Mavronicolas, V. Papadopoulou, A. Philippou, "...", A Graph-Theoretic Network Security Game, *Proceedings of the 1st International Workshop on Internet and Network Economics (WINE 2005)*, Germany, 969-978, 2005

## ANDREAS PITSILLIDES Professor Department of Computer Science

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### ■ STUDIES

University of Manchester, Institute of Science and Technology (UMIST), U.K.,  
B.Sc. in Electrical and Electronic Engineering, 1980  
Swinburne University of Technology (SUT), Australia, Ph.D. in High Speed  
Multimedia Networks, 1993

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

International Federation of Automatic Control (IFAC) Technical Committee  
(TC1.5) on Networked Systems • International Federation of Automatic  
Control (IFAC) Technical Committee (TC7.4) on Transportation Systems •  
Federation of Information Processing (IFIP) Working Group WG 6.3 (Working  
group 6.3): Performance of Communications Systems Research and  
Academic Network (CYNET) (Chairman and Scientific Director) • European  
National Research and Education Networks (NREN) Policy Committee  
Member • IEEE Institute of the Electrical and Electronic Engineers (Elected  
Senior Member)

### ■ EDITORIAL BOARDS

*Editorial Board of Computer Networks Journal (COMNET)* (Area Editor)

### ■ RESEARCH INTERESTS

Design and Performance Aspects of Communication Networks: Congestion  
and Flow Control; Control Theoretic Techniques; Resource Allocation and  
Radio Resource Management; Internet Technologies Application in m-  
Healthcare

### ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

ADAVIDEO (PI) Methods for the Transmission of Video Streams in Wireless  
Networks

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

TRAFICNET (PI) Intelligent control of transportation system  
Funding: RPF, Cyprus  
ASPIDA (Scientific PI), Security in Sensor Networks  
Funding: RPF, Cyprus

- HRA, Location finding for current and next generation mobile networks  
Funding: RPF, Cyprus
- M-POWER (co-PI of Cyprus participation and leader for Work Package Security Middleware) Middleware platform for eMPowerING cognitive disabled and elderly  
Funding : FP6-IST, E.U.
- C-MOBILE (PI of Cyprus participation), Advanced MBMS For The Future Mobile World  
Funding : FP6-IST, E.U.
- MOTIVE, (PI of Cyprus participation and leader for WP on Specifications and Technical System Design) MOBILE Terminal Information Value addEd Functionality  
Funding : FP6-IST, E.U.
- GENESIS, Enterprise Application Interoperability via Internet - Integration for SMEs, Governmental Organisations and Intermediaries in the new European Union  
Funding : FP6-IST, E.U.
- Net6 IPv6 Pilot Network for real time service support  
Funding: RPF, Cyprus
- TRUFBUS, Modeling and Analysis of Traffic and Impact of Dedicated Bus Lanes on Strovolos Avenue  
Funding: RPF, Cyprus
- B-BONE (PI of Cyprus participation and leader of WP: Radio Resource management and Core Network Optimisation) Broadcasting And Multicasting Over Enhanced UMTS Mobile Broadband Networks  
Funding : FP6-IST, E.U.
- E-NEXT (PI of Cyprus participation) Emerging Networking Experiments and Technologies  
Funding: FP6-Network of Excellence - IST, E.U.
- CRUISE, Creating Ubiquitous Intelligent Sensing Environments (Network of Excellence on the Application and Communication aspects of Wireless Sensor Networking)  
Funding: FP6-Network of Excellence - IST, E.U.
- POSIDON environmental control  
Funding: RPF, Cyprus
- ERMES, Quality of Service provision in real time services  
Funding: RPF, Cyprus
- DBGlobe, A Data-centric Approach to Global Computing. IST, Future and Emerging Technologies (FET)  
Funding: FP6 (Future and Emerging Technologies), IST, E.U.

- VIDEO (PI), Video transmission through mobile and wireless networks (WLANs/UMTS)  
Funding: RPF, Cyprus
- SKINIKO (PI), Designing secure and robust mobile services for home healthcare environments  
Funding: RPF, Cyprus
- HealthService-24 (Co-PI of Cyprus Participation) Continuous Mobile Services for HealthCare  
Funding: e-Ten Programme, E.U.
- LinkCare (Co-PI of Cyprus Participation), Linking Health Professionals in Emerging Care Environments  
Funding: e-Ten Programme, E.U.
- DITIS II, Collaborative Virtual Medical team for home healthcare of cancer patients  
Funding: RPF, Cyprus
- Wi-QoST: Traffic and QoS Management in Wireless Multimedia Networks (PI of Cyprus Participation)  
Funding: COST, E.U.
- Analysis and Design of Advanced Multiservice Networks supporting Mobility, Multimedia, and Internetworking, PI of Cyprus Participation  
Funding: COST, E.U.

## PUBLICATIONS

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### ■ BOOKS

#### Editing

Petros Ioannou and Andreas Pitsillides (Eds), *Modelling and Control of Complex Systems*, CRC Press in the Control Engineering Series, Frank Lewis, 2007

### ■ CHAPTERS IN BOOKS

P. Ioannou, A. Pitsillides, Introduction and overview, *Modelling and Control of Complex Systems*, Petros Ioannou and Andreas Pitsillides (Eds), CRC Press in the Control Engineering Series, Frank Lewis, 1-12, 2007

M. Lestas, A. Pitsillides, P. Ioannou, Congestion Control in Computer Networks, *Modelling and Control of Complex Systems*, Petros Ioannou and Andreas Pitsillides (Eds), CRC Press in the Control Engineering Series, Frank Lewis, 203-246, 2007

N. Panteli, B. Pitsillides, A. Pitsillides, "...", An E-healthcare Mobile application: A Stakeholders' analysis, *Web Mobile-Based Applications for Healthcare Management*, Dr Latif Al-Hakim (Ed.), Idea Group, 101-117, 2007

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B. Pitsillides, A. Pitsillides, G. Samaras, "...", DITIS: Virtual collaborative teams for improved home healthcare, *Virtual Teams: Concepts and Applications*, K.Chandrasekar (Ed.), ICFAI University Press, 147-172, 2005

A. Pitsillides, et al., A Collaborative Virtual Medical Team for Home Healthcare of Cancer Patients, *M-Health: Emerging Mobile Health Systems*, R. H. Istepanian, S. Laxminarayan, C. S. Pattichis (Eds), Kluwer Academic/Plenum Publishers, Springer Science, 247-266, 2005

G. Samaras, D. Georghiadis, and A. Pitsillides, Computational and Wireless Modeling for Collaborative Virtual Medical Teams, *M-Health: Emerging Mobile Health Systems*, R. H. Istepanian, S. Laxminarayan, C. S. Pattichis (Eds), Kluwer Academic/Plenum Publishers, Springer Science, 107-132, 2005

### ■ SELECTED JOURNAL PUBLICATIONS

A. Pitsillides, C. Christoforou, MBMS Handover Control: A New Approach for Efficient Handover in MBMS Enabled 3G Cellular Networks, *Computer Networks Journal (COMNET)*, Vol. 51, Issue 18, 4897-4918, 2007

M. Lestas, A. Pitsillides, P. Ioannou, Adaptive Congestion Protocol: A Congestion Control Protocol with Learning Capability, *Computer Networks Journal (COMNET)*, Vol. 51, Issue 13, 3773-3798, 2007

V. Vasiliou, A. Pitsillides, Supporting Mobility Events within a Hierarchical Mobile IP-over-MPLS Network, *Journal of Communications Journal Of Communications (JCM)*, Vol. 2, No. 2, 61-70, 2007

E. Kyriacou, et al., m-health e-Emergency Systems: Current Status and Future Directions, *IEEE Antennas and Propagation Magazine*, Vol. 49, No.1, 216-231, 2007

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A. Pitsillides, et al., Virtual Collaborative Healthcare Teams for Home Healthcare, *Journal of Mobile Multimedia (JMM)*, Special Issue on Advanced Mobile Technologies for Health Care Applications, Vol. 2, No.1, 023-036, 2006

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### ■ SELECTED CONFERENCE PROCEEDINGS

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C. Chrysostomou, A. Pitsillides, Fuzzy Logic Congestion Control in TCP/IP Tandem Networks, *11th IEEE Symposium on Computers and Communications, ISCC06*, Sardinia, Italy, 123-129, 2006

C. Christoforou, A. Pitsillides, MBMS Handover Control for Efficient Multicasting in IP-based 3G mobile networks, *2006 IEEE International Conference on Communications (ICC 2006)*, Istanbul, Turkey, 11-15, Vol. 5, 2112 – 2117, 2006

## **GEORGE SAMARAS** Professor Department of Computer Science

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### ■ STUDIES

University of Athens, Greece, B.S. in Mathematics, 1982  
Rensselaer Polytechnic Institute (RPI), U.S.A., M.S. in Computer Science, 1984  
Rensselaer Polytechnic Institute (RPI), U.S.A., Ph.D. in Computer Science, 1989

### PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

ACM Computer Society, U.S.A. • IEEE Computer Society, U.S.A.

### EDITORIAL BOARDS

*International Journal of Internet Technology and Secured Transactions (IJITST)*, U.S.A.

### RESEARCH INTERESTS

Database Systems; Mobile, Wireless and Pervasive Computing; Data Management in Sensor Networks; Personalization Systems; WWW Information Retrieval

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

EKPAIDION: Personalized and Adaptive Multimedia Educational Environments

Cooperating Organizations: University of Athens. Funding: RPF, Cyprus

GITONIA: Improving Quality of Life by Utilizing Multimedia Mobile Wireless Technologies and Sensors) to watch the Neighborhood by the local authorities

Cooperating organizations: Cosign Ltd, Ithaki Consulting Ltd  
Funding: RPF, Cyprus

ePavsanias: A Multimedia Database for Archaeological Excavations Salonika  
Cooperating Organizations: University of Salonika. Funding: RPF, Cyprus

MHTIS: Development of relationally complete interactive querying methods for mobile devices and personal computers  
Cooperating Organizations: University of Crete. Funding: RPF, Cyprus

- DITIS II, Akolouthia: Collaborative Virtual Medical team for home healthcare of cancer patients. Funding: RPF, Cyprus
- PERSONA: Personalization for the Mobile and wireless User  
Cooperating Organizations: University of Ioannina. Funding: RPF, Cyprus
- SemaNet: Semantic Overlay Networks of Services in Ubiquitous Computing  
Cooperating Organizations: University of Ioannina. Funding: RPF, Cyprus
- mPower (FP6-034707): Middleware platform for eMPOWERing cognitive disabled and elderly  
Cooperating Organizations: Various European Partners. Funding: FP6, E.U.
- MOTIVE (FP6: IST-27659): Mobile Terminal Information Value added  
Functionality  
Cooperating Organizations: Various European Partners. Funding: FP6, E.U.
- HealthService24 (Contract No. 517352): Continuous Mobile Services for Healthcare  
Cooperating Organizations: Various European Partners  
Funding: European Commission
- EPRI (Project Nr. 015871): Stimulate the Participation of SMEs of NMS in IST activities  
Cooperating Organizations: Various European Partners  
Funding: European Commission
- W-Response: Workflow and RFID enabled system for automated & paperless Warehouse operations  
Cooperating Organizations: Various European Partners  
Funding: European Commission
- B-BONE: FP6 IST Integrated Project: Broadcasting and Multicasting over Enhanced UMTS Mobile Broadband Networks  
Cooperating Organizations: Various European Partners. Funding: FP6, E.U.
- INTELCITIES (FP6: IST-2003-507860): Intelligent Cities  
Cooperating Organizations: Various European Partners. Funding: FP6, E.U.
- DBGlobe (IST-2001-32645): A Data-centric Approach to Global Computing  
Cooperating Organizations: Various European Partners  
Funding: European Commission

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Pitsillides, B. Pitsillides, G. Samaras et al., A Collaborative Virtual Medical Team for Home Healthcare of Cancer Patients, R. H. Istepanian, S. Laxminarayan, C. S. Pattichis (Eds), *M-Health: Emerging Mobile Health Systems*, Kluwer Academic/Plenum Publishers, Springer Science, 247-266, 2005

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## ■ SELECTED CONFERENCE PROCEEDINGS

Germanakos P. et al., A Semantic Approach of an Adaptive and Personalized Web-based Learning Content - The case of AdaptiveWeb, *Proceedings of the 2nd Intl. Workshop on Semantic Media Adaptation and Personalization (SMAP 2007)*, London, U.K., IEEE Computer Society, 68-73, 2007

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#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

E. Pitoura and G. Samaras, *Data Management for Mobile Computing*, Kluwer Academic Publishers, 1998

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Samaras G. et al., Two-Phase Commit Optimizations in a Commercial Distributed Environment, *Distributed and Parallel Databases Journal/An International Journal*, 3(4), 325-361, 1995

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#### ■ STUDIES

Oakland University, U.S.A., B.Sc. in Computer Engineering, 1991

Cornell University, U.S.A., Ph.D. in Electrical Engineering, 1992

University of Wisconsin, Madison, U.S.A., Ph.D. in Electrical Engineering, 1999

#### ■ RESEARCH INTERESTS

Computer Architecture

- **RESEARCH PROGRAMMES (University of Cyprus 2005-2007)**
  - Cache-Content Duplication (Coordinator)
  - Performance efficient power-aware microarchitectures (Coordinator)
- **RESEARCH PROGRAMMES (External Funding 2005-2007)**
  - Temperature constrained multi-cores (Coordinator)
    - Funding: RPF, Cyprus
  - Intel: Trace-prediction and trace-optimizations methods for improved performance and power (Coordinator)
    - Funding: RPF, Cyprus
  - HiPEAC, FP6 Network of Excellence in the area of High Performance Embedded Architecture and Compilation
    - Funding: FP6, E.U.
  - Temperature aware microarchitectures (Coordinator)
    - Cooperation between Cyprus-France. Funding: RPF, Cyprus

## PUBLICATIONS

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### ■ CHAPTERS IN BOOKS

Y. Sazeides, et al., Data Speculation, *Speculative Execution in High Performance Computer Architectures*, CRC press, 215-243, 2005

### ■ SELECTED JOURNAL PUBLICATIONS

P. Michaud, Y. Sazeides, A. Sez nec, "...", A study of thread migration in temperature-constrained multi-cores, *ACM Transactions on Architecture and Code Optimization*, Vol. 4, Issue 2, 2007

[http://portal.acm.org/ft\\_gateway.cfm?id=1250729&type=pdf&coll=&dl=&CFID=70549361&CFTOKEN=97356175](http://portal.acm.org/ft_gateway.cfm?id=1250729&type=pdf&coll=&dl=&CFID=70549361&CFTOKEN=97356175)

Y. Sazeides, et al., The Danger of Interval Based Power Efficiency Metrics: When Worst is Best, *Computer Architecture Letters*, Vol. 4, Issue 1, 2005

<http://portal.acm.org/citation.cfm?id=1115697.1115830&coll=GUIDE&dl=GUIDE&CFID=70549361&CFTOKEN=97356175>

### ■ SELECTED CONFERENCE PROCEEDINGS

V. Desmet, Y. Sazeides and C. Vrionis, Performance Implications of Hard-Faults in Non-Architectural Structures, *2nd Annual Reconfigurable and Adaptive Architecture Workshop (RAAW-2)*, 2007, <http://citeseerx.ist.psu.edu/>

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[http://www.ece.wisc.edu/~wddd/2005/papers/WDDD05\\_desmet.pdf](http://www.ece.wisc.edu/~wddd/2005/papers/WDDD05_desmet.pdf)

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

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E. Rotenberg, Q. Jacobson, Y. Sazeides, "...", Trace Processors, *30th International Symposium on Microarchitecture*, 138-148, 1997

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#### ■ STUDIES

University of London, Queen Mary College, U.K., B.Sc. (Eng.) in Electronic Engineering, 1978

University of London, Queen Mary College, U.K., Doctor of Philosophy in Systems Theory, Ph.D., 1981

University of Indianapolis, U.S.A., MBA, 1988

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

British Computer Society, U.K. (Fellow) • Institute of Electrical Engineers, U.K.

(Fellow) • Institute of Electrical and Electronic Engineers, U.S.A. (Senior Member) • European Society for Engineering in Medicine, E.U. • Cyprus

Scientific and Technical Chamber (ETEK), Cyprus • International Neural Network Society, U.S.A.

#### ■ EDITORIAL BOARDS

*Journal of Technology and Health Care*

*Journal of Intelligent Systems*

*IEEE Transactions on Information Technology in Biomedicine*

*International Journal of Information Technology Research*

Special Issue on Computational Intelligent Diagnostic Systems in Medicine of the *Journal of Intelligent Systems* (Guest Editor)

Special Issue on Emerging Health Telematics Applications in Europe, *IEEE Transactions on Information Technology in Biomedicine* (Guest Editor)

#### ■ RESEARCH INTERESTS

Computational Intelligence, Artificial Neural Networks, Genetic Algorithms, Fuzzy Systems; Medical Informatics; Brain Computer Interaction; Analysis and Design of Systems

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

A Mediterranean Research and Higher Education Intranet in Medical and Biological Sciences (Co-Investigator)

Funding: INTERREG III B Archimed, E.U.

An INTEgrated broadband telecommunication pilot teleservices-platform for improving health care provision in the Region of MEDiterranean (Co-Investigator)

Funding: INTERREG III B Archimed, E.U.

East Mediterranean Cohesion on Information and Telecommunications, EMedIT (Principal Investigator)

Funding: INTERREG III B Archimed, E.U.

