



University of Cyprus
Graduate School



DOCTORAL THESIS
OF GRADUATES
UNIVERSITY OF CYPRUS (ABSTRACTS)
JUNE 2022

ABSTRACTS OF PHD THESIS JUNE 2022

The Senate of the University of Cyprus unanimously decided, on 15th June 2022 to award 37 Ph.D. titles.

In this edition the research subject of the PhD student is presented in a short summary.

The information is presented in alphabetical order by Department.

ABSTRACTS OF PHD THESIS JUNE 2022

NAME/SURNAME	DEPARTMENT	TITLE OF THESIS/ ABSTRACT
Somayyeh Lofti	Accounting and Finance	<p><i>Portfolio choice with neglected risk, political risk, and ambiguity</i></p> <p>Supervisor: Stavros Zenios, <i>Professor of Finance</i></p> <p>I find evidence consistent with the neglected risk hypothesis in the Eurozone sovereign credit market. I identify the presence of political risk in international portfolios. I show the diversification benefit persists with hedging the political risk premium. I develop a portfolio selection model under ambiguity which explains under-diversification puzzles.</p>
Angelos Agathangelou	Biological Science	<p><i>Investigation of the middle Miocene and late Pliocene ichthyofauna and palaeoenvironmental reconstruction of Cyprus Island (Eastern Mediterranean)</i></p>

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Nikolas Papanikolas

Biological Science

Supervisor: Spyros Sfendourakis, **Professor**

The purpose of this dissertation is the reconstruction of the fish fauna of the Middle Miocene and the Late Pleiocene of the Levantine Basin (Eastern Mediterranean) and the use of the results to assess the palaeo-environmental conditions in the study areas. To achieve the above purpose, fossilized otoliths were used.

Ecology and Behanioural Biology of Curruca Species Breeding in Cyprus

Supervisor: Alexander N.G Kirschel , **Associate Professor**

Population counts, analysis of songs and experiments regarding territorial responses were performed for the three breeding Curruca species in the island of Cyprus. Results showed a remarkable decline

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Georgia Katsifarakis

Business and Public
Administration

in the endemic *Curruca melanothorax* populations as well as a convergence in specific traits of its song towards the song of *C. melanocephala* over the years the two species are in sympatry.

A study of complex transaction phenomena related to actors' co-creation within modern market ecosystems

Supervisor: Marios Theodosiou, ***Associate Professor***

Three distinct papers are proposed, related to the idea of value co-creation within a market ecosystem. A Service-Dominant (S-D) driven, value-based strategic platform for market transactions is specifically developed, motivating the empirical investigation of how a firm's S-D strategic orientation affects customer (dis)engagement, and subsequently its performance, in e-market contexts.

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Maria Demetriou

Byzantine and Modern
Studies

The interpretation and the reception of postmodernism in Greece: The case of Giannis Panou

Supervisor: Marinos Pourgouris, ***Associate Professor***

It examines the postmodern literary genre, tracing the conceptual manifestations of the term in the work of some of the most scholars who studied the phenomenon. It examines strategies developed in the postmodern novel, through which the narratives of the traditional and the postmodern novel discourses could be distinguish by analysing the novels of Giannis Panou.

Damaskinos M. Constantinos

Chemistry

Development of New Ceria-based Supported Metal Catalysts for Synthesis Gas Production via Dry Reforming of Methane

ABSTRACTS OF PHD THESIS JUNE 2022

Aikaterini Triantafyllaki

Civil and Environmental
Engineering

Supervisor: Angelos Efstathiou, *Professor*

Investigation of the effect of (a)CeO₂ synthesis method and chemical composition of metal oxides Ce_{1-x}MxO_{2-δ} (M = Pr³⁺, Ti⁴⁺) used as supports of Ni catalysts,(b) Ni and NiPt catalysts supported onCe_{0.8}Pr_{0.2}O_{2-δ}, and (c)Ni particle size over Ce_{0.8}Ti_{0.2}O_{2-δ}-supported Ni catalysts, on several catalyticparameters under DRM conditions (CH₄ + CO₂ ® 2CO + 2H₂).

Structural Integrity of Offshore Pipelines Crossing Active Fault

Supervisor: Panos Papanastasio, *Professor*

This thesis deals with the structural response of offshore partially embedded pipelines crossing active tectonic faults. A series of parametric finite element simulations of a natural gas pipeline that

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Dimitris Vitalis

Classics and Philosophy

rests on non-sensitive soft fine-grained seabed and subjected to differential movement of an active tectonic faults (normal, reverse, strike-slip) are performed.