Computational Intelligence Laboratory (formerly MRDL)

Funding: Marfin Laiki Bank, Cyprus

#### PUBLICATIONS

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#### ■ CHAPTERS IN BOOKS

A.A. Sofokleous, M.C. Angelides and C.N. Schizas, Mobile Computing: Technology Challenges, Constraints, and Standards, *Handbook of Research on Mobile Multimedia*, I.K. Ibrahim (Ed.), Idea Group Reference, Hershey, Pennsylvania, 1-10, 2006

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C.S. Pattichis, et al., Wireless Telemedicine Systems: *An Overview, Telemedicine in Practice*, M. Perikouri, P. Giovas, D. Papadogiannis and Associates (Eds), En Plo Publishers, Greece, 149-169, 2005

### ■ SELECTED JOURNAL PUBLICATIONS

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### ■ SELECTED CONFERENCE PROCEEDINGS

K. Neophytou, et al., Deriving Quantitative Structure-Activity Relationship Models Using Genetic Programming for Drug Discovery, *Proceedings of the IEEE-ITAB Information Technology Applications in Biomedicine*, Tokyo, Japan, 2007, <http://www.itab2007.org/program.html>

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### ■ DISTINGUISHED PUBLICATIONS (before 2005)

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C.N. Schizas, C.S. Pattichis, Learning Systems in Biosignal Analysis, *BioSystems*, Vol. 41, 105-125, 1997

C.S. Pattichis, C.N. Schizas, Genetics-Based Machine Learning Models for the Diagnosis of Certain Neuromuscular Disorders, *IEEE Transactions on Neural Networks*, Vol. 7(2), 427-439, 1996

**PEDRO MOURA TRANCOSO** Assistant Professor  
Department of Computer Science

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■ **STUDIES**

Technical University of Lisbon, Portugal, Undergraduate Degree in Electrical and Computer Engineering, 1992

University of Illinois at Urbana-Champaign, U.S.A., M.Sc. in Computer Science, 1995

University of Illinois at Urbana-Champaign, U.S.A., Ph.D. in Computer Science, 1998

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

Institute of Electrical and Electronics Engineers (IEEE), U.S.A. • Association for Computing Machinery (ACM), U.S.A.

■ **EDITORIAL BOARDS**

*International Journal of High Performance Systems Architecture (IJHPSA)*, Switzerland, Inderscience

■ **RESEARCH INTERESTS**

Computer Architecture; Parallel Programming and Systems; Memory Hierarchy Design; Performance Evaluation; Database Workloads

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

Security in Open Multi-Application SMART CARDS (S-OMA SMART CARDS)

Cooperating Organization: Aristotle University of Thessaloniki, Greece.

Funding: RPF, Cyprus

Efficient System for Weather Prediction using Graphics Processors

Cooperating Organization: Meteorology Service of Cyprus, Cyprus.

Funding: RPF, Cyprus

DDM-CMP: Data-Driven Multithreading on a Chip Multiprocessor –

Development and Implementation

Cooperating Organization: Technical University of Delft, The Netherlands.

Funding: RPF, Cyprus

High Performance Embedded Architecture and Compilation (HiPEAC)

Funding: European Network of Excellence, E.U.

Database Performance Optimization using Reconfigurable Hardware

Cooperating Organization: CEPBA-CESCA Universitat Politècnica de

Barcelona (UPC), Spain. Funding: E.U.

## PUBLICATIONS

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### ■ CHAPTERS IN BOOKS

P. Trancoso and P. Evripidou, Parallel Computer Architecture, *Handbook of Parallel Computing and Statistics*, E.J. Kontogiorghe (Ed.), Chapman and Hall/CRC, Florida, 43-73, 2006

### ■ SELECTED JOURNAL PUBLICATIONS

K. Stavrou and P. Trancoso, Thermal-Aware Scheduling for Future Chip Multiprocessors, *EURASIP Journal on Embedded Systems*, Hindawi, U.S.A., Article ID 48926, 2007

P. Trancoso, Watt Matters Most? Design Space Exploration of High-Performance Microprocessors for Power-Performance Efficiency, *Journal of Circuits, Systems, and Computers*, Vol. 16, No. 3, U.S.A., 357-378, 2007

C. Kyriacou, P. Evripidou, and P. Trancoso, Data Driven Multithreading Using Conventional Microprocessors, *IEEE Transactions on Parallel and Distributed Systems*, Vol. 17, Issue 10, U.S.A., 1176-1188, 2006

P. Trancoso, et al., A Case for Chip Multiprocessors based on the Data-Driven Multithreading Model, *International Journal of Parallel Programming*, U.S.A., Vol. 34, Issue 3, 213-235, 2006

J. Aguilar-Saborit, P. Trancoso, "...", Dynamic Count Filters, *ACM Sigmod Record*, U.S.A., Vol. 35, Issue 1, 26-32, 2006

### ■ SELECTED CONFERENCE PROCEEDINGS

P. Trancoso, K. Stavrou and P. Evripidou, DDMCPP: The Data-Driven Multithreading C Pre-Processor, *Eleventh Annual Workshop on the Interaction between Compilers and Computer Architecture (Interact-11)*, U.S.A., 32-39, 2007  
[http://www.cs.pitt.edu/~childers/interact11\\_proc.pdf](http://www.cs.pitt.edu/~childers/interact11_proc.pdf)

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## VASOS VASSILIOU Lecturer Department of Computer Science

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### ■ STUDIES

Higher Technical Institute, Cyprus, HND in Electrical Engineering, 1993  
 University of South Florida, U.S.A., B.Sc. in Electrical Engineering, 1997  
 Georgia Institute of Technology, U.S.A., M.Sc. in Electrical and Computer Engineering, 1999  
 Georgia Institute of Technology, U.S.A., Ph.D. in Electrical and Computer Engineering, 2002

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Institute of Electrical and Electronic Engineers (IEEE), U.S.A. • Institution of Engineering and Technology (IET), U.K. • Association of Computing Machinery (ACM), U.S.A. • Cyprus Scientific and Technical Chamber (ETEK), Cyprus

### ■ EDITORIAL BOARDS

*Telecommunication Systems, Modelling, Analysis, Design and Management Journal*, U.S.A., Springer

### ■ RESEARCH INTERESTS

Communication Networks; Sensor, Ad-hoc and Vehicular Networks; Mobility Management in Computer Networks; Multimedia Multicasting in Mobile Networks; Fault Tolerance and Traffic Engineering for MPLS

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

NET6: Next Generation IPv6 Research Network  
 Cooperating Organizations: European University Cyprus; Netway Ltd.  
 Funding: RPF, Cyprus

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

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D. A. Barlow, V. Vassiliou, S. Krasser, "...", Traffic Engineering Based on Local States in Internet Protocol-Based Radio Access Networks, *Journal of Communications and Networks*, Vol. 7, no 3, 377-384, 2005

#### ■ SELECTED CONFERENCE PROCEEDINGS

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P. Antoniou, A. Pitsillides, V. Vassiliou, Adaptive Feedback Algorithm for Internet Video Streaming based on Fuzzy Rate Control, *Proc. of the 12th IEEE Symposium on Computers and Communications (ISCC'07)*, Aveiro, Portugal, 219-226, 2007

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#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

C.-K. Toh and Vasos Vassiliou, Power Consumption Issues on Ad Hoc Mobile Networks, *Ad Hoc Networking*, C. Perkins (Ed.), Addison-Wesley, Upper Saddle River, N.J., 299-321, 2001

V. Vassiliou, H. L. Owen, D. A. Barlow, "...", M-MPLS: Micromobility-enabled Multiprotocol Label Switching, *Proc. IEEE International Conference on Communications (ICC2003)*, Alaska, U.S.A., 250-255, 2003

C-K. Toh, V. Vassiliou, G. Guichal, "...", MARCH: A Medium Access Control Protocol for Multihop Wireless Ad Hoc Networks, *Proc. MILCOM 2000, Atlantic City, N.J.*, 512-516, 2000



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*Assistant Professor*

ALEKOS VIDRAS

*Associate Professor*

FILIA VONTA

*Assistant Professor*

CHRISTOS XENOFONTOS

*Assistant Professor*

## DEPARTMENT OF MATHEMATICS AND STATISTICS

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The Department of Mathematics and Statistics carries out important research activity in a wide range of Pure Mathematics, Applied Mathematics and Statistics. Members of the Department cooperate and participate in research programmes with other universities and research centres. Beyond the academic arena, the Department of Mathematics and Statistics has research partnerships with public and private organizations in Cyprus and abroad. The research output of the Department is of high quality, published in top journals.

The quality and quantity of publications compares favourably with that of respected departments of Mathematics and Statistics at competitive universities overseas. The research record of the Department proves that the faculty, in addition to teaching and administration, are active in research and in the advancement of the Mathematical Sciences. An important development in the last three years is the further involvement of graduate students in seminars, publications and, above all, in original research.

The ongoing research activities of the Department cover various areas of Mathematics like Algebra, Geometry, Analysis, Mathematical Physics, Numerical Analysis, Probability and Statistics.

The Department of Mathematics and Statistics has developed activities in numerous areas, some of which extend beyond the traditional areas of mathematics research, for example:

- Computer-Aided Design (CAD)
- Modelling of Rainfall
- Computational Oceanography
- Biomedicine
- Molecular Genetics

Yiorgos-Socratis Smyrlis  
Chairperson



## TASOS C. CHRISTOFIDES Professor

### Department of Mathematics and Statistics

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#### ■ STUDIES

University of Athens, Greece, B.Sc. in Mathematics, 1983  
 The Johns Hopkins University, U.S.A., M.S.E. in Mathematical Sciences, 1985  
 The Johns Hopkins University, U.S.A., Ph.D. in Mathematical Sciences, 1987

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Cyprus Mathematical Society, Cyprus • Greek Statistical Institute, Greece •  
 American Statistical Association, U.S.A. • American Mathematical Society,  
 U.S.A. • Institute of Mathematical Statistics, U.S.A. • Bernoulli Society for  
 Mathematical Statistics and Probability, Netherlands

#### ■ EDITORIAL BOARDS

*Communications in Statistics-Theory and Methods* (Associate Editor), U.S.A.,  
 Taylor and Francis  
*Communications in Statistics-Computation and Simulation* (Associate Editor),  
 U.S.A., Taylor and Francis

#### ■ RESEARCH INTERESTS

Probability Inequalities; U-Statistics; Sampling; Associated Random  
 Variables; Stochastic Orders

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Mediterranean Drought Preparedness Mitigation Planning (MEDROPLAN)  
 Cooperating Organizations: Mediterranean Agronomic Institute of  
 Zaragoza, Spain; National Technical University of Athens, Greece;  
 University of Catania, Italy; Polytechnic University of Madrid, Spain;  
 Institut Agronomique et Vétérinaire Hassan II, Morocco; Direction des  
 Grandes Ouvrage Hydrauliques, Tunisia. Funding: E.U.

## PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

Chaudhuri, A. and Christofides, T.C., Item Count Technique in estimating the proportion  
 of people with a sensitive feature. *J. Statist. Plann. Inf.*, 137, 589-593, 2007  
 Christofides, T.C., Randomized response in stratified sampling, *J. Statist. Plann. Inf.*, 128,  
 303-310, 2005  
 Christofides, T.C., Randomized response technique for two sensitive characteristics at  
 the same time, *Metrika*, 62, 53-63, 2005  
 Koupepidou P, Deltas C., Christofides T.C., "The MTHFR677TT and 677CT/1298AC  
 genotypes in Cypriot patients may be predisposing to hypertensive nephrosclerosis  
 and chronic renal failure, *International Angiology*, 24, 287-294, 2005

### ■ SELECTED CONFERENCE PROCEEDINGS

Christofides, T.C., Estimating the prevalence of a stigmatizing characteristic without a randomization device, *Proceedings of the 56th Session of the ISI*, 2007  
<http://isi.cbs.nl/bulletin.htm>

Christofides T.C., Randomized response technique for two sensitive characteristics, *Proceedings of the 8th Pancyprian Conference of the Cyprus Mathematical Society*, 341-348, 2006 (in Greek)

Chaudhuri Arijit, Christofides Tasos C. and Saha Amitava, Protection of Privacy in Randomized Response Techniques, *Proceedings of the International Conference on Statistical Methods for Biomedical and Technical Systems*, F. Vonta (Ed.), Nicosia, Cyprus, 253-258, 2006

Christofides, T.C., Opinion Polls and Statistics, *Proceedings of the 19th Panhellenic Conference of the Greek Statistical Institute*, 683-686, 2006 (in Greek)

Chaudhuri, A. and Christofides, T.C., Obtaining confidential information in survey sampling, *Proceedings of the 7th Pancyprian Conference of the Cyprus Mathematical Society*, 217-224, 2005 (in Greek)

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Christofides, T.C. and Serfling, R.J., Maximal inequalities for multidimensionally indexed submartingale arrays, *Annals of Probability*, Institute of Mathematical Statistics, U.S.A., 18, 630-641, 1990

Christofides, T.C., Maximal inequalities for demimartingales and a strong law of large numbers, *Statistics and Probability Letters*, Elsevier, Holland, 50, 357-363, 2000

Christofides, T.C. and Vaggelatos, E., A connection between supermodular ordering and positive/negative association, *Journal of Multivariate Analysis*, Elsevier, Holland, 88, 138-151, 2004

## PANTELIS A. DAMIANOU Professor Department of Mathematics and Statistics

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### ■ STUDIES

University of New Hampshire, U.S.A., B.Sc. in Mathematics, 1977

UCLA, U.S.A., M.A. in Mathematics, 1980

University of Arizona, U.S.A., Ph.D. in Mathematics, 1989

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Mathematical Society, U.S.A. • Mathematical Association of

America, U.S.A. • Société Mathématique de France, France • Cyprus

Mathematical Society

### ■ EDITORIAL BOARDS

*Bulletin of the Greek Mathematical Society* (Editor until 2005), Greece, HMS

*Regular and Chaotic Dynamics* (Editor since 2007), Springer Verlag

## ■ RESEARCH INTERESTS

Integrable Systems; Poisson Manifolds; Lie Groups; Number Theory

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

TRAFBUS Modeling and Analysis of Traffic and Impact of Dedicated Bus Lanes on Strovolos Avenue

Cooperating Organization: University of Southern California, U.S.A.

Funding: RPF, Cyprus

Supervisor of an expatriate recent Ph.D. (Maria Agrotis)

Funding: RPF, Cyprus

Supervisor of an expatriate recent Ph.D. (Yiannis Christodoulides)

Funding: RPF, Cyprus

Cyprus-France Cooperation Programme

Cooperating Organization: University of Poitiers, France

Funding: RPF, Cyprus

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

M. Agrotis and P.A. Damianou, The modular hierarchy of the Toda lattice, *Differential Geometry and its applications*, 25, 655-666, 2007

P. A. Damianou, H. Sabourin and P. Vanhaecke, Transverse Poisson structures to adjoint orbits in semi-simple Lie algebras, *Pacific Journal of Mathematics*, 232, No 1, 111-139, 2007

P. A. Damianou, V.G. Papageorgiou, On an integrable Case of Kozlov-Treshnev Birkhoff Integrable Potentials, *Regular and Chaotic Dynamics*, 12, No. 2, 160-170, 2007

Agrotis, P. A. Damianou, Volterra's realization of the KM-system, *Journal of Mathematical Analysis and Applications*, Vol. 325, 157-165, 2007

J. M. Nunes da Costa, P. A. Damianou, The negative relativistic Toda hierarchy and rational Poisson brackets, *Qualitative Theory of Dynamical Systems*, 5, No. 2, 121-134, 2006

M. Agrotis, P. A. Damianou, C. Sophocleous, The Toda lattice is super-integrable, *Physica A*, 365, 235-243, 2006

P. A. Damianou, C. Sophocleous, Master and Noether symmetries for the Toda lattice, *Applied Math. Letters*, 18, 163-170, 2005

M. Agrotis, P. A. Damianou, G. Marmo, A symplectic realization of the Volterra lattice, *J. Phys. A*, 38, 6327-6334, 2005

P. A. Damianou and F. Magri, A gentle (without chopping) approach to the full Kostant-Toda lattice, *SIGMA*, Vol. 1, paper 010, 1-12, 2005

### ■ SELECTED CONFERENCE PROCEEDINGS

M. Agrotis, P. A. Damianou, C. Sophocleous, Super-integrability of the non-periodic Toda lattice, *Proceedings of the 10th international conference in Modern Group Analysis*, 15-21, 2005

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

P. A. Damianou, Master symmetries and R-matrices for the Toda Lattice, *Letters in Mathematical Physics*, 20, 101-112, 1990

P. A. Damianou, Multiple Hamiltonian structures for Toda-type systems, *Journal of Mathematical Physics*, 35, 5511-5541, 1994

P. A. Damianou, Transverse Poisson structures of coadjoint orbits, *Bulletin des Sciences Mathématiques*, 120, 195-214, 1996

## KONSTANTINOS FOKIANOS Associate Professor

### Department of Mathematics and Statistics

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### ■ STUDIES

University of Ioannina, Greece, B.Sc. in Mathematics, 1991

University of Maryland, U.S.A., M.A. in Statistics, 1993

University of Maryland, U.S.A., Ph.D. in Statistics, 1996

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Institute of Mathematical Statistics (IMS), U.S.A. • International Statistical Institute (ISI), The Netherlands (Elected Member) • American Statistical Association (ASA), U.S.A. • International Biometric Society (IBS), U.S.A.