Topics Regarding the Dialect and Alphabet on Inscriptions of Corinthia, the Corinthian Establishments and Dodona

Supervisor: Anna Panayotou-Triantaphyllopoulou, ***Professor***

This thesis deals with the examination, description and presentation in chronological and geographical order of inscriptions of ancient Corinthia, the Corinthian establishments and Dodona. The prime objective is the synthesis of a cohesive study regarding the dialect and alphabet of the epigraphical texts. The discussion focuses on the linguistic analysis of these texts and it gives prominence to the similarities and differences amongst the inscriptional data from the aforementioned areas, in terms of alphabet and dialect.

ABSTRACTS OF PHD THESIS JUNE 2022

Argyris Constantinides

Computer Science

Personalized Cued-recall Graphical User Authentication based on Image Content Familiarity

Supervisor: Andreas Pitsillides, ***Professor***

This thesis proposes a new cued-recall graphical user authentication framework, coined RetroPass, by leveraging on users' sociocultural experiences for the delivery of personalized images at different levels of abstraction (i.e., Individual, Group, Organizational, National, Global).

Anna Georgiou

Education

Implementing an Educational Drama Program to Foster Pre - school Children's Play Skills in Socio - dramatic and Imaginative Play

Supervisor: Eleni Loizou, ***Professor***

ABSTRACTS OF PHD THESIS JUNE 2022

Maria Irakleous

Education

The purpose of this research study was to explore the development of preschool children's sociodramatic and imaginative play skills, while participating in an educational drama program. Another research goal was to investigate how the specific early childhood teacher was involved in children's play in order to scaffold it.

An investigation of undergraduate students' Pedagogical Content Knowledge for inquiry during and after their participation in a specially designed professional development program

Supervisor: Zacharias Zacharia, ***Professor***

This dissertation aims to study undergraduate students' Pedagogical Content Knowledge (PCK) of inquiry during their participation in a specially designed inquiry professional development program, as well as during the designing and teaching of inquiry lessons in the classroom after their participation in the program.

ABSTRACTS OF PHD THESIS JUNE 2022

Marina Vasileiadou

Education

The contribution of inclusive education on children's friendships in early childhood education

Supervisor: Simoni Symeonidou, ***Associate Professor***

This thesis examined whether an educational programme that was developed based on inclusive pedagogies affects friendships and socioemotional development in early childhood education. Analysis of the data revealed that children were positively affected in both respects. Certain prerequisites are discussed in relation to designing and implementing similar programmes in kindergarten.

Niki Melanidou

Education

Coaching for applying Differentiated teaching/learning based on Success Criteria and Adequacy Criteria in teaching Greek as a second language.

Supervisor: Koutselini-Ioannidou Mary, ***Professor Emeritus***

ABSTRACTS OF PHD THESIS JUNE 2022

Flora Panayiotou

Education

The aim of the research is to investigate whether the teacher has applied differentiated teaching/learning, how the coaching has assisted her teaching based on criteria of success and adequacy, what the teacher's views on the coaching are, and what the results of the research/coaching to the trainer are.

Differentiated instruction and Inclusive Education: Action Research In the subject of Greek Language

Supervisor: Helen Pthiaka , ***Professor***

This dissertation aims to determine the effectiveness of Differentiated Instruction in the subject of Greek Language. Action Research was implemented trying to answer how Differentiated Instruction affects students' attitudes, behavior and academic performance, which routines and techniques facilitate the application of specific practices in mixed ability classroom and how reflection promotes teacher's professional development.

ABSTRACTS OF PHD THESIS JUNE 2022

Yvoni Pavlou

Education

Exploring the Impact of the Presence/Absence of Haptic Feedback on Preschoolers' Science Learning When Experimenting With Physical and Virtual Manipulatives

Supervisor: Zacharias Zacharia, ***Professor***

This study investigated the impact of the presence or absence of haptic feedback while using physical or virtual manipulatives on preschoolers' learning in three subject domains: balance beam, sinking/floating, and springs. Data were collected through clinical interviews and analyzed qualitatively and quantitatively. The findings indicate that haptic feedback, mostly in terms of experiencing the mass of objects, has either a positive (springs), negative (sinking/floating) or a neutral (balance beam) impact on preschoolers' learning.

Vasiliki Papacharalambous

Education

Leadership and Leadership Style in Education and its Impact on Learning Outcomes

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<p>Giannis Savva</p> <p>Electrical and Computer Engineering</p>	<p>Supervisor: Leonidas Kyriakides, <i>Profssor</i></p> <p>The present research is a systematic attempt to identify the influence of leadership on learning outcomes (mathematics, science, language) and to control the effect of the context on outcomes (quality - equality). Secondary analysis of leadership scales of PISA 2012 and 2015 international surveys was performed. The scales were related to aspects of instructional, transformational and distributed leadership style.</p> <p><i>Provisioning Meets Security in Next Generation Optical Networks</i></p>
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Elisavet Stefani

History and Archeology

*Supervisor: Georgios Ellinas, **Professor***

This thesis develops efficient connection provisioning approaches in conjunction with security techniques, for ensuring the security of provisioned connections in next-generation optical networks against eavesdropping and jamming attacks. Efficient optimization techniques and heuristic algorithms are developed to increase the security level of the connections, without affecting significantly the utilization of the network resources.

The necropoleis of Amathous. Funerary topography and typology from the Early Iron Age to the Late Roman period.

*Supervisor: Maria Iacovou, **Professor***

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Maria Achilleos

History and Archeology

The aim of the present doctoral dissertation is the study of the funerary topography and the architecture of ancient Amathous from the Early Iron Age until the Late Roman period. The spatial organization of each necropolis is examined separately, seeking to reconstruct the gradual development of the three burial grounds.

The Society of Roman Cyprus based on epigraphic data and archaeological evidence in the light of the Romanization

Supervisor: Theodoros Mavrojannis, ***Professor***

In the first part of the dissertation the ancient written sources and a summary of the epigraphic data were presented. In the second part, the archaeological situation of Cyprus from August to Constantine was analysed, in terms of cities, monuments - architecture and mosaics. These were studied in the light of the question whether there was an "attempt to Romanization", dividing all kinds of information into the corresponding "element" that leads a scholar to conclude whether there

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Thea Christoforou

History and Archeology

was an attempt and whether the phenomenon of "Romanization" is indeed located on the island. In the third and last part we proceeded with the analysis of the information.

Diachronic synthesis of the landscape in the northeastern foothills of the Troodos, from Prehistory until Late Antiquity: the study of the areas of Agia Varvara, Lythrodontas, Mathiatis and Sia.

Supervisor: Maria Iacovou, ***Professor***

The subject of this thesis is the synthesis of the landscape in the area being investigated, for the clarification of its character in the *longue durée*, and to incorporate its landscape in the overall historical and archaeological background of ancient Cyprus, in the chrono-cultural horizons of the 2nd and 1st millennium B.C..

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Dimitrios Ioannidis

History and Archeology

Unravelling Metallurgical Issues Of Metallurgical Ceramics From Late Bronze Age Cyprus. The Cases Of Enkomi and Kition

Supervisor: Vasiliki Kassianidou, ***Professor***

The doctoral thesis focuses on the examination of the metallurgical ceramic assemblages discovered in the metallurgical workshops of copper, which were found at Kition and Enkomi and date in the Late Cypriot period (2nd millennium BC). The material is examined with the use of analytical techniques with the aim to reconstruct the organization of copper production in Cyprus.

Maria Rousou

History and Archeology

Exploitation Des Ressources Vegetales Et Impact Environmental Des Premiers Peuplements Humans A Chypre: Approches Anthracologique Et Carpologique

ABSTRACTS OF PHD THESIS JUNE 2022

Clemence Moulle Prevost

History and Archeology

Supervisors: Ourania Kouka , **Associate Professor** , Margareta Tenberg, **Professor Muséum National d'Histoire Naturelle**

The subject of this thesis is the synthesis of the landscape in the area being investigated, for the clarification of its character in the *longue durée*, and to incorporate its landscape in the overall historical and archaeological background of ancient Cyprus, in the chrono-cultural horizons of the 2nd and 1st millennium B.C..

Transmettre un patrimoine dispersé : le cas des vestiges archéologiques chypriotes depuis 1960. Processus, enjeux actuels et nouvelles orientations

Supervisors : Maria Parani, **Associate Professor** , Antigoni Maragkou, **Maitre de Conférences HDR, Université Rennes 2**

Based on empirical investigations, the thesis draws up an up-to-date overview of the archaeological

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Christos Andreou

Mathematics and
Statistics

heritage of Cyprus dispersed in Europe. Thus, the means used to preserve and enhance it are analyzed, starting from 1960 - the date when Cyprus became an independent state - to the present day.

Construction and Fitting of Random Field Models to Precipitation Data

Supervisor: Anastasia Baxevani , ***Associate Professor***

We investigate a compound Poisson-Gamma model for modeling precipitation, methods of implementing temporal and spatial correlation to this model and we evaluate the efficiency of the reconstruction. Furthermore, we investigate covariance function estimation methods of truncated and transformed Gaussian random field model, their properties, and their influence in spatial interpolation.