### ■ RESEARCH INTERESTS

Time Series; Semiparametric Models; Spatio-Temporal Data Analysis; Biostatistics; Bioinformatics

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

K. Fokianos, I. Sarrou and I. Pashalidis, Increased Radiation Exposure by Granite used as Natural Tiling Rock in Cypriot Houses, *Radiation Measurements*, 42, 446-448, 2007

K. Fokianos and J. F. Troendle, Inference for the Relative Treatment Effect with the Density Ratio Model, *Statistical Modeling: An International Journal*, 7, 155-173, 2007

K. Fokianos, Density Ratio Model Selection, *Journal of Statistical Computation and Simulation*, 77, 805-819, 2007

K. Fokianos, Partial likelihood for Observation Driven Models, *Student: A Celebration of Statistics: Papers in Honor of D.R. Cox*, Y. Dodge, G. Melfi (Eds), 5, 185-194, 2006

K. Fokianos, I. Kaimi, On the Effect of Misspecifying the Density Ratio Model, *Annals of the Institute for Statistical Mathematics*, 58, 475-497, 2006

K. Fokianos, I. Sarrou and I. Pashalidis, A Two-sample Model for the Comparison of Radiation Doses, *Chemometrics and Intelligent Laboratory Systems*, 79, 1-9, 2005

## ■ DISTINGUISHED PUBLICATIONS (before 2005)

### Authorship

B. Kedem and K. Fokianos, *Regression Models for Time Series Analysis*, John Wiley, Hoboken NJ, 2002

S. Wichert, K. Fokianos and K. Strimmer, Identifying Periodically Expressed Transcripts in Microarray Time Series Data, *Bioinformatics*, 20, 5-20, 2004

K. Fokianos, Merging Information for Semiparametric Density Estimation, *Journal of Royal Statistical Society, Series B*, 66, 941-958, 2004

**GEORGIOS C. GEORGIU** Professor  
Department of Mathematics and Statistics

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## ■ STUDIES

National Technical University of Athens, Greece, Diploma in Chemical Engineering, 1985

University of Michigan, U.S.A., M.Sc. in Chemical Engineering, 1986

University of Michigan, U.S.A., Ph.D. in Chemical Engineering, 1989

## ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Hellenic Society of Rheology (HSR), Greece • Greek Association of Computational Mechanics (GRACM), Greece • Society of Rheology, U.S.A. • Society of Industrial and Applied Mathematics (SIAM), U.S.A. • Societe Canadienne de Mathematiques Appliquees, Canada • International Association of Computational Mechanics (IACM), U.S.A. • Cyprus Mathematical Society

## ■ RESEARCH INTERESTS

Computational Rheology; Instabilities in Non-Newtonian Flows; Numerical Solution of Partial Differential Equations; Numerical Solution of Viscoplastic Flows; Computational Oceanography

## ■ EDITORIAL BOARDS

*Nonlinear Dynamics and Systems Theory*, Russia, Academic Periodical Press  
*International Journal of Applied Mathematical Sciences*, India, GBS Publishers and Distributors

*Mediterranean Journal for Research in Mathematics Education*, Cyprus, Cyprus Mathematical Society

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

ECOP-European Coastal Shelf sea operational monitoring and forecasting system

Funding: E.U.

CORI-Prevention and Management of Sea Originated Risks to Coastal Zone Cooperation between Cyprus and Greece. Funding: E.U.

AQUA-PLANNER, Estimation System for Environmental Effects from Aquacultures. Cooperation between Cyprus and Greece. Funding: E.U.

Image-based modelling of cardiovascular flows  
Funding: RPF, Cyprus

## PUBLICATIONS

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### ■ BOOKS

#### Editing

G. Georgiou, P. Papanastasiou and M. Papadrakakis (Eds), *Proceedings of the 5th GRACM International Congress on Computational Mechanics (GRACM05)*, Vol. 1, Kantzilaris Publications, Nicosia, 2005

G. Georgiou, P. Papanastasiou and M. Papadrakakis (Eds), *Proceedings of the 5th GRACM International Congress on Computational Mechanics (GRACM05)*, Vol. 2, Kantzilaris Publications, Nicosia, 2005

### ■ CHAPTERS IN BOOKS

G. Georgiou, Stick-slip instability, *Polymer Processing Instabilities: Control and Understanding*, S.G. Hatzikiriakos and K. Migler (Eds), MerceL Dekker, Inc., 161-206, 2005

### ■ SELECTED JOURNAL PUBLICATIONS

E. Taliadorou, G. Georgiou and A.N. Alexandrou, A two-dimensional numerical study of the stick-slip extrusion instability, *J. Non-Newtonian Fluid Mechanics*, 146, 30-44, 2007

G.C. Florides, A.N. Alexandrou and G. Georgiou, Flow development in compression of a finite amount of a Herchel-Bulkley fluid, *J. Non-Newtonian Fluid Mechanics*, 143, 38-47, 2007

A.N. Alexandrou and G. Georgiou, On the early breakdown of semisolid suspensions, *J. Non-Newtonian Fluid Mechanics*, 142, 199-206, 2007

M. Elliotis, G. Georgiou, and C. Xenophontos, The singular function boundary integral method for biharmonic problems with crack singularities, *Engineering Analysis with Boundary Elements*, 31, 209-215, 2007

M. Chatzimina, C. Xenophontos, G. Georgiou, "...", Cessation of annular Poiseuille flows of Bingham plastics, *J. Non-Newtonian Fluid Mechanics*, 142, 135-142, 2007

E. Taliadorou, G. Georgiou and A. Alexandrou, Two-dimensional simulations of the effect of the reservoir region on the pressure oscillations observed in the stick-slip instability regime, *Int. J. Appl. Mech. Eng.*, 11, 245-254, 2006

C. Xenophontos, M. Elliotis, and G. Georgiou, A singular function boundary integral method for Laplacian problems with boundary singularities, *SIAM J. Sci. Comp.*, 28, 517-532, 2006

M. Elliotis, G. Georgiou, and C. Xenophontos, The singular function boundary integral method for a two-dimensional fracture problem, *Engineering Analysis with Boundary Elements*, 30, 100-106, 2006

G. Zodiatis, et al., Operational coastal ocean forecasting in the Eastern Mediterranean: implementation and evaluation, *Ocean Science, Ocean Sci. Discuss*, 3, 397-434, 2006

M. Elliotis, G. Georgiou, and C. Xenophontos, Solution of the planar Newtonian stick-slip problem with the singular function boundary integral method, *Int. J. Numer. Methods Fluids*, 48, 1000-1021, 2005

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

T. Papanastasiou, G. Georgiou and A. Alexandrou, *Viscous Fluid Flow*, CRC Press, Boca Raton, 1999, <http://www.crcpress.com/us/product.asp?sku=1606&dept%5Fid=1>

G.C. Georgiou and D. Vlassopoulos, On the stability of the simple shear flow of a Johnson-Segalman fluid, *J. Non-Newtonian Fluid Mech.*, 75, 77-97, 1998

G.C. Georgiou and M.J. Crochet, Compressible viscous flow in slits with slip at the wall, *Rheol.* 38, 639-654, 1994

### ANDREAS KARAGEORGHIS Professor Department of Mathematics and Statistics

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#### ■ STUDIES

Oxford University, U.K., B.A. in Mathematics, 1981

Oxford University, U.K., M.A. in Mathematics, 1985

Oxford University, U.K., D.Phil. in Mathematics, 1985

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Institute of Mathematics and its Applications, U.K. (Fellow) • Canadian Applied Mathematics Society • Society for Industrial and Applied Mathematics, U.S.A. • International Association for Mathematics and Computers in Simulation

#### ■ EDITORIAL BOARDS

*Engineering Analysis with Boundary Elements*, Elsevier

#### ■ RESEARCH INTERESTS

Numerical Analysis; Scientific Computing

#### ■ RESEARCH PROGRAMMES (University of Cyprus, 2005-2007)

Matrix decomposition algorithms for modified spline collocation for separable elliptic boundary value problems

### PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

J. R. Berger, A. Karageorghis and P. A. Martin, Stress intensity factor computation using the method of fundamental solutions: Mixed mode problems, *International Journal for Numerical Methods in Engineering*, 69, 469-483, 2007

A. Karageorghis, C. S. Chen and Y-S. Smyrlis, A matrix decomposition RBF algorithm: Approximation of functions and their derivatives, *Applied Numerical Mathematics*, 57, 304-319, 2007

B. Bialecki and A. Karageorghis, A nonoverlapping domain decomposition method for Legendre spectral collocation problems, *Journal of Scientific Computing*, 32, 373-409, 2007

Z. Belhachmi, C. Bernardi and A. Karageorghis, Mortar spectral element discretization of Laplace and Darcy equations with discontinuous coefficients, *Modélisation Mathématique et Analyse Numérique*, 41, 801-824, 2007

Y-S. Smyrlis and A. Karageorghis, The method of fundamental solutions for stationary heat conduction problems in rotationally symmetric domains, *SIAM Journal on Scientific Computing*, 27, 1493-1512, 2006

T. Tsangaris, Y-S. Smyrlis and A. Karageorghis, Numerical analysis of the method of fundamental solutions for harmonic problems in annular domains, *Numerical Methods for Partial Differential Equations*, 22, 507-539, 2006

R. Tankelevich, G. Fairweather, A. Karageorghis, "...", Potential field based geometric modeling using the method of fundamental solutions, *International Journal for Numerical Methods in Engineering*, 68, 1257-1280, 2006

A. Karageorghis, Y-S. Smyrlis and T. Tsangaris, A matrix decomposition MFS algorithm for certain linear elasticity problems, *Numerical Algorithms*, 43, 123-148, 2006

G. Fairweather, A. Karageorghis and Y-S. Smyrlis, A matrix decomposition MFS algorithm for axisymmetric biharmonic problems, *Advances in Computational Mathematics*, 23, 55-71, 2005

B. Bialecki, G. Fairweather and A. Karageorghis, Optimal superconvergent one step nodal cubic spline collocation methods, *SIAM Journal on Scientific Computing*, 27, 575-598, 2005

**ALEX KARAGRIGORIOU** Associate Professor  
Department of Mathematics and Statistics

TEL.: 22892634, FAX: 22892601, E-mail: alex@ucy.ac.cy

#### ■ STUDIES

University of Patras, Greece, B.Sc. in Mathematics, 1984  
University of Maryland, U.S.A., M.A. in Mathematical Statistics, 1988  
University of Maryland, U.S.A., Ph.D. in Mathematical Statistics, 1992

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Statistical Association • Institute of Mathematical Statistics, U.S.A.  
• International Biometrics Society • Hellenic Statistical Institute

#### ■ EDITORIAL BOARDS

*Statistical Periscope e-News Bulletin* (Editor), Greek Statistical Institute

## ■ RESEARCH INTERESTS

Measures of Divergence; Model Selection Criteria; Statistical Modelling; Medical Statistics

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Cypriot Household Portfolios (Survey of Consumer Finances)  
Cooperating Organization: Department of Economics, University of Cyprus; Central Bank of Cyprus. Funding: Central Bank of Cyprus

Male Urogenital Cancer and its Relation to the Human Pappiloma Virus (HPV)  
Cooperating Organization: Mendel Center for Biomedical Sciences, Cyprus. Funding: RPF, Cyprus

## PUBLICATIONS

---

### ■ SELECTED JOURNAL PUBLICATIONS

Vonta, I. and Karagrigoriou, A., Variable selection strategies in survival models with multiple imputations, *Lifetime Data Analysis*, 13, 295-315, 2007

Karagrigoriou, A. and Vonta, I., On distributional changes of financial characteristics in Cyprus: What does the survey of consumer finances say?, *Financial Theory and Practice*, Vol. 30 (4), 381-403, 2006

Mattheou, K. and Karagrigoriou, A., Robust model selection criteria with applications, *Commun. in Dependability and Quality Managem.*, Vol. 9(3), 53-65, 2006

Cariolou, M. A., et al., Allele distribution of 15 STR loci used for human identity purposes in the Greek Cypriot population of the island of Cyprus, *Forensic Sc. Intern.*, 164 (1), 75-78, 2006

Karagrigoriou, A. and Vonta, I., O promjenama distribucije financijskih obiljezja na cipru: Sto govori anketa o financijama potrosaca?, *Financijska teorija i praksa*, Vol. 30 (4), 386-405, 2006 (in Croatian)

Karagrigoriou, A. and Vonta, F., On efficient AR spectral estimation for long-range predictions, *Commun. in Statist.*, 34(7), 1587-1603, 2005

Cariolou MA, et al., HDL cholesterol, smoking and IL13 R130Q polymorphism are associated with myocardial infarction in Greek Cypriot males, *Atherosclerosis Supplements*, 6 (1): 3-3, 2005

### ■ SELECTED CONFERENCE PROCEEDINGS

Mattheou, K. and Karagrigoriou, A., BHHJ Discrepancy Measure: Distributional Properties and Goodness of Fit Tests, *Proc. 19th Conf. of the Greek Statist. Inst.*, 631-639, 2007

Mattheou, K. and Karagrigoriou, A., A discrepancy based model selection criterion, *Proc. 18th Conf. of the Greek Statist. Inst.*, 485-494, 2006

Mattheou, K. and Karagrigoriou, A., On measures of divergence and the divergence model selection criterion, *BIOSTAT2006, Proc. of the Intern. Conf. on Statistical Models in Biomedical and Technical Systems*, I. Vonta (Ed.), Kantzilaris Publications, Cyprus, 393-398, 2006

**STAMATIS KOUMANDOS** Professor  
Department of Mathematics and Statistics

TEL.: 22892622, FAX: 22892601, E-mail: skoumand@ucy.ac.cy

■ **STUDIES**

Aristotle University of Thessaloniki, Greece, B.Sc. in Mathematics, 1985  
Aristotle University of Thessaloniki, Greece, Ph.D. in Mathematics, 1991

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

American Mathematical Society • Society for Industrial and Applied Mathematics (SIAM), U.S.A. • SIAM Activity Group on Orthogonal Polynomials and Special Functions, U.S.A. • European Mathematical Society, Germany • Greek Mathematical Society • Cyprus Mathematical Society  
• Research Group in Mathematical Inequalities and Applications, Australia  
• Harmonic Analysis, IHP Network, France

■ **RESEARCH INTERESTS**

Fourier Analysis; Orthogonal Polynomials - Special Functions;  
Approximation Theory; Harmonic Analysis; Analytic Number Theory

■ **EDITORIAL BOARDS**

*International Journal of Pure and Applied Mathematical Sciences*, India, GBS Publishers and Distributors  
*Global Journal of Mathematics and Mathematical Sciences*, India, GBS Publishers and Distributors  
*Australian Journal of Mathematical Analysis and Applications*, Australia, University of Victoria, Melbourne  
*Journal of Mathematical Inequalities*, Croatia, University of Zagreb

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

Inequalities for special functions and applications to geometric function theory and related fields  
Funding: Leventis Foundation, Cyprus

**PUBLICATIONS**

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■ **SELECTED JOURNAL PUBLICATIONS**

Stamatis Koumandos, An extension of Vietoris's inequalities, *The Ramanujan Journal*, 14, No. 1, 1-38, 2007  
Horst Alzer and Stamatis Koumandos, A new refinement of Young's inequality, *Proceedings of the Edinburgh Mathematical Society*, 50, No. 2, 255-262, 2007  
Stamatis Koumandos and Stephan Ruscheweyh, On a conjecture for trigonometric sums and starlike functions, *Journal of Approximation Theory*, 149, No. 1, 42-58, 2007

- Stamatis Koumandos, Remarks on a paper by Chao-Ping Chen and Feng Qi, *Proceedings of the American Mathematical Society*, 134, No. 5, 1365-1367, 2006
- Stamatis Koumandos and Stephan Ruscheweyh, Positive Gegenbauer polynomial sums and applications to starlike functions, *Constructive Approximation*, 23, No. 2, 197-210, 2006
- Horst Alzer and Stamatis Koumandos, Sub- and Superadditive properties of the Fej\{e}r's sine polynomial, *Bulletin of the London Mathematical Society*, 38, No. 2, 261-268, 2006
- Horst Alzer and Stamatis Koumandos, Inequalities for two sine polynomials, *Colloquium Mathematicum*, 105, No. 1, 127-134, 2006
- Stamatis Koumandos, Remarks on some completely monotonic functions, *Journal of Mathematical Analysis and Applications*, 324, No. 2, 1458-1461, 2006
- Horst Alzer and Stamatis Koumandos, Some monotonic trigonometric sums, Analysis (Munich), *International Mathematical Journal of Analysis and its Applications*, 26, No. 4, 429-449, 2006
- Horst Alzer, Christian Berg and Stamatis Koumandos, On a conjecture of Clark and Ismail, *Journal of Approximation Theory*, 134, No. 1, 102-113, 2005

## GEORGE KYRIAZIS Associate Professor Department of Mathematics and Statistics

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### ■ STUDIES

University of Ioannina, Greece, B.Sc. in Mathematics, 1986  
University of South Carolina, U.S.A., Ph.D., 1992

### ■ RESEARCH INTERESTS

Approximation Theory; Harmonic Analysis; Related topics of Classical Analysis including the Study of Decomposition Systems on Various Spaces of Functions

### ■ RESEARCH PROGRAMMES (University of Cyprus, 2005-2007)

Decomposition of Weighted Smoothness Spaces and Applications

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

- G. Kyriazis, P. Petrushev, On the construction of frames for Triebel-Lizorkin and Besov spaces, *Proceedings of the American Mathematical Society*, Vol. 136, 1759-1770, 2006
- G. Kyriazis, P. Petrushev and R. Park, Anisotropic Franklin bases on polygonal domains, *Math. Nachrichten*, Vol. 279, 1099-1127, 2006

## CHRISTOS A. PALLIKAROS Associate Professor Department of Mathematics and Statistics

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### ■ STUDIES

Imperial College, London, U.K., B.Sc. in Mathematics, 1988  
Stanford University, U.S.A., M.Sc. in Mathematics, 1990  
Imperial College, U.K., Ph.D. in Mathematics, 1993

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Mathematical Society, U.S.A. • London Mathematical Society, U.K.  
• Cyprus Mathematical Society, Cyprus

### ■ RESEARCH INTERESTS

Group Representation Theory; Algebraic Combinatorics

### PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

T. P. McDonough, C. A. Pallikaros, On relations between the classical and the Kazhdan-Lusztig representations in symmetric groups and associate Hecke algebras, *Journal of Pure and Applied Algebra*, 203, 133–144, 2005

## EFSTATHIOS G. PAPARODITIS Professor Department of Mathematics and Statistics

TEL.: 22892643, FAX: 22892601, E-mail: stathisp@ucy.ac.cy

### ■ STUDIES

Freie Universität Berlin, Germany, Diploma in Mathematical Economics, 1985  
Freie Universität Berlin, Germany, Ph.D. in Statistics, 1990

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Institute of Mathematical Statistics • Bernoulli Society • International Statistical Institute

### ■ EDITORIAL BOARDS

*Journal of Nonparametric Statistics* (Associate Editor)  
*Journal of Time Series Econometrics* (Associate Editor)

### ■ RESEARCH INTERESTS

Nonparametric Statistics; Resampling Methods; Time Series Analysis

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007):

Cyprus-France Bilateral Agreement Programme  
Funding: RPF, Cyprus

## PUBLICATIONS

---

### ■ SELECTED JOURNAL PUBLICATIONS

A. Antoniadis, E. Paparoditis and T. Sapatinas, A Functional Wavelet-Kernel Approach for Continuous-Time Prediction, *Journal of the Royal Statistical Society, Series B*, Vol. 68, 837-857, 2006

C. Parker, E. Paparoditis and D. N. Politis, Unit, Root Testing via the Stationary Bootstrap, *Journal of Econometrics*, Vol. 133, 601-638, 2006

E. Paparoditis and D. N. Politis, Bootstrap, Hypothesis Testing in Regression Models, *Statistics and Probability Letters*, Vol. 74, 356-365, 2005

E. Paparoditis, Testing the Fit of a Vector Autoregressive Moving Average Model, *Journal of Time Series Analysis*, Vol. 26, 543-568, 2005

E. Paparoditis and D. N. Politis, Bootstrapping Unit Root Tests for Autoregressive Time Series, *Journal of the American Statistical Association*, Vol. 100, 545-553, 2005

**EVANGELIA SAMIOU** Assistant Professor  
Department of Mathematics and Statistics

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### ■ STUDIES

University of Athens, Greece, Degree in Mathematics, 1990

University of Augsburg, Germany, Dr. rer. nat. in Mathematics, 1997

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Deutsche Mathematiker-Vereinigung (DMV), Germany • London

Mathematical Society (LMS), U.K. • American Mathematical Society (AMS), U.S.A.

### ■ RESEARCH INTERESTS

Differential Geometry (Riemannian Geometry)

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

S. Bechtluft-Sachs and E. Samiou: The Monge-Ampère equation and warped product of higher rank, *J. Aust. Math. Soc.*, 83, 11-15, 2007

L. Dalla and E. Samiou: Curvature and q-strict convexity, *Beiträge Algebra Geom.*, 48, No. 1, 83-93, 2007

A. Kollross and E. Samiou, Homogeneous Spaces with Sections, *Manuscripta Math.*, 116, 115-123, 2005

S. Console, A. Fino and E. Samiou, The moduli space of 6-dimensional 2-step nilpotent Lie algebras, *Annals of Global Analysis and Geometry*, 27, 17-32, 2005

## THEOFANIS SAPATINAS Associate Professor Department of Mathematics and Statistics

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### ■ STUDIES

University of Athens, Greece, B.Sc. in Mathematics, 1989

University of Sheffield, U.K., M.Sc. in Statistics, 1991

University of Sheffield, U.K., Ph.D. in Statistics, 1994

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Royal Statistical Society, U.K. (Fellow) • Institute of Mathematical Statistics, U.S.A. • Bernoulli Society, Netherlands

### ■ RESEARCH INTERESTS

Nonparametric and Semiparametric Volatility Estimation; Functional Time Series Prediction; Functional Mixed-Effects Models; Nonparametric Curve Estimation; Wavelets in Statistics

### ■ EDITORIAL BOARDS

*Annals of Statistics* (Associate Editor), U.S.A., Institute of Mathematical Statistics

### ■ RESEARCH PROGRAMMES (External Funding, 2005-2007)

Development of New Statistical Methods and Related Software for the Analysis of Genetical Data Using Grid Computing  
Cooperation between Italy and Cyprus. Funding: RPF, Cyprus

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

Antoniadis, A. and Sapatinas, T., Estimation and inference in functional mixed-effects models, *Computational Statistics and Data Analysis*, The Netherlands, Vol. 51, 4793-4813, 2007

Pensky, M. and Sapatinas, T., Frequentist optimality of Bayes factor estimators in wavelet regression models, *Statistica Sinica*, Taiwan, Vol. 17, 599-633, 2007

Michis, A.A. and Sapatinas, T., Wavelet instruments for efficiency gains in generalized method of moments models, *Studies in Nonlinear Dynamics and Econometrics*, U.S.A., Vol. 11, Issue 4, Article 4, 2007

- <http://www.bepress.com/cgi/viewcontent.cgi?article=1531&context=snde>  
 Fryzlewicz, P., Sapatinas, T. and Subba Rao, S. A Haar-Fisz technique for locally stationary volatility estimation, *Biometrika*, U.K., Vol. 93, 687-704, 2006
- Antoniadis, A., Paparoditis, E. and Sapatinas, T., A functional wavelet-kernel approach for time series prediction, *Journal of the Royal Statistical Society*, U.K., Series B, Vol. 68, 837-857, 2006
- Bochkina, N. and Sapatinas, T., On pointwise optimality of Bayes factor wavelet regression estimators, *Sankhya*, India, Vol. 68, 513-541, 2006
- Bochkina, N. and Sapatinas, T., On the posterior median estimators of possibly sparse sequences, *Annals of the Institute of Statistical Mathematics*, Japan, Vol. 57, 315-351, 2005

**YIORGOS-SOKRATIS SMYRLIS** Associate Professor  
 Department of Mathematics and Statistics

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■ **STUDIES**

- University of Athens, Greece, B.S. in Mathematics, 1984  
 Courant Institute, New York University, U.S.A., M.S. in Mathematics, 1986  
 Courant Institute, New York University, U.S.A., Ph.D. in Mathematics, 1989

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

- American Mathematical Society (AMS) • Mathematical Association of America (MAA)

■ **RESEARCH INTERESTS**

- Partial Differential Equations; Numerical Analysis; Functional Analysis

■ **RESEARCH PROGRAMMES (University of Cyprus 2005-2007)**

- Matrix Decomposition Algorithms

**PUBLICATIONS**

■ **SELECTED JOURNAL PUBLICATIONS**

- A. Karageorghis and Y.-S. Smyrlis, Matrix decomposition MFS algorithms for elasticity and thermo-elasticity problems in axisymmetric domains, *Journal of Computational and Applied Mathematics*, 206, Issue 2, 774-795, 2007
- A. Karageorghis, C. S. Chen and Y.-S. Smyrlis, A matrix decomposition RBF algorithm: Approximation of functions and their derivatives, *Applied Numerical Mathematics*, 57, Issue 3, 304-319, 2007
- R. L. Tankelevich, et al., Potential Field Based Geometric Modelling using the Method of Fundamental Solutions, *International Journal for Numerical Methods in Engineering*, 68, Issue 12, 1257-1280, 2006

A. Karageorghis, Y.-S. Smyrlis, Th. Tsangaris, A matrix decomposition MFS algorithm for certain linear elasticity problems, *Numerical Algorithms*, 43, Issue 2, 123-149, 2006

Th. Tsangaris, Y.-S. Smyrlis and Andreas Karageorghis, A matrix decomposition MFS algorithm for problems in hollow axisymmetric domains, *Journal of Scientific Computing*, 28, Issue 1, 31-50, 2006

Th. Tsangaris, Y.-S. Smyrlis and A. Karageorghis, Numerical analysis of the method of fundamental solutions for harmonic problems in annular domains, *Numerical Methods in Partial Differential Equations*, 22, Issue 3, 507-539, 2006

Y.-S. Smyrlis, The method of fundamental solutions: A weighted least-squares approach, *BIT Numerical Mathematics*, 46, Issue 1, 163-194, 2006

Y.-S. Smyrlis and A. Karageorghis, The method of fundamental solutions for stationary heat conduction problems in rotationally symmetric domains, *SIAM Journal on Scientific Computing*, 26, Issue 4, 1493-1512, 2006

G. Fairweather, A. Karageorghis and Y.-S. Smyrlis, A matrix decomposition MFS algorithm for axisymmetric biharmonic problems, *Advances in Computational Mathematics*, 23, Issues 1-2, 55-71, 2005

#### ■ DISTINGUISHED PUBLICATIONS

Y.-S. Smyrlis and A. Karageorghis, Numerical Analysis of the MFS for certain harmonic problems, M2AN, *Mathematical Modelling and Numerical Analysis*, 38, Issue 3, 495-517, 2004

Y.-S. Smyrlis and D. T. Papageorgiou, Predicting chaos for infinite dimensional dynamical systems: The Kuramoto-Sivashinsky equation, a case study, *Proceedings of the National Academy of Sciences (PNAS)*, U.S.A., *Applied Mathematics*, 88, 11129-11132, 1991

Y.-S. Smyrlis, Existence and stability of stationary profiles of the LW scheme, *Communications on Pure and Applied Mathematics*, 43, 509-545, 1990

**CHRISTODOULOS SOPHOCLEOUS** Associate Professor  
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#### ■ STUDIES

University of Aston in Birmingham, U.K., B.Sc. in Mathematics, 1987

University of Nottingham, U.K., Ph.D. in Mathematics, 1991

#### ■ RESEARCH INTERESTS

Mathematical Physics; Nonlinear Partial Differential Equations

#### ■ EXTERNAL RESEARCH PROGRAMMES (2005-2007)

Nonlinear Evolution Equations-Solitons and their applications

Funding: RPF, Cyprus

Nonlinear Diffusive and Wave equations that model problems in  
Mathematical Physics and Mathematical Biology

Funding: RPF, Cyprus

Applications of Algebraic Computing to Mathematics

Funding: RPF, Cyprus

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

N. H. Ibragimov and C. Sophocleous, Differential invariants of the one-dimensional quasi-linear second-order evolution equation, *Communications in Nonlinear Science and Numerical Simulation*, Elsevier, 12, 1133-1145s, 2007

O. O. Vaneeva, et al., Enhanced Group Analysis and Conservation Laws of Variable Coefficient Reaction–Diffusion Equations with Power Nonlinearities, *Journal of Mathematical Analysis and Applications*, Elsevier, 330, 1363-1386, 2007

E. Demetriou, M. A. Christou and C. Sophocleous, On the classification of similarity solutions of a two-dimensional diffusion-advection equation, *Applied Mathematics and Computation*, Elsevier, 187, 1333-1350, 2007

N. M. Ivanova and C. Sophocleous, On the group classification of variable-coefficient nonlinear diffusion-convection equations, *Journal of Computational and Applied Mathematics*, 197, 322-344, 2006

M. A. Agrotis, P. A. Damianou, and C. Sophocleous, The Toda lattice is super integrable, *Physica A*, Elsevier, 365, 235-243, 2006

C. Sophocleous and R.J. Wiltshire, Linearisation and potential symmetries of certain systems of diffusion equations, *Physica A*, Elsevier, 370, 329-345, 2006

P. A. Damianou and C. Sophocleous, Noether and master symmetries for the Toda Lattice, *Applied Mathematics Letters*, Elsevier, 18, 163-170, 2005

C. Sophocleous, Further transformation properties of generalised inhomogeneous nonlinear diffusion equations with variable coefficients, *Physica A, Elsevier*, 345, 457-471, 2005

**NIKOS STYLIANOPOULOS** Associate Professor  
Department of Mathematics and Statistics

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### ■ STUDIES

University of Patras, Greece, B.Sc. in Mathematics, 1985

Brunel University, U.K., M.Sc. in Numerical Analysis, 1987

Brunel University, U.K., Ph.D. in Mathematics, 1990

### PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Greek Mathematical Society, Greece • Society for Industrial and Applied Mathematics, U.S.A.

## ■ RESEARCH INTERESTS

Computational Complex Analysis; Conformal Mapping; Numerical Analysis; Numerical Linear Algebra; Orthogonal Polynomials

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

Putinar, Mihai, Stylianopoulos, Nikos S., Finite-term relations for planar orthogonal polynomials, *Complex Anal. Oper. Theory* 1, No. 3, 447-456, 2007

Hadjidimos, A., Stylianopoulos, N. S., Optimal semi-iterative methods for complex SOR with results from potential theory, *Numer. Math.* 103, No. 4, 591-610, 2006

Miña-Díaz, Erwin, Saff, Edward B., Stylianopoulos, Nikos S., Zero distributions for polynomials orthogonal with weights over certain planar regions, *Comput. Methods Funct. Theory* 5, No. 1, 185-221, 2005

### ■ SELECTED CONFERENCE PROCEEDINGS

Baratchart, L., et al., Open problems in constructive function theory, *Electron. Trans. Numer. Anal.* 25, 511-525, 2006

## NIKOLAOS TZIOLAS Assistant Professor Department of Mathematics and Statistics

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### ■ STUDIES

Aristotle University of Thessaloniki, Greece, B.Sc. in Mathematics, 1991

University of Utah, U.S.A., Ph.D. in Mathematics, 1999

### ■ RESEARCH INTERESTS

Algebraic Geometry

## PUBLICATIONS

---

### ■ SELECTED JOURNAL PUBLICATIONS

Nicolaos Tziolas, Three dimensional divisorial extremal neighborhoods, *Mathematische Annalen* 333, 315-354, 2005

### ■ SELECTED CONFERENCE PROCEEDINGS

Nicolaos Tziolas, Corrigendum: Families of D-minimal models and applications to 3-fold divisorial contractions, *Proceedings of the London Mathematical Society*, 93 (3), 82-84, 2006

Nicolaos Tziolas, Families of D-minimal models and applications to 3-fold divisorial contractions, *Proceedings of the London Mathematical Society*, 90 (2), 345-370, 2005

## ALEKOS VIDRAS Associate Professor Department of Mathematics and Statistics

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### ■ STUDIES

University of Athens, Greece, B.Sc in Mathematics, 1986

University of Maryland, College Park, U.S.A., Ph.D. in Mathematics, 1992

### ■ RESEARCH INTERESTS

Complex Analysis (One and Several Variables); Residue Currents, Entire Functions, Carleman Formulas

### PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

Aizenberg Lev, Vidras Alekos, On a class of holomorphic functions representable by Carleman formulas in the disk from their values on the arc of the circle, *Math. Nachr.*, 280, No. 1-2, 5-19, 2007

Chailos George, Vidras Alekos, On a class of holomorphic functions representable by Carleman formulas in some class of bounded, simply connected domains from their values on an analytic arc., *Monatsh. Math.*, 149, No. 4, 289-301, 2006

Chailos George, Vidras Alekos, On a class of holomorphic functions representable by Carleman formulas in the interior of an equilateral cone from their values on its rigid base, *J. Math. Anal. Appl.*, 310, No. 2, 657-672, 2005

Berenstein Carlos A., Vidras Alekos, Yger Alain, Analytic residues along algebraic cycles, *J. Complexity*, 21, No. 1, 5-42, 2005

## FILIA VONTA Associate Professor Department of Mathematics and Statistics

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### ■ STUDIES

University of Patras, Greece, B.Sc. in Mathematics, 1984

University of Maryland, U.S.A., M.A. in Mathematical Statistics, 1988

University of Maryland, U.S.A., Ph.D. in Mathematical Statistics, 1992

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Statistical Association • Institute of Mathematical Statistics •

International Statistical Institute (Elected Member, 2006) • Cyprus

Mathematical Society • Hellenic Statistical Institute • Eastern Mediterranean

Region of the International Biometrics Society (Vice President)

## ■ RESEARCH INTERESTS

Medical Statistics; Semiparametric Statistics; Survival Analysis; Biostatistics

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Cypriot Household Portfolios (Survey of Consumer Finances)

Funding: University of Cyprus and Central Bank of Cyprus

Male Urogenital Cancer and its Relation to the Human Pappiloma Virus (HPV)

Cooperating Organization: Mendel Center for Biomedical Sciences,

Cyprus. Funding: RPF, Cyprus

## PUBLICATIONS

---

### ■ BOOKS

#### Editing

Vonta, F. and Frenkel, I. (Eds), *Communications in Dependability and Quality Management*, Vol. 10 (1), 2007

Vonta, F., *BIOSTAT2006, Proceedings of the International Conference on Statistical Methods for Biomedical and Technical Systems*, Kantzilaris Publications, Cyprus, 2006

### ■ CHAPTERS IN BOOKS

Huber-Carol, C., Solev, V., and Vonta, F., Estimation of density for arbitrarily censored and truncated data, *Probability, Statistics and Modelling in Public Health*, Nikulin, M. S., Commenges, D., and Huber-Carol, C. (Eds), Springer (Kluwer Acad. Publ.), New York, 246-265, 2006

### ■ SELECTED JOURNAL PUBLICATIONS

Huber, C., Solev, V. N. and Vonta, F., Maximum likelihood estimators: nonparametric approach, *Journal of Mathematical Sciences*, Springer, U.S.A., 147, No. 4, 6975-6979, 2007

Huber, C., Solev, V. N. and Vonta, F., Maximum likelihood estimator: a nonparametric approach, *Zap. Nauch. Sem. S-Petersburg. Otdel. Mat. Inst. Steklov (POMI)*, 341, Veroyatn. i Stat. II, 220-228, 233-234, 2007 (in Russian)

Vonta F. and Karagrigoriou, A., Automatic variable selection strategies in survival models and their asymptotic properties, *Lifetime Data Analysis*, 13, Issue 3, 295-315, 2007

Vonta, F. and Artemiou, A., Hypothesis Testing in Frailty Models for Arbitrarily Censored and Truncated Data, *Comm. in Dependability and Quality Manag.*, 10 (1), 110-121, 2007

Karagrigoriou, A. and Vonta F., On distributional changes of financial characteristics in Cyprus: What does the survey of consumer finances say?, *Financial Theory and Practice*, 30, Issue 4, 381-403, 2006

Kyriakides, T., et al., Melatonin is detrimental to survival in a transgenic mouse model of familial ALS, *Journal of Neurology*, 253, Suppl. 2, 122-122, 2006

Kyriakides, T., et al., Familial amyloidotic neuropathy: an epidemiological and genetic study, *Journal of Neurology*, 253, Suppl. 2, 107-107, 2006

Slud, E. V. and Vonta, F., Efficient semiparametric estimators via modified profile likelihood, *J. Statist. Plann. and Infer.*, 129, 339-367, 2005

Karagrigoriou, A. and Vonta F., On efficient AR spectral estimation for long-range predictions, *Commun. In Statist.*, 34, Issue 7, 1587-1603, 2005

#### ■ SELECTED CONFERENCE PROCEEDINGS

Huber-Carol, C., Solev, V. and Vonta, F., Frailty models for censored and truncated data. *BIOSTAT2006, Proc. of the Intern. Conf. In Statist. Methods for Biom. and Techn. Systems*, F. Vonta (Ed.), 13-20, 2006

### CHRISTOS XENOPHONTOS Assistant Professor Department of Mathematics and Statistics

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#### ■ STUDIES

The College of William and Mary, U.S.A., B.Sc. in Mathematics, 1991  
University of Maryland Baltimore, U.S.A., M.Sc. in Applied Mathematics, 1993  
University of Maryland Baltimore, U.S.A., Ph.D. in Applied Mathematics, 1996

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Society for Industrial and Applied Mathematics, U.S.A. • American Mathematical Society, U.S.A. • Greek Association of Computational Mechanics, Greece

#### ■ RESEARCH INTERESTS

Numerical Analysis; Computational Mathematics; Numerical Solution of Differential Equations; Finite Element Methods

#### PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

M. Elliotis, G. Georgiou and C. Xenophontos, The singular function boundary integral method for biharmonic problems with crack singularities, *Engineering Analysis with Boundary Elements*, 209–215, 2007

M. Chatzimina, C. Xenophontos, G. Georgiou, "...", Cessation of annular Poiseuille flows of a Bingham plastic, *J. Non-Newtonian Fluid Mechanics*, 135–142, 2007

C. Xenophontos and L. Oberbroeckling, A numerical study on the finite element solution of singularly perturbed systems of reaction-diffusion problems, *Applied Mathematics and Computation*, 1351–1367, 2007

C. Xenophontos, The use of curved elements in the finite element approximation of thin plates by high order p and hp methods, *J. Scientific Computing*, 465–476, 2006

C. Xenophontos, M. Elliotis and G. Georgiou, The singular function boundary integral method for elliptic problems with singularities, *SIAM Journal of Scientific Computing*, 517–532, 2006

- C. Xenophontos, J. Kurtz and S. R. Fulton, A p-version MITC finite element method for Reissner-Mindlin plates with smooth boundaries, *Journal of Computational and Applied Mathematics*, 374–395, 2006
- 
- M. Elliotis, G. Georgiou and C. Xenophontos, The singular function boundary integral method for a two-dimensional fracture problem, *Engineering Analysis with Boundary Elements*, 100–106, 2006
- 
- Z. C. Li, et al., Special boundary approximation methods for Laplace equation problems with boundary singularities, *Computers and Mathematics with Applications*, 115–142, 2006
- 
- M. Elliotis, G. Georgiou and C. Xenophontos, Solution of the planar Newtonian stick-slip problem with the singular function boundary integral method, *Int. J. Numer. Meth. Fluids*, 1001–1021, 2005
- 
- M. Elliotis, G. Georgiou and C. Xenophontos, Solving Laplacian problems with boundary singularities: A comparison of a singular function boundary integral method with the p/hp version of the finite element method, *Applied Mathematics and Computation*, 485–499, 2005

FACULTY OF PURE AND APPLIED SCIENCES

**DEPARTMENT OF PHYSICS**



## ACADEMIC STAFF

---

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GEORGIOS ARCHONTIS

*Associate Professor*

CONSTANTINOS CHRISTOFIDES

*Professor*

GRIGORIOS ITSKOS

*Lecturer*

KONSTANTINOS MOULOPOULOS

*Associate Professor*

ANDREAS OTHONOS

*Associate Professor*

HARALAMBOS G. PANAGOPOULOS

*Professor*

FOTIOS PTOHOS

*Assistant Professor*

PANOS A. RAZIS

*Professor*

SPIROS S. SKOURTIS

*Associate Professor*

STAVROS THEODORAKIS

*Associate Professor*

NICOLAOS TOUMBAS

*Assistant Professor*

HARALAMBOS TSERTOS

*Professor*

## DEPARTMENT OF PHYSICS

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The Department of Physics has 13 faculty members whose research areas cover a very broad spectrum of the modern research activity in experimental, computational, and theoretical physics.

Areas of research in our Department include applied physics, theoretical and computational biophysics, theoretical condensed matter physics, experimental high energy physics, theoretical and computational high energy physics, experimental nuclear physics, solid state physics and optoelectronics.

Our faculty members maintain active collaborations with major research laboratories (e.g., CERN, CNRS, Fermi National Laboratory, GSI) and with top universities and research institutes (e.g., Cambridge University, Ecole Normale Supérieure, Ecole Polytechnique, Harvard University, Imperial College, MIT, Weizmann Institute).

The research of our faculty is widely recognized with well over 10,000 citations to our work in international scientific journals (ISI Web of Science, SPIRES).

Our objective is to maintain excellence in both teaching and research and to contribute to the educational, technological and cultural development of Cyprus.

Spiros S. Skourtis  
Chairperson



## CONSTANTIA ALEXANDROU Professor

### Department of Physics

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#### ■ STUDIES

Bachelor of Arts, Oxford University, U.K., 1980  
 Doctor of Philosophy in Theoretical Strong Interaction Physics,  
 Massachusetts Institute of Technology, U.S.A., 1985

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Physical Society, U.S.A.

#### ■ RESEARCH INTERESTS

Hadronic Matrix Elements in Lattice QCD; Algorithms for Lattice QCD; Phase Transitions and Topology in QCD; Polaron Problems; Programming of Vector and Massively Parallel Machines

#### ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

Studies in Strong interactions: Hadron structure, Renormalization and Confinement (Coordinator)

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

13HP/ Computational Hadron Physics (Coordinator of Cyprus/CERN node)  
 Funding: FP6, E.U.

ADRODOMI, The Shape of Hadrons from Lattice QCD (Coordinator)  
 Funding: RPF, Cyprus

ADROMIOSI, Computational Strong Interaction Physics (Coordinator)  
 Funding: RPF, Cyprus

Cyprus-France ZINON, Hadron Structure from Twisted Mass Fermions  
 Funding: RPF, Cyprus

## PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

C. Alexandrou, et al., The Axial N to Delta transition form factors from Lattice QCD, *Phys. Rev. Lett.*, 98, 052003, 2007

C. Alexandrou, et al., Axial nucleon and nucleon to Delta form factors and the Goldberger-Treiman relations from lattice QCD, *Phys.Rev.*, D76, 094511, 2007

C. Alexandrou and A. Tsapalis, A lattice study of pentaquark states, *Phys. Rev.*, D 73, 014507, 2006

C. Alexandrou, Ph. de Forcrand and B. Lucini, Evidence for diquarks in lattice QCD, *Phys. Rev. Lett.*, 97, 222002, 2006

C. Alexandrou et al., The N to Delta electromagnetic transition form factors from lattice QCD, *Phys. Rev. Lett.*, 94, 021601, 2005

C. Alexandrou and G. Koutsou, The tetraquark and pentaquark static potentials, *Phys. Rev.*, D71, 014504, 2005

#### ■ SELECTED CONFERENCE PROCEEDINGS

C. Alexandrou, G. Koutsou and H. Neff, Hadron form-factors using density-density correlators, *LATTICE2006*, PoS LAT2006, hep-lat/0610039, 113, 2006

C. Alexandrou, H. Panagopoulos and G. Schierholz (Eds), Computational Hadron physics, *Proceedings of the Workshop on Computational Hadron Physics*, Nucl. Phys. Proc. Suppl., 153, 2006

C. Alexandrou, et al., Density-density correlators using all to all propagators, *LATTICE2005*, PoS LAT2005, 030, 2005

C. Alexandrou, et al., First principles calculations of nucleon and pion form factors: Understanding the building blocks of nuclear matter from lattice QCD, *J. Phys. Conf. Ser.*, 16 174, 2005

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

C. Alexandrou, et al., B meson properties from lattice QCD. *Phys.Lett.*, B256:60-67,1991

C. Alexandrou, P. de Forcrand, E. Follana, The Gluon propagator without lattice Gribov copies, *Phys.Rev.*, D63:094504, 2001

C. Alexandrou, P. De Forcrand, A. Tsapalis, The Static three quark SU(3) and four quark SU(4) potentials, *Phys.Rev.*, D65:054503, 2002

### GEORGIOS ARCHONTIS Associate Professor Department of Physics

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#### ■ STUDIES

University of Athens, Greece, B.Sc. in Physics, 1987

Harvard, U.S.A., Ph.D. in Theoretical Biophysics, 1994

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Biophysical Society, U.S.A.

#### ■ RESEARCH INTERESTS

Biomolecular Structure-Function Relationships by Theory and Simulation; Study of the Thermodynamic Properties of Biomolecules in Solution by Implicit Solvent Models and Liquid-State Theory; Interpretation of the Biomolecular Structure Stabilisation with Statistical and Polymer Physics Theories; Rational, Computer-Aided Drug Design

#### ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

Repair of DNA by the protein DNA photolyase; Insights from molecular simulations and electron-transfer calculations

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Computational investigation of the salting-out effect with polarizable water models (Coordinator)

Funding: Leventis Foundation, Cyprus

Modification of the specificity of aminoacyl-tRNA synthetases by biomolecular simulations (Coordinator)

Cooperating Organization: Ecole Polytechnique, France

Funding: RPF, Cyprus

Study of the solvation of organic compounds in electrolyte solutions by molecular dynamics simulations (Coordinator)

Funding: RPF, Cyprus

Redesigning the genetic code with biomolecular simulation methods (Coordinator)

Cooperating Organization: Ecole Polytechnique, France

Funding: Cyprus-France Technology and Scientific Cooperation

Redesigning the genetic code with biomolecular simulation methods

Funding: HPC-Europa

Study of Compstatin, important inhibitor of the autoimmune system, with high-accuracy molecular simulations (Research Coordinator)

Cooperating Organizations: University of California, Riverside, U.S.A.;

University of Pennsylvania, U.S.A

Funding: RPF, Cyprus

Initial formation of amyloid fibers from peptides that influence the formation of type-II diabetes. Microscopic understanding with atomic-detail simulations (Coordinator)

Funding: RPF, Cyprus

## PUBLICATIONS

---

### ■ SELECTED JOURNAL PUBLICATIONS

Ph. Tamamis, et al., Conformational analysis of Compstatin analogues with Molecular Dynamics Simulations in Explicit Water, *Journal of Molecular Graphics and Design*, 26, 571-580, 2007

G. Archontis, et al., Conformational analysis of Compstatin analogues with molecular dynamics simulations in explicit water, *Molecular Immunology*, 44, 150, 2007

[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/253/description#description](http://www.elsevier.com/wps/find/journaldescription.cws_home/253/description#description)

S. Polydoridis, et al., Recognition of Ribonuclease A by 3'-5'-Pyrophosphate-linked Dinucleotide Inhibitors: A Molecular Dynamics/Continuum Electrostatics Analysis, *Biophysical Journal*, 92, 1659-1672, 2007

A. Lopes, et al., Computational sidechain placement and protein mutagenesis with implicit solvent models, *Proteins, Structure, Function and Bioinformatics*, 67, 853-867, 2007

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G. Archontis and E. Leontidis. Dissecting the stabilization of iodide at the air-water interface into components: A free energy analysis. *Chemical Physics Letters*, 420, 199-203, 2006

G. Archontis and T. Simonson, A residue-pairwise Generalized Born scheme suitable for protein design calculations, *J. Physical Chemistry B*, 109:22667-22673, 2005

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G. Archontis, et al., Molecular Recognition and Relative Binding of Glucopyranose Spirohydantoin Analogues to Glycogen Phosphorylase: A Free Energy Perturbation Study, *Proteins, Structure Function and Bioinformatics*, 61:966-983, 2005

K.A. Watson, et al., Kinetic and crystallographic studies of glucopyranose spirohydantoin and glucopyranosylamine analogues inhibitors of glycogen phosphorylase, *Proteins, Structure, Function and Bioinformatics*, 61:984-998, 2005

G. Archontis and T. Simonson, Proton binding to proteins: A self-consistent dielectric continuum analysis, *Biophysical Journal*, 88:3888-3904, 2005

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

T. Simonson, G. Archontis and M. Karplus, Protein-ligand recognition: Free-energy simulations come of age, *Accounts of Chemical Research* 35, 430-437, 2002

G. Archontis, T. Simonson and M. Karplus, Binding free energies and free energy components from molecular dynamics and Poisson Boltzmann calculations, Application to amino acid recognition by Aspartyl-tRNA synthetase, *Journal of Molecular Biology* 306, 307-327, 2001

T. Lazaridis, G. Archontis and M. Karplus, The enthalpic contribution to protein stability: Insights from atom-based calculations and statistical mechanics, *Advances in Protein Chemistry* 47:231-296, 1995

### CONSTANTINOS CHRISTOFIDES Professor

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#### ■ STUDIES

University of Grenoble, Grenoble, France, B.Sc., 1982

University of Grenoble, Grenoble, France, M.Sc., 1983

University of Grenoble, IEJE Department, Grenoble, France, D.E.A.

National Polytechnic School of Grenoble (INPG), Grenoble, France, D.E.A., 1984

National Polytechnic School of Grenoble (INPG), Grenoble, France, Ph.D., 1987

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Council of the International Society of the "Solid State Physics"

## ■ EDITORIAL BOARDS

*Nano et Micro Technologies*, Edition "Hermes", France  
*Book Series "Progress in Photothermal and Photoacoustics Science and Technology"* SPIE

## ■ RESEARCH INTERESTS

Photothermal Science: Instrumental and Physical Aspects; Photothermal and Optical Sensors; Semiconductor Science and Devices – Ion Implantation; Solar Materials and Solar Cells

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

A New PV Wave Making More Efficient Use of the Solar Spectrum (FULLSPECTRUM)  
 Funding: E.U.

Recycling of Silicon Rejects from PV Production Cycle (ReSiCle)  
 Funding: E.U.

Artwork Conservation by Lasers (ARTWORK)  
 Funding: E.U.

Advanced Materials Characterization by Photoacoustic and Photothermal Methods  
 Funding: RPF, Cyprus

Laser induced micro-photoluminescence of marble and application to authenticity testing of ancient objects  
 Funding: RPF, Cyprus

Application of optical techniques for the characterization of Byzantine Icons  
 Funding: RPF, Cyprus

Photothermal Detection of hydrogen at ppt limits  
 Funding: RPF, Cyprus

Photothermal Microscopy under the Influence of electric field: Technological Development and Microelectronics Application  
 Funding: RPF, Cyprus

Development of New Antireflective Films and Metallic Contacts for the Optimization of Solar Cells Efficiency (EFFICIENCY)  
 Funding: RPF, Cyprus

## PUBLICATIONS

---

### ■ BOOKS

#### Editing

C. Christofides and K. Polikreti (Eds), *Conferences Proceedings of the XXI Hellenic Conference on Solid State Physics and Material Science*, Nicosia, Cyprus, 2005

## ■ SELECTED JOURNAL PUBLICATIONS

E. Lioudakis, et al., The role of Surface Vibration and Quantum Confinement Effect to the Optical Properties of Very Thin Nanocrystalline Silicon Films, *Journal of Applied Physics*, 102, 083534, 2007

T. Kuzniz, et al., Instrumentation for the Monitoring of Toxic Pollutants in Water Resources by means of Neural Network Analysis of Absorption and Fluorescence Spectra, *Sensors and Actuators B* 121, 231-237, 2007

E. Lioudakis, C. Christofides and A. Othonos, Study of the annealing kinetic effect and implantation energy on phosphorus-implanted silicon wafers using spectroscopic ellipsometry, *Journal of Applied Physics* 99, 123514, 2006

E. Lioudakis, C. Christofides and A. Othonos, Optical and Structural Properties of Implanted Si Wafer: The effects of Implantation Energy and Subsequent Isochronal Annealing Temperature, *Semiconductor Sciences and Technology* 21, 1059-1063, 2006

K. Polikreti and C. Christofides, Spectroscopic ellipsometry as a tool for the optical characterization and ageing studies of varnishes used in Post-Byzantine icon reconstructions, *Journal of Cultural Heritage* 7, 30-36, 2006

C. Christofides, et al., FULLSPECTRUM: a new PV wave making more efficient use of solar spectrum, *Solar Energy Materials and Solar Cells* 87, 467-479, 2005

K. Polikreti, C. Christofides and A. Othonos, In-Situ Characterization of Varnish films by Spectroscopic Ellipsometry, for Application in Artwork Conservation, *Applied Spectroscopy* 59, 94-99, 2005

## ■ SELECTED CONFERENCE PROCEEDINGS

N.C Papanicolaou, M. Nestoros, and C. Christofides, Numerical Simulation of Nonlinear PhotoThermal Radiometry on Silicon Wafers Using a Chebyshev Galerkin Method, *Proceedings of Neural Computation*, Vol. 3, 188-192, 2006

K. Polikreti and C. Christofides, Characterization and Ageing Studies of Byzantine Icon Varnishes by Spectroscopic Ellipsometry, *Proceedings of the XXI Hellenic Conference on Solid State Physics and Material Science*, C. Christofides and K. Polikreti (Eds), Nicosia, Cyprus, 168-170, 2005

## ■ DISTINGUISHED PUBLICATIONS (before 2005)

### Authorship

A. Mandelis and C. Christofides, *Physics, Chemistry and Technology of Solid State Gas Sensor Devices*, Chemical Analysis, A Series of Monographs on Analytical Chemistry and its Applications, Vol. 125, A Wiley Interscience Publication, John Wiley and Sons, New York, 1993

### Editing

G. Ghibaudo and C. Christofides, *Effects of Disorder and Defects in Ion-Implanted Semiconductors: Electrical and Physicochemical Characterization*, Semiconductors and Semimetals, Vol. 45, Academic Press, New York, 1997

C. Christofides and G. Ghibaudo, *Effects of Disorder and Defects in Ion-Implanted Semiconductors: Optical and Photothermal Characterization*, Semiconductors and Semimetals, Vol. 46, Academic Press, New York, 1997

## GRIGORIOS ITSKOS Lecturer

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#### ■ STUDIES

University of Thessaloniki, Greece, B.Sc. in Physics, 1997

State University of New York at Buffalo, U.S.A., Ph.D. in Physics, 2003

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Institute of Physics (IOP), U.K.

#### ■ RESEARCH INTERESTS

Optical and Magneto-Optical Spectroscopy; Semiconductor Structures; Spintronics: Spin Injection in Semiconductors; Hybrid Organic-Inorganic Semiconductors: Energy and Carrier Transfer; Photovoltaics: Plastic and Hybrid Solar Cells

#### PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

G. Itskos, et al., Efficient dipole-dipole coupling of Mott-Wannier and Frenkel excitons in (Ga,In)N quantum well/polyfluorene semiconductor heterostructures, *Physical Review B*, Vol. 76, 035344-1 - 035344-7, 2007

G. Itskos, et al., Oblique Hanle measurements of InAs/GaAs quantum dot spin-light emitting diodes - *Applied Physics Letters*, Vol. 88, 22113-1 - 22113-3, 2006

G. Heliotis, G. Itskos, R. Murray, "...", Hybrid inorganic/organic semiconductor heterostructures with efficient non-radiative energy transfer, *Advanced Materials*, Vol. 18, 334-338, 2006

G. Heliotis, S. Choulis, G. Itskos "...", Low-threshold lasers based on a high-mobility semiconducting polymer, *Applied Physics Letters*, Vol. 88, 81104-1 - 81104-3, 2006

R. Mallory, M. Yasar, G. Itskos, "...", Phonon-assisted recombination in Fe-based spin-LEDs, *Physical Review B*, Vol. 73, 115308-1 - 115308-6, 2006

G. Itskos, et al., Optical spin injection in CuGaSe<sub>2</sub>/GaAs films, *Applied Physics Letters*, Vol. 89, 32108-1 - 32108-3, 2006

#### ■ SELECTED CONFERENCE PROCEEDINGS

G. Itskos, et al., Efficient Förster transfer mediated by excitons in InGaN/GaN quantum well/polyfluorene heterostructures, *Physics of Semiconductors: 28th International Conference on the Physics of Semiconductors, ICPS 2006, AIP Conf. Proc.*, Vol. 893, 355-356, 2007

G. Itskos, et al., Oblique Hanle Measurements of InAs/GaAs Quantum Dot Spin-Light Emitting Diodes, *Physics of Semiconductors: 28th International Conference on the Physics of Semiconductors, ICPS 2006, AIP Conf. Proc.*, Vol. 893, 1289-1290, 2007

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

B.T. Jonker et al., Efficient electrical spin injection from a magnetic metal/tunnel barrier contact into a semiconductor, *Applied Physics Letters*, Vol. 80, 1240, 2002

R.M. Stroud et al., Reduction of spin injection efficiency by interface defect spin scattering in ZnMnSe/AlGaAs spin-polarized light emitting diodes, *Physical Review Letters*, Vol. 89, 166602, 2002

A.T. Hanbicki et al., Analysis of the transport process providing spin injection through an Fe/AlGaAs Schottky barrier, *Applied Physics Letters*, Vol. 82, 4092, 2003

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### ■ STUDIES

University of Athens, Greece, B.Sc. in Physics, 1983

Cornell University, U.S.A., Ph.D. in Physics, 1990

### ■ RESEARCH INTERESTS

Theoretical Condensed Matter Physics: Many-Body Coulomb Systems; Superconductivity; Nanoscopic Physics in Aharonov-Bohm Configurations; Quasicrystals and Quantum Hall Systems

### ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

Novel Electronic States and Quantum Phase Transitions Induced by a Magnetic Field in Two-Dimensional Nanostructures

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

Moulopoulos K. and Constantinou M., Two interacting charged particles in an Aharonov-Bohm ring: Bound state transitions, symmetry breaking, persistent currents, and Berry's phase, *Physical Review B*, U.S.A., Vol. 76, 039902-1(E), 2007

Avetisyan A. A., Moulopoulos K. and Djotyan A. P., Coulomb repulsive correlation in systems with radial confinement: Quantum Dots and the Overhauser model in an external magnetic field, *Philosophical Magazine*, U.K., Vol. 86, 2493-2509, 2006

Moulopoulos K. and Constantinou M., Exciton in an Aharonov-Bohm ring: an exactly soluble interacting mesoscopic system, *Philosophical Magazine*, U.K., Vol. 86, 2511-2528, 2006

### ■ SELECTED CONFERENCE PROCEEDINGS

Avetisyan A. A., Djotyan A. P. and Moulopoulos K., Coulomb repulsive correlation in A3B5 semiconductor quantum dots in the presence of a magnetic field, *32nd International Symposium on Compound Semiconductors*, Rust, Germany, 2005, Physica

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Avetisyan A. A. and Mouloupoulos K., Few-Electron Systems in a Quantum Dot in a Magnetic Field: the Wigner Molecule and Paired Electron Phases, *Twelfth International Conference on II-VI Compounds, Warsaw, Poland, Physica Status Solidi (c)*, Germany, Vol. 3, 1095-1098, 2006

Avetisyan A. A., Mouloupoulos K. and Djotyan A. P., Negative ion-electron states in a semiconductor quantum dot in a magnetic field, *Proceedings of the Fifth International Conference, Semiconductor Micro- and Nanoelectronics, Agveran, Armenia*, 173-176, 2005

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#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Konstantinos Mouloupoulos and Martha Constantinou, Two interacting charged particles in an Aharonov-Bohm ring: Bound state transitions, symmetry breaking, persistent currents, and Berry's phase, *Physical Review B*, American Physical Society, New York, Vol. 70, 235327-1-24, 2004

Konstantinos Mouloupoulos and Neil W. Ashcroft, Coulomb interactions and Generalized Pairing in Condensed Matter, *Physical Review B*, American Physical Society, New York, Vol. 59, 12309-12325, 1999

Marco Polini, Konstantinos Mouloupoulos, B. Davoudi, "..." Unpaired and spin-singlet paired states of a two-dimensional electron gas in a perpendicular magnetic field, *Physical Review B*, American Physical Society, New York, Vol. 65, 165306-1-10, 2002

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#### ■ STUDIES

University of Toronto, Canada, B.Sc in Physics, 1984

University of Toronto, Canada, M.Sc. in Physics, 1986

University of Toronto, Canada, Ph.D. in Physics, 1990

#### ■ RESEARCH INTERESTS

Ultrafast Science; Laser Physics; Semiconductor Physics; Non-linear optics; Optical Fiber and Telecommunications

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Infrastructure Research Programme, Spatial-temporal probing nanostructures using Ultrafast Laser Techniques  
Funding: RPF, Cyprus

Infrastructure Research Programme, Study of ultrafast carrier dynamics in InGaN Semiconductors  
Funding: RPF, Cyprus

Infrastructure Research Programme, Study of Silicon Nanostructures  
Funding: RPF, Cyprus

EU-FIRE, Innovative Optoelectronic and Acoustic Sensing Technologies for Large Scale Forest Fire Long Term Monitoring, Specific Targeted Research Projects  
Funding: E.U.

## PUBLICATIONS

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### ■ CHAPTERS IN BOOKS

A. Othonos, et al., Fibre Bragg Gratings, *Wavelength Filters in Fibre Optics*, H. Venghaus (Ed.), Springer, 2006

### ■ SELECTED JOURNAL PUBLICATIONS

A. Othonos, et al., Ultrafast carrier dynamics in band edge and broad deep defect emission ZnSe nanowires, *Applied Physics Letters*, 91, 241113, 2007

E. Lioudakis, A. Antoniou, A. Othonos, "...", The role of surface vibrations and quantum confinement effect to the optical properties of very thin nanocrystalline silicon films. *Journal of Applied Physics*, 102, 83534, 2007

E. Lioudakis, A. Othonos, A.G. Nassiopoulou, Influence of grain size on ultrafast carrier dynamics in thin nanocrystalline silicon films, *Applied Physics Letters*, 90, 191114, 2007

E. Lioudakis, A.G. Nassiopoulou, A. Othonos, Ultrafast transient photoinduced absorption in silicon nanocrystals: Coupling of oxygen-related states to quantized sublevels, *Applied Physics Letters*, 90, 171103, 2007

E. Lioudakis, et al., Temporal evolution of effects of ultrafast carrier dynamics in In<sub>0.33</sub>Ga<sub>0.67</sub>N: above and near the bandgap, *Semicond. Sci. Technol*, 22 158, 2007

E. Lioudakis, A.G. Nassiopoulou and A. Othonos, Probing Carrier Dynamics in Implanted and Annealed Polycrystalline Silicon Thin Films using white light, *Appl. Phys. Lett.*, Vol. 88 (18), 181107, 2006

E. Lioudakis, et al., Ultrafast carrier dynamics in In<sub>x</sub>Ga<sub>1-x</sub>N (0001) epilayers: effects of high fluence excitation, *Appl. Phys. Lett.*, Vol.88 (12), 121128, 2006

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E. Lioudakis, A.G. Nassiopoulou, and A. Othonos, Ultrafast Carrier Dynamics in Highly Implanted and Annealed Polycrystalline Silicon Films, *Journal of Physics: Conference Series*, Vol. 10, 263-266, 2005

E. Lioudakis, K. Adamou and A. Othonos, Prism Based Ultrafast Pulse Shaping Apparatus, *Opt. Eng.*, Vol. 44 (3), 034203, 2005

## ■ DISTINGUISHED PUBLICATIONS (before 2005)

### Authorship

A. Othonos and K. Kalli, *Fiber Bragg Gratings: Fundamentals and Applications in Telecommunications and Sensing*, Artech House, 1999

A. Othonos, Probing ultrafast carriers and phonon dynamics in semiconductors, Invited Review paper, *Applied Physics Reviews*, 83, 1789-1830, 1998

A. Othonos, Fiber Bragg gratings, *Review of Scientific Instruments*, Vol. 68, 4309-4341, 1997

**HARALAMBOS G. PANAGOPOULOS** Professor  
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## ■ STUDIES

Harvard University, U.S.A., B.A. magna cum laude in Physics, 1979

Massachusetts Institute of Technology (M.I.T.), U.S.A., Ph.D. in Physics, 1984

## ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Union of Cypriot Physicists, Cyprus (Vice President)

## ■ RESEARCH INTERESTS

Theoretical High Energy Physics and Elementary Particle Physics; Quantum Field Theory; Computational Physics; Non-Perturbative Phenomena in Field Theories; Analytic and Numerical Calculations in Gauge Theories on a Lattice

## ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

Lattice Quantum Chromodynamics and Computational Condensed Matter, Physics

Studies in Strong Interactions: Hadron Structure, Renormalization and Confinement

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Quanta

Funding: RPF, Cyprus

Quarks

Funding: RPF, Cyprus

Hadrons

Funding: RPF, Cyprus

Adromioiosi

Funding: RPF, Cyprus

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

A. Skouroupathis, H. Panagopoulos, Lambda-parameter of lattice QCD with Symanzik improved gluon actions, *Phys. Rev. D* 76, 114514, 2007

M. Constantinou, H. Panagopoulos, QCD with overlap fermions: Running coupling and the 3-loop  $\beta$ -function, *Phys. Rev. D* 76, 114504, 2007

A. Skouroupathis, H. Panagopoulos, Two-loop renormalization of scalar and pseudoscalar fermion bilinears on the lattice, *Phys. Rev. D* 76, 094514, 2007

H. Panagopoulos, A. Skouroupathis and A. Tsapalis, Free Energy and Plaquette expectation value for gluons on the lattice, in three dimensions, *Phys. Rev. D* 73, 054511, 2006

M. Ioannou, H. Panagopoulos, Perturbative renormalization in parton distribution functions using Overlap fermions and Symanzik improved gluons, *Phys. Rev. D* 73, 054507, 2006

L. Del Debbio, G. M. Manca, H. Panagopoulos, "...", Theta-dependence of the spectrum of SU(N) gauge theories, *J. High Energy Phys.* 06, 005, 2006

M. Constantinou, H. Panagopoulos, A. Skouroupathis, Improved Perturbation Theory for Improved Lattice Actions, *Phys. Rev. D* 74, 074503, 2006

A. Skouroupathis and H. Panagopoulos, Additive and multiplicative renormalization of topological charge with improved gluon/fermion actions: A test case for 3-loop vacuum calculations, using overlap or clover fermions, *Phys. Rev. D* 72, 094509, 2005

### ■ SELECTED CONFERENCE PROCEEDINGS

M. Constantinou, H. Panagopoulos, A. Skouroupathis, Improving perturbation theory with cactus diagrams, *Lattice 2006*, University of Arizona, U.S.A., Proc. of Science 155, 2006

A. Skouroupathis, H. Panagopoulos, Optimized Interpolations and Nonlinearity in Numerical Studies of Woodwind Instruments, *Forum Acusticum 2005*, European Acoustics Association, Budapest, Acta Acustica united with Acustica, Vol. 91, Suppl. 1, 1594, 2005

**FOTIOS PTOCHOS** Assistant Professor  
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### ■ STUDIES

Aristotle University of Thessaloniki, Greece, B.Sc. Physics, 1987

Harvard University, U.S.A., M.Sc. Arts and Sciences, 1990

Harvard University, U.S.A., Ph.D. Physics, 1998

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

American Physical Society

## ■ RESEARCH INTERESTS

Top, Bottom Quarks; Higgs; Supersymmetry

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

International Fellowship for Senior Researchers

Funding: Fermi National Laboratory, U.S.A.

## PUBLICATIONS

---

### ■ SELECTED JOURNAL PUBLICATIONS

A. Abulencia, et al., [CDF Collaboration], Measurement of the  $B^+$  production cross section in  $p\bar{p}$  collisions at  $\sqrt{s}=1.96\text{-TeV}$ , *Physical Review, D* 75, 012010-1--012010-12, 2007

A. Abulencia, et al., [CDF Collaboration], Polarization of  $J/\psi$  and  $\psi(2S)$  mesons produced in  $p\bar{p}$  collisions at  $\sqrt{s}=1.96\text{-TeV}$ , *Physical Review Letters* 99, 121801-1--121801-7, 2007

F. Happacher, P. Giromini and F. Ptohos, Status of the observed and predicted b anti-b production cross section at the Tevatron, *Physical Review, D*. 73, 014026-1--014026-7, 2006

Bhatti, et al., Determination of the jet energy scale at the collider detector at Fermilab, *Nuclear Instruments and Methods, A* 566, 375-412, 2006

G. Apollinari et al., Phenomenological study of the atypical heavy flavor production observed at the Fermilab Tevatron, *Physical Review, D*. 73, 014025-1--014025-14, 2006

A. Abulencia, et al., [CDF Collaboration], Search for charged Higgs bosons from top quark decays in  $p\bar{p}$  collisions at  $\sqrt{s}=1.96\text{-TeV}$ , *Physical Review Letters*, 96, 042003-1--042003-7, 2006

A. Abulencia, et al., [CDF Collaboration], Measurement of the production cross section in  $p\bar{p}$  collisions at  $\sqrt{s}=1.96\text{-TeV}$ , *Physical Review Letters*, 97, 082004-1--1082004-7, 2006

A. Abulencia, et al., [CDF Collaboration], Measurement of  $B_s^0\text{-}\bar{B}_s^0$  oscillation frequency, *Physical Review Letters*, 97, 062003-1--1062003-7, 2006

G. Apollinari, et al., Study of sequential semileptonic decays of b hadrons produced at the Tevatron, *Physical Review, D*. 72, 072002-1--072002-9, 2005

G. Apollinari, et al., Search for narrow resonances below the Upsilon mesons, *Physical Review, D*. 72, 092003-1--092003-7, 2005

**PANOS A. RAZIS** Professor  
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### ■ STUDIES

University of Athens, Greece, B.Sc. in Physics, 1980

Yale University, U.S.A., M.Sc. in Physics, 1982

Yale University, U.S.A., M.Ph. in Physics, 1982

Yale University, U.S.A., Ph.D. in Physics, 1986

### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Hellenic High Energy Physics Society, Greece • Hellenic Physics Society, Greece • European Physics Society, Europe • CERN-CMS, European Laboratory for Particle Physics, Switzerland (Representative of Cyprus) • CERN-RRB, European Laboratory for Particle Physics, Switzerland (Representative of Cyprus) • CERN-L3, European Laboratory for Particle Physics, Switzerland (Representative of Cyprus) • KM3NeT, A European Deep Sea Research Infrastructure (Representative of Cyprus)

### ■ RESEARCH INTERESTS

Experimental High Energy Physics-Accelerators, Detectors; Electronic Data Acquisition, Calibration; Analysis and Simulation of Events; Unification Models, Supersymmetry, Cosmology; Electromagnetic Radiation-Medical Physics

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

ΕΠΕΘ: Spectrum Monitoring and Control Laboratory

Funding: RPF, Cyprus

ΕΒΗΚ: Calibration and Control of the Very Front Electronic Modules of the CMS Electromagnetic Calorimeter

Funding: RPF, Cyprus

ΑΛΓΗΚ: Development of a Computational Algorithm for the Calibration of the Dead Crystals of the CMS Electromagnetic Calorimeter at CERN

Funding: RPF, Cyprus

ΕΠΗΣΚ: Study of the Specifications of the Data Acquisition Electronic Cards of the CMS Electromagnetic Calorimeter at CERN

Funding: RPF, Cyprus

Measurement of the Electromagnetic Fields at the Base Stations of Mobile Telephony

Funding: Electricity Authority of Cyprus

KM3NeT: A European Deep-Sea Research Infrastructure (Neutrino Telescope)

Funding: EFRFI, E.U.

High Energy Physics with the CMS Experiment at LHC, CERN

Funding: Republic of Cyprus

Detection, Recording and Study of the Characteristics of the Non-Ionizing Electromagnetic Radiation in the Environment (Greece-Cyprus)

Funding: INTERREG IIIA, E.U.

### ■ PATENTS

Biometric Identification Method, International Application No:

PCT/RU2005/000473. DactoLive: Opto-electronical Identification Systems using Novel Dactyloscopy Technology, ERMIS Research and Incubator Center, 2005

## PUBLICATIONS

### ■ BOOKS

#### Authorship

CMS Collaboration, *High Density QCD with Heavy Ions*, CERN-LHCC-2007-009, CMS TDR 8.2- Add1, 2007

CMS Collaboration, *Detector Performance and Software*, CMS Physics Technical Design Report, Volume I, CERN-LHCC-2006-001, CMS TDR 8.1, 2006

CMS Collaboration, *Physics Performance*, CMS Physics Technical Design Report, Volume II, CERN-LHCC-2006-021, CMS TDR 8.2, 2006

CMS Collaboration, *Prospects for Diffractive and Forward Physics at the LHC*, CERN-LHCC-2006-039, 2006

CMS Collaboration, *The Computing Project*, CMS Technical Design Report, CERN-LHCC-2005-023, CMS TDR 7, 2005

### ■ SELECTED JOURNAL PUBLICATIONS

P. Achard, et al., Study of Inclusive Strange Baryon Production and Search for Pentaquarks in Two-Photon Collisions at LEP, *European Physical Journal*, C49, 395-410, 2007

P. Achard, et al., High Density QCD with Heavy Ions, *J Phys. G: Nucl. Part. Phys.*, 34, 2307-2455, 2007

P. Achard, et al., Measurement of the mass and the width of the W boson at LEP, *European Physical Journal*, C45, 569-587, 2006

P. Achard, et al., Analysis of the  $\pi^+ \pi^- \pi^+ \pi^-$  and  $\pi^+ \pi^0 \pi^- \pi^0$  Final States in Quasi-Real Two-Photon Collisions at LEP, *Physics Letters B*638, 128-139, 2006

P. Achard, et al., The Solar Flare of the 14th of July 2000 (L3 + C Detector Results), *Astron. Astrophys.* 456, 351-357, 2006

P. Achard, et al., Study of spin and decay-plane correlations of W bosons in the  $e^+ e^- \rightarrow W^+ W^-$  process at LEP, *European Physical Journal*, C40, 333-341, 2005

P. Achard, et al., Compton scattering of quasi-real virtual photons at LEP, *Physics Letters B*616, 145-158, 2005

P. Achard, et al., Measurement of exclusive  $\rho^+ \rho^-$  production in mid-virtuality two-photon interactions and study of the  $\gamma \gamma^* \rightarrow \rho \rho$  process at LEP, *Physics Letters B*615, 19-30, 2005

P. Achard et al., Measurement of the cross section for open-beauty production in photon-photon collisions at LEP, *Physics Letters B*619, 71-81, 2005

D. G. d'Enterria, et al., Measurement of the running of the electromagnetic coupling at large momentum-transfer at LEP, *Physics Letters B*623, 26-36, 2005

### ■ DISTINGUISHED PUBLICATIONS (before 2005)

CMS Collaboration, *The Electromagnetic Calorimeter Project*, European Organization for Nuclear Research, Geneva, 1997

S.Y. Hsueh, et al., Measurement of the Electron Asymmetry in the Beta Decay of Polarized  $\Sigma^-$  Hyperons, *Phys. Rev. Lett.* 54, 2399, 1985

L3 Collaboration, Results from the L3 Experiment at LEP, *Phys. Rept.* 236, 1-146, 1993

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■ **STUDIES**

University of Miami, Florida, U.S.A., B.G.S. in Physics and Mathematics, 1986  
University of California at Berkeley, U.S.A., Ph.D. in Theoretical Biophysics, 1991

■ **RESEARCH INTERESTS**

Theory of Electron Transfer in Molecules with Emphasis on Biomolecular Systems; Chemical and Biological Tunneling Phenomena; Structure-Function and Dynamics-Function Relationships for Proteins; Reaction Rate Theory for Molecular Transitions in Condensed Phase Environments; Molecular Electronics

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

Study of the Molecule Compstatin, an Important Inhibitor of the Immune System, with High Precision Biomolecular Simulations  
Cooperating Organizations: University of Pennsylvania, U.S.A., University of California at Riverside, U.S.A... Funding: RPF, Cyprus

**PUBLICATIONS**

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■ **CHAPTERS IN BOOKS**

Spiros S. Skourtis, Jianpin Lin, and David N. Beratan, Modern methods for Theoretical Physical Chemistry of Biopolymers, E. B., Starikov, S. Tanaka, and J. P. Lewis (Eds), Elsevier, *The effects of bridge motion onelectron transfer reactions mediated by tunneling*, Netherlands, 357-379, 2006

■ **SELECTED JOURNAL PUBLICATIONS**

Phanourios Tamamis, et. al. Conformational analysis of compstatin analogues with molecular dynamics simulations in explicit water, *J. Molecular Graphics and Modelling*, 26, 571-580, 2007

Spiros S. Skourtis and David N. Beratan, Photosynthesis from the Protein's Perspective, *Science*, 316, 703-704, 2007

Tatiana Prytkova, David N. Beratan and Spiros S. Skourtis, Photo-selected electron transfer pathways in DNA photolyase, *Proc. Natl. Acad. Sci., U.S.A.*, 104, 802-807, 2007

Antonios Teklos and Spiros S. Skourtis, Comparative study of perturbative methods for computing electron tunneling matrix elements with a nonorthogonal basis set, *J. Chem. Phys.*, 125, 244103, 1-9, 2006

Antonios Teklos and Spiros Skourtis, Electron transfer through time-dependent bridges: differences between Franck-Condon and Born-Oppenheimer breakdown, *Chemical Physics*, 319, 52-68, 2005

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Spiros S. Skourtis, et. al., Protein dynamics and electron transfer: electronic decoherence and non-Condon effects. *Proc. Natl. Acad. Sci., U.S.A.*, 102, 3552-3557, 2005

#### ■ SELECTED CONFERENCE PROCEEDINGS

Spiros S. Skourtis, Tatiana Prytkova and David N. Beratan, Flavin charge transfer transitions assist DNA photolyase electron transfer, *Computation in Modern Science and Engineering, Proceedings of the International Conference on Computational Methods in Science and Engineering 2007 (ICCMSE 2007)*, American Institute of Physics (AIP) Conference Proceedings 963, Vol. 2B, 674-677, 2007

Spiros S. Skourtis and David N. Beratan, A molecular double slit paradigm, *Computation in Modern Science and Engineering, Proceedings of the International Conference on Computational Methods in Science and Engineering 2007 (ICCMSE 2007)*, American Institute of Physics (AIP) Conference Proceedings 963 (Volume 2B), 809-812, 2007

Spiros S. Skourtis, The effects of biomolecular dynamics on biological electron transport, *XXI Hellenic Conference of Solid State Physics and Materials Science Nicosia, Cyprus, Proceedings of the XXI Hellenic Conference of Solid State Physics and Materials Science, Nicosia, Cyprus, 78-80, 2007*

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

Spiros S. Skourtis and Shaul Mukamel, Superexchange versus sequential long range electron transfer; density matrix pathways in Liouville space, *Chemical Physics*, Elsevier, Netherlands, Vol. 197, 367-387, 1995

**STAVROS THEODORAKIS** Associate Professor  
Department of Physics

TEL.: 22892841, FAX: 22892821, E-mail: stavrost@ucy.ac.cy

#### ■ STUDIES

University of Sussex, U.K., B.Sc. in Mathematical Physics, 1981

Stanford University, U.S.A., M.Sc. in Theoretical Physics, 1983

Stanford University, U.S.A., Ph.D. in Theoretical Physics, 1986

#### ■ RESEARCH INTERESTS

Theoretical Condensed Matter Physics; Nonlinear Physics

#### PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

Stavros Theodorakis and Yiannis Constantinou, Evolution of a Bose-Einstein condensate in a rapidly expanding circular box, *Physical Review E*, The American Physical Society, U.S.A., Vol. 76, Article No. 036205, 036205-1 to 036205-8, 2007

Stavros Theodorakis and Yiannis Constantinou, Emulation of the evolution of a Bose-Einstein condensate in a time-dependent harmonic trap, *Physics Letters A*, Elsevier, Netherlands, Vol. 364, 497-504, 2007

## NICOLAOS TOUMBAS Assistant Professor Department of Physics

TEL.: 22892838, FAX: 22892821, E-mail: nick@ucy.ac.cy

### ■ STUDIES

Columbia University, U.S.A., B.A. in Physics, 1996  
Stanford University, U.S.A., Ph.D. in Theoretical High Energy Physics, 2001

### ■ RESEARCH INTERESTS

Quantum Gravity, Superstrings, Black Holes

### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Superstring Theory, MRTN-CT-2004-512194, Marie Curie Research Training Network programme  
Funding: E.U.

Regional Europe at the Center of Modern Research - Greece and Cyprus in Theoretical High Energy Physics and Cosmology  
Cooperating Organization: High Energy Physics Group, University of Crete, Greece. Funding. E.U. (INTERREG IIIC Programme); Republic of Cyprus; Republic of Greece

## PUBLICATIONS

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### ■ SELECTED JOURNAL PUBLICATIONS

T. Brown et al., Correlators, probabilities and topologies in N=4 SYM, *Journal of High Energy Physics*, Int. School Advanced Studies, Italy, Issue 3, Article No. 072, 2007

C. Kounnas, N. Toumbas, J. Troost, A wavefunction for stringy universes, *Journal of High Energy Physics*, Int. School Advanced Studies, Italy, Issue 8, Article No. 018, 2007

C. Papageorgakis, S. Ramgoolam, N. Toumbas, Non-commutative geometry, quantum effects and DBI scaling in the collapse of D0-D2 bound states, *Journal of High Energy Physics*, Int. School Advanced Studies, Italy, Issue 1, Article No. 030, 2006

N. Toumbas, An extremal black hole from matrices, *Fortschritte der Physik*, Wiley, Germany, Vol. 53, Issue 7-8, 978-983, 2005

## HARALAMBOS P. TSERTOS Professor

### Department of Physics

TEL.: 22892847, FAX: 22892821, E-mail: tsertos@ucy.ac.cy

#### ■ STUDIES

Aristotle University of Thessaloniki, Greece, B.Sc. in Physics, 1977  
 Technical University of Munich, Germany, M.Sc. in Physics, 1980  
 Technical University of Munich, Germany, Ph.D. in Physics, 1985

#### ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

GSI, HADES, International (Collaboration Board Committee) • Hellenic High-Energy Physics Society, Greece

#### ■ RESEARCH INTERESTS

Modern Experimental Hadron and Heavy-Ion Physics at Relativistic Energies: High-Resolution Dilepton Spectroscopy, Equation of State (EoS) of Hot and Dense Hadronic Matter, Nuclear Tests of Fundamental Interactions and Symmetries, Particle Detectors and Monte Carlo Simulation Techniques; Experimental Quantum Electrodynamics (QED) of Very Strong Electromagnetic Fields; Environmental and Medical Applications of Nuclear Radiation

#### ■ RESEARCH PROGRAMMES (University of Cyprus 2005-2007)

The International Experiment HADES at the Research Centre of GSI

#### ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

Dilepton Analysis of 12C+12C Collisions at 1A GeV

Funding: RPF, Cyprus

Upgrading the existing High-Performance Linux Cluster for Heavy-ion

Experiments at GSI and CERN

Funding: RPF, Cyprus

## PUBLICATIONS

#### ■ SELECTED JOURNAL PUBLICATIONS

The HADES Collaboration, Dielectron production in 12C+12C collisions at 2 AGeV with HADES, *Physical Review Letters* 98, 052302, 2007

E. Svoukis and H. Tsertos, Indoor and outdoor in situ high-resolution gamma radiation measurements in urban areas of Cyprus, *Radiation Protection Dosimetry* 123, No. 3, 384-390, 2007

The HADES Collaboration, Dielectron production in C+C and p+p collisions with HADES, *International Journal of Modern Physics A* 22, 388-396, 2007

The HADES Collaboration, Dielectron production in C-12+ C-12 collisions at 2 A GeV with HADES, *Journal of Physics G - Nuclear And Particle Physics* 34, S1041-S1045, 2007

The HADES Collaboration, Dilepton production in pp and CC collisions with HADES, *European Physical Journal A* 31, 831-835, 2007

The HADES Collaboration, HADES experiment: Di-lepton spectroscopy in p+p (2.2 GeV) and C+C (1 and 2 A GeV) collisions, *Acta Physica Polonica B37*(1), 139-151, 2006

The HADES Collaboration, Dilepton analysis in the HADES spectrometer for C-12+C-12 at 2 AGeV, *International Journal Of Modern Physics, A* 20, 602-605, 2005

The HADES Collaboration, Probing of in-medium hadron structure with HADES, *Nuclear Physics A* 749, 150C-159C, 2005

The HADES Collaboration Di-electron measurements in C+C reactions at 2 AGeV with HADES, *Nuclear Physics A* 752, 433C-438C, 2005

M. Tzortzis and H. Tsertos, Natural radioelement concentration in the Troodos Ophiolite Complex of Cyprus, *Journal of Geochemical Exploration* 85, 47-54 2005

#### ■ DISTINGUISHED PUBLICATIONS (before 2005)

H. Tsertos, et al., On the scattering-angle dependence of the monochromatic positron emission from U + U and U + Th collisions, *Published in Physics Letters B* 162, 273 –276, 1985

R. Schicker, et al., Resolution and acceptance simulation studies for the dielectron spectrometer Hades at GSI, *Nuclear Instruments and Methods A* 380, 586-596, 1996

M. Tzortzis, H. Tsertos, S. Christofides, "...", Gamma-ray measurements of naturally occurring radioactive samples from Cyprus characteristic geological rocks, *Radiation Measurements*, 37, 221-229, 2003

# OCEANOGRAPHY CENTER



## SPECIAL SCIENTISTS

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DANIEL HAYES  
*Special Scientist*

GEORGE ZODIATIS  
*Senior Researcher*

## OCEANOGRAPHY CENTER

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The mission of the Oceanography Center is to conduct basic and applied research in many fields of ocean science. The primary areas of activity are in ocean physics and dynamics, remote sensing, operational oceanography, and information systems, including ocean and marine databases. Other activities include community education and outreach, undergraduate and graduate student supervision, among others.

The Oceanography Center develops and operates the Cyprus Coastal Ocean Forecasting and Observing System (CYCOFOS), which is a component of several European and Mediterranean operational forecasting and observing networks. The Oceanography Center has also developed a new online system, the Cyprus Oceanography Online Database (Bythos). The purpose of this system is to browse and search for scientific data and information about the Eastern Mediterranean, including the Levantine Basin and the Cyprus coastal and open sea areas. The CYCOFOS and Bythos web pages can be viewed via the website of the Oceanography Center:

**<http://www.oceanography.ucy.ac.cy>**

The Oceanography Center has demonstrated important research activity in physical and biological oceanography. Members of the Center participate in many research projects funded by the European Union and the Cyprus Research Promotion Foundation and collaborate with other research centers and universities. The Center also has research partnerships with public and private organizations in Cyprus and abroad. The research output of the Center is of high quality, published in top international journals and comparable to that of respected oceanography centers at competitive universities overseas. The Center is actively involved in the guidance and supervision of students from the University of Cyprus as well as students from other universities working on independent study projects or B.Sc. and M.Sc. theses. In addition, the Center regularly hosts students from local area high schools and provides education to the wider community through open lectures and radio and television broadcasts.

Georgios Georgiou  
Director



**DANIEL HAYES** Special Scientist  
Oceanography Center

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■ **STUDIES**

Luther College, U.S.A., B.A. in Physics and Mathematics, 1996  
University of Washington, U.S.A., M.S. in Oceanography, 1999  
University of Washington, U.S.A., Ph.D. in Oceanography, 2003

■ **PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS**

American Geophysical Union, U.S.A. • European Geophysical Union • The Oceanography Society, U.S.A.

■ **RESEARCH INTERESTS**

Ocean Observations: Currents, Temperature, and Salinity of the Mediterranean; Ocean Forecasting: Eastern Mediterranean; Autonomous Underwater Vehicles for Ocean Measurements; Polar Oceanography: Ocean-Sea Ice-Atmosphere Interaction

■ **RESEARCH PROGRAMMES (External Funding 2005-2007)**

Autonomous Underwater Vehicles for Measurement of Ocean Parameters  
Cooperating Organizations: Cyprus Oceanography Center (Coordinator);  
Laboratoire d'Océanographie et de Climatologie: Experimentation et  
Approches Numerique, France; Department of Fisheries and Marine  
Research, Cyprus. Funding: RPF, Cyprus

MFSTEP-Mediterranean Forecasting System Towards Environmental  
Predictions

Cooperating Organizations: Istituto Nazionale di Geofisica e  
Vulcanologia, Italy (Coordinator) and 48 partners in total, including the  
Cyprus Oceanography Center. Funding: FP5, E.U.

RECARO-Understanding the Impact of a Reduced Ice Cover in the Arctic  
Ocean

Cooperating Organizations: Scottish Association for Marine Science  
(Coordinator) and 14 partners in total including the Cyprus  
Oceanography Center. Funding: FP6, E.U.

ECOOP-European Coastal Shelf Sea Operational Monitoring and Forecasting  
System

Cooperating Organizations: Danish Meteorological Institute  
(Coordinator) and 72 partners in total including the Cyprus  
Oceanography Center. Funding: FP6, E.U.

AQUA-PLANNER-System of Assessment for Environmental Impacts from  
Aquaculture

Cooperating Organizations: Hellenic Center for Marine Research, Greece  
(Coordinator), University of Aegean, Greece; Cyprus Oceanography  
Center; Department of Fisheries and Marine Research, Cyprus  
Funding: INTERREG III A, E.U.

CYBO - Cyprus Basin Oceanography

Funding: Ministry of Agriculture, Natural Resources and the Environment,  
Cyprus

## PUBLICATIONS

### ■ SELECTED JOURNAL PUBLICATIONS

Manzella, G. M. R., et al., The improvements of the Ships Of Opportunity Program in MFSTEP, *Ocean Science*, 3, 245-258, 2007

Hayes, D. R., A. Jenkins, S. McPhail, Autonomous underwater vehicle measurements of surface wave decay and directional spectra in the marginal sea ice zone, *Journal of Physical Oceanography*, 37 (1), 71-83, 2007

### ■ SELECTED CONFERENCE PROCEEDINGS

Zodiatis, G., R. Lardner, D. Hayes, "...", The successful application of the Mediterranean oil spill model in assisting E.U. decision makers during the oil pollution crisis of Lebanon in summer 2006, *38th CIESM Congress Proceedings*, 214, 2007

Zodiatis, G., I. Gertman, D. Hayes, "...", The Atlantic water in the Levantine basin (1995-2006), *38th CIESM Congress Proceedings*, 215, 2007

Zodiatis, G., R. Lardner, D. Hayes, "...", Validation of Ocean forecasts in the NE Levantine basin, Eastern Mediterranean, *International Conference on Fluxes and Structures in Fluids*, St. Petersburg, 146-148, 2007

Hayes, D., Boyd, T. and M. Patterson, Sensors and instrument requirements of autonomous underwater vehicles, Griffiths, G. and Collins K.J. (Eds), *Masterclass in AUV technology for polar science*, Society for Underwater Technology, London, 39-48, 2007

Bose, N., Hayes, D., and G. Griffiths, Autonomous Underwater Vehicle Operations - Needs of New Users, Griffiths, G. and Collins K.J. (Eds), *Masterclass in AUV technology for polar science*, Society for Underwater Technology, London, 69-78, 2007

Zodiatis, G., R. Lardner, D. Hayes, "...", An operational oceanographic forecasting and observing system for the Eastern Mediterranean Levantine Basin: The Cyprus coastal ocean forecasting and observing system, *European operational oceanography present and future*, 4th International Conference on EuroGOOS, 591-597, 2006

Hayes, D. R., A. Jenkins and S. McPhail, Surface wave decay and directional spectra in the marginal sea ice zone measured by an autonomous underwater vehicle, *Proc. of the IEEE/OES 8th Working Conference on Current Measurement Technology*, The Printing House, Stoughton, Wisconsin, U.S.A., J. R. White and S. Anderson (Eds), 36-40, 2005

Zodiatis G., et al., The Atlantic water mesoscale hydrodynamics in the Levantine Basin, *CIESM workshop on Strategies for Tracking mesoscale processes*, Villefrance-sur-mer, 89-92, 2005

**GEORGE ZODIATIS** Senior Researcher  
Oceanographic Center

TEL.: 22892576, FAX: 22892575, E-mail: gzodiac@ucy.ac.cy

### ■ STUDIES

LMHI (Russian State Hydrometeorological University- RSHU), St Petersburg, B.Sc. in Oceanography, 1984

LMHI (Russian State Hydrometeorological University- RSHU), St Petersburg, M.Sc. in Oceanography, 1984

LHMI (Russian State Hydrometeorological University- RSHU), St. Petersburg, Ph.D. Thesis in Oceanography, 1991

## ■ PROFESSIONAL SOCIETIES / INTERNATIONAL ORGANIZATIONS

Data Exchange Agreement of the Mediterranean Operational Oceanography Network, Italy (Chairperson) • Advisory Committee of the International Commission for the Scientific Exploration of the Mediterranean Sea, Monaco • Ocean Physics and Climate Committee of the International Commission for the Scientific Exploration of the Mediterranean Sea, Monaco • Steering Committee of the Mediterranean Operational Oceanography Network, Italy • European Global Ocean Observing System, Sweden • Mediterranean Global Ocean Observing System, Greece • European Geophysical Union, Germany • European Sea Level Service, Norway • Mediterranean Global Ocean Observing System, Malta

## ■ RESEARCH INTERESTS

Operational Oceanography; Numerical Flow, Oil Spill and Trajectory Modelling; General Circulation; Water Masses, Mixing and Fine Thermohaline Processes; Satellite Remote Sensing

## ■ RESEARCH PROGRAMMES (External Funding 2005-2007)

ECOOP, European Coastal Sea Operational observing and Forecasting System

Cooperating Organizations: DMI, Denmark; INGV, Italy; HCMR, Greece; MERCATOR, France; IFREMER, France, and others  
Funding: FP6, E.U.

YPOKINOUMODA, AUVs for Measurement of Ocean Parameters

Funding: RPF, Cyprus

SeaDataNet-, A Pan European Infrastructure for Ocean and Marine Data management

Cooperating Organizations: IFREMER, France; MARIS, Netherlands; OGC, Italy; BODC, U.K., and others. Funding: FP6, E.U.

SESAME, Southern European Seas: Assessing and Modelling the changes in Ecosystems

Cooperating Organizations: HCMR, Greece; INGV, Italy; IOLR-Israel; MHI, Ukraine; METU, Turkey; IO-BAS, Bulgaria, and others. Funding: FP6, E.U.

Aqua-Planner, System for evaluating the environmental impact from aquaculture

Cooperating Organization: HCMR, Greece. Funding: INTERREG III A, E.U.

CORI-Prevention and management of sea originated risks to the coastal zone

Cooperating Organization: HCMR-Greece  
Funding: INTERREG III B ARCHIMED

MERSEA-IP- Marine Environment and Security in the European Areas- Integrated Project

Cooperating Organizations: IFREMER, France; MERCATOR, France; INGV, Italy; ENEA, Italy; U.K. met office, SMHI, Sweden; MetNo, Norway, and others. Funding: FP6, E.U.

MFSTEP- Mediterranean Forecasting System Towards Environmental Predictions

Cooperating Organizations: INGV, Italy; ENEA, Italy; OGS, Italy; IOLR, Israel; HCMR, Greece; METU, Turkey; MHI, Ukraine, and others. Funding: FP5, E.U.

SEA-SEARCH-Gateway to Oceanographic and Marine Data Information in Europe  
Cooperating Organizations: MARIS, Netherlands; IFREMER, France; HCMR, Greece; BODC, U.K.; OGS, Italy, and others. Funding: FP5, E.U.

## PUBLICATIONS

---

### ■ CHAPTERS IN BOOKS

Zodiatis, G., et al., CIESM Monographs n27, Strategies for understanding mesoscale processes, *The Atlantic Water Mesoscale Hydrodynamics in the Levantine Basin*, Monaco, 71-80, 2005

### ■ SELECTED JOURNAL PUBLICATIONS

Manzella, G.M.R., et al., The Improvements of the Ships of Opportunity Program in MFS-TEP, *Ocean Science*, 3, 245-258, 2007

Tanaka, T., et al., Microbial community structure and function in the Levantine Basin of the eastern Mediterranean, *Deep Sea Research, Part I*, 54, 1721-1743, 2007

Thingstad T.F., et al., Nature of Phosphorous Limitation in the Ultra oligotrophic Eastern Mediterranean, *Science*, 309, 1068-1071, 2005

Zodiatis G., et al., Variability of the Cyprus warm core Eddy during the CYCLOPS project, *Deep Sea Research, II*, 52, 2897–2910, 2005

Groom S., et al., Satellite-derived spatial and temporal biological variability in the Cyprus Eddy, *Deep Sea Research, II*, 52, 2990–3010, 2005

Krom, M.D., et al., Nutrient cycling in the south east Levantine basin of the Eastern Mediterranean: results from a phosphorus starved system, *Deep Sea Research, II*, 52, 2879-2896, 2005

Krom, M.D., et al., Overview of the CYCLOPS P addition Lagrangian experiment in the Eastern Mediterranean, *Deep Sea Research, II*, 52, 3090-3108, 2005

Maillard, C., et al., A Mediterranean and Black Sea Oceanographic Database and Network, *Bollettino di Geofisica Teorica ed Applicata*, Vol. 46, No. 4, 329-343, 2005

### ■ SELECTED CONFERENCE PROCEEDINGS

Zodiatis, G., et al., The successful application of the Mediterranean oil spill model in assisting E.U. decision makers during the oil pollution crisis of Lebanon in summer 2006, *38th CIESM Congress, Rapp.Comm. int. Mer Medit.*, 38, 214, 2007

Zodiatis, G., R. Lardner, D. Hayes, "...", An operational oceanographic forecasting and observing system for the Eastern Mediterranean Levantine Basin: The Cyprus coastal ocean forecasting and observing system, *4th International Conference on EuroGOOS: European operational oceanography present and future*, European Communities, 591-597, 2006



## **APPENDICES**



- **DOCTORAL TITLES AWARDED**
- **ABBREVIATIONS**
- **ACADEMIC STAFF INDEX**



## DOCTORAL TITLES 2005-2007

Name of Graduate	Dpt	Doctoral Title
<b>29 JUNE 2005</b>		
Stella Chadjiyiannakou	CHE	Synthesis and morphology control of gold nanoparticles in micellar solutions and lyotropic phases of surfactants
Miltiades Eliotis	MAS	The singular function boundary integral method for Laplacian and Biharmonic problems with boundary singularities
Constantina Klitou	CHE	Synthesis, Characterisation, Modelling and Evaluation of Amphiphilic Block Copolymeric Emulsifiers
Costas Kyriacou	CS	Data Driven Multithreading Using Conventional Control Flow Microprocessors
Kyriaki Polychronopoulou	CHE	Synthesis of Novel Solid Catalysts for H <sub>2</sub> S Adsorption and H <sub>2</sub> Production by Phenol Steam Reforming Reaction: Physicochemical Characterization, Catalytic Behaviour and Mechanistic Studies
Theodoros Tsangaris	MAS	The method of Fundamental Solutions for Certain Problems in Rotationally Symmetric Domains
Elias Zikkos	MAS	Perturbation of zeros of entire functions of exponential
<b>30 JUNE 2006</b>		
Tasoula Anastasiadou	CHE	Catalytic Reduction of NO by CH <sub>4</sub> and H <sub>2</sub> under Strongly Oxidising Conditions over Mixed Metal Oxides La <sub>2</sub> O <sub>3</sub> -CaO and Supported Palladium Catalysts
Andria Aroti	CHE	Study of the Effect of Hofmeister Anions on Monolayer, Bilayer and Micell Lipid Model Systems Through Experiments and Theory
Stavroula Christou	CHE	Fundamental Studies of Oxygen Storage Capacity Phenomenon Over Pd/CexZr1-xO <sub>2</sub> Catalysts and Regeneration of Commercial Three-Way Catalysts
Chrysostomos Chrysostomou	CS	Fuzzy Logic Based AQM Congestion Control in TCP/IP Networks
Evgenios Evgeniou	CHE	Structure and Activity Functional Silicates with Oxovanadium and Boron Complexes in Aqueous Solution

Theonitsa Georgiou	CHE	Star Polymers and their Applications in Gene Delivery – Synthesis and Characterization of Cross-linked Star Polymer Model Networks
Hariclea Kazeli	CS	An Intelligent Hybrid Decision Support System for the Management of Water Resources
Panayiota Lambrou	CHE	Studies of the Oxygen Storage and Release Phenomena over Aged and Regenerated Three-Way Catalysts: Effects of Various Pollutants and Regeneration Methods
Emmanouil Lioudakis	PHY	Ultrafast carrier dynamics of polycrystalline silicon samples: Effect of implantation, annealing and thickness
Stephanos Mavromoustakos	CS	A Web Engineering Methodology for Developing and Assessing the Quality of Web Applications
Maria Rikkou	CHE	Investigation of the Activity and the Kinetics of the Fluxional Processes of Hard Metal Ions with Redox Active Ligands
Efrosyni Themistou	CHE	Synthesis, Characterization and Degradation of Star Polymers and Polymer Networks based on Degradable Cross-Linkers
Angeliki Triftaridou	CHE	Synthesis and Characterization of Linear and Star ABC Triblock Terpolymers and ABCBA Pentablock Terpolymer Networks
Panayiota Vraka	CHE	Synthesis and Study of Antioxidant and the Cancer Cell growth Inhibitory Properties of $\alpha$ -, $\gamma$ -tocopheryl and $\gamma$ -tocotrienyl 2-phenylselenyl succinates.

## 27 JUNE 2007

Constantina Colocassidou	CHE	Characterization and complexation studies of humic acids with metal ions
Evroura Hapeshi	CHE	Preparation and characterization of mixed oxide Mn-Ce ( $Mn_xCe_{1-x}O_{2-y}$ , $x=0-1$ ) and the study of the influence of the solvent on the cerium oxides' surface properties
Georgia Kyriakou	CHE	Preparation of Mesoporous Ceria with controlled pore size distribution: Use of organic matrix
Kyriacos Matheou	MAS	On new developments in statistical inference for measures of divergence
Rodoula Moleski	CHE	Hybrid silicate materials as boron sorbents and host matrices for semiconductor nanoparticles
Marios Stylianou	CHE	Structural and Spectroscopic Investigation of Copper (II), Zinc (II), Vanadium (IV/V), and Molybdenum (V) Complexes with Redox Active Ligands and Carbonates



## ABBREVIATIONS

<b>BIO</b>	Department of Biological Sciences
<b>CHE</b>	Department of Chemistry
<b>CS</b>	Department of Computer Science
<b>FP5</b>	5th Framework Programme
<b>FP6</b>	6th Framework Programme
<b>FP7</b>	7th Framework Programme
<b>IST</b>	Information Societies and Technologies
<b>MAS</b>	Department of Mathematics and Statistics
<b>PHY</b>	Department of Physics
<b>RPF</b>	Research Promotion Foundation, Cyprus

## ACADEMIC STAFF INDEX

ALEXANDROU CONSTANTIA, <i>Professor</i> .....	Department of Physics .....	125
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CHRISTODOULOU–KAPNISSI P. CONSTANTINA, <i>Lecturer</i> .....	Department of Chemistry .....	32
CHRISTOFIDES CONSTANTINOS, <i>Professor</i> .....	Department of Physics .....	128
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CHRONAKIS NIKOLAOS, <i>Lecturer</i> .....	Department of Chemistry .....	27
CHRYSANTHOU L. YIORGOS, <i>Assistant Professor</i> .....	Department of Computer Science .....	54
CONSTANTINOU ANDREAS, <i>Professor</i> .....	Department of Biological Sciences .....	13
DAMIANOU A. PANTELIS, <i>Professor</i> .....	Department of Mathematics and Statistics .....	100
DELTAΣ CONSTANTINOS, <i>Professor</i> .....	Department of Biological Sciences .....	14
DIKAIKAKOS D. MARIOS, <i>Associate Professor</i> .....	Department of Computer Science .....	56
DIMOPOULOS YIANNIS, <i>Associate Professor</i> .....	Department of Computer Science .....	58
EFSTATHIOU M. ANGELOS, <i>Associate Professor</i> .....	Department of Chemistry .....	28
EVRIPIDOU PARASKEVAS, <i>Professor</i> .....	Department of Computer Science .....	59
FOKIANOS KONSTANTINOS, <i>Associate Professor</i> .....	Department of Mathematics and Statistics .....	102
GEORGIADIS PANTELIS, <i>Assistant Professor</i> .....	Department of Biological Sciences .....	16
GEORGIUO CHRYSISS, <i>Lecturer</i> .....	Department of Computer Science .....	62
GEORGIUO C. GEORGIOS, <i>Professor</i> .....	Department of Mathematics and Statistics .....	103
HAYES C. SOPHIA, <i>Lecturer</i> .....	Department of Chemistry .....	31
HAYES DANIEL, <i>Special Scientist</i> .....	Oceanography Center .....	149
ITSKOS GRIGORIOS, <i>Lecturer</i> .....	Department of Physics .....	131
KAKAS C. ANTONIS, <i>Professor</i> .....	Department of Computer Science .....	64
KARAGEORGHIS ANDREAS, <i>Professor</i> .....	Department of Mathematics and Statistics .....	105
KARAGRIGORIOU ALEX, <i>Associate Professor</i> .....	Department of Mathematics and Statistics .....	106
KERAMIDAS D. ANASTASIOS, <i>Associate Professor</i> .....	Department of Chemistry .....	33
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