ABSTRACTS OF PHD THESIS JUNE 2022

Eleni Manoli

Mathematics and
Statistics

Advancements in Indirect Questioning Techniques

Supervisor: Tasos Christofides, ***Professor***

Indirect Questioning Techniques (IQTs) have appeared due to the inability to gather reliable data when conducting sample surveys on sensitive items are carried out. In this thesis, we review some of the IQTs and present some revised techniques for which we put more emphasis on producing estimators which may not necessarily be unbiased but which better protect the privacy of the participants. Finally, we wish to check whether the results received using various IQTs versus direct questioning method are more accurate or not and we conclude that they are worth applying.

Ioanna Ioannou

Mechanical and
Manufacturing
Engineering

P-type half-Heusler and Bismuth-Telluride thermoelectric materials

Supervisor: Theodora Kyratsi, ***Professor*** , Ioannis Giapintzakis ***Professor***

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Panagiotis Ioannou

Mechanical and
Manufacturing
Engineering

P-type half-Heusler $M\text{CoSb}$ ($M=\text{Ti, Hf, Zr}$) and Bismuth Telluride $\text{Bi}_x\text{Sb}_{2-x}\text{Te}_3$ materials were synthesized via mechanical alloying. The best thermoelectric properties were reported for $\text{Hf}_{0.6}\text{Ti}_{0.4}\text{CoSb}_{0.83}\text{Sn}_{0.17}$ composition, prepared by 4 hours ball-milling ($Z\text{T}(973\text{K}) \sim 1.1$) and $\text{Bi}_{0.3}\text{Sb}_{1.7}\text{Te}_3$ prepared via 20 hours of milling ($Z\text{T}(350\text{K}) \sim 1.13$) respectively.

Lithionic two-terminal resistive switching devices with bioinspired synaptic functionalities and analog memory

Supervisor: John Giapintzakis ***Professor***

This *Thesis* focuses on lithionic materials that are able to undergo reversible insulator-to-metal transitions, through delithiation and lithiation reactions. This ability was utilized for the fabrication of two-terminal devices that present multistate, or analog resistive switching (RS) with an externally applied voltage stimulation, highlighting their potential as memory-resistor (memristor) elements with applications in neuromorphic computing.

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Marina Kolosova

Physics

Search for charged Higgs bosons decaying into a top and a bottom quark with the CMS detector in pp collisions at $\sqrt{s} = 13$ TeV with the 2016 and 2017 LHC data

Supervisor: Fotios Ptochos, ***Associate Professor***

A search for charged Higgs bosons in the process $pp \rightarrow t(b)H^\pm$ with the subsequent decay $H^\pm \rightarrow tb$, in the all-jet final state, using data produced at the Large Hadron Collider (LHC) in 2016 and 2017 in proton-proton collisions at a center-of-mass energy of $\sqrt{s} = 13$ TeV.

Daniele Simeoni

Physics

Lattice Kinetic Algorithms for Relativistic Flows: a Unified Treatment

Supervisor: Constantia Alexandrou, ***Professor***, Andreas Frommer, ***Professor Bergische University Germany***

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Floriano Manigrasso

Physics

I present results obtained during the P.h.D. project Algorithms for Relativistic Lattice Boltzmann, in the framework of the Joint Doctorates program STIMULATE. Focus of the project has been the algorithmic refinement of kinetic solvers for simulation of relativistic hydrodynamics and applications in the fields of astrophysics, condensed matter, nuclear physics.

Direct calculation of Parton Distribution Function (PDFs) on the lattice

Supervisors: Costantia Alexandrou , ***Professor*** Nazario Tantalo, ***Professor Universitadegli Studi de Roma – Tor Vergata*** , Igor Sololov , ***Professor Humbolt – Universita Germany***

This thesis addresses several crucial aspects regarding the calculation of parton distribution functions through lattice QCD simulations. Systematic effects, such as discretization artifacts, are analyzed in detail. Furthermore, we present the results of the first calculation of the flavor decomposition of parton distribution functions for the proton.

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Ifigenia Stylianou

Psychology

Workplace Building and Victimization : A Mixed Method Approach

Supervisor: Panayiotis Stavrinides , ***Associate Professor***

The research aims to investigate the relation between school bullying and victimization experiences, coping skills and personality traits of employees and workplace victimization, to assess the mediating role of the workplace climate in the above relationship, as well as to investigate the relationship of the workplace climate and workplace victimization, and post-traumatic embitterment disorder in employees.

Andreas Chatzikyprianou

Psychology

Cognitive Aging: Development of an Intervention Program Based on Cognitive and Psychosocial Functionality

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Maria Panteli

Psychology

Supervisor: Fofi Constantinidou, *Professor*

The aim of this study was to design and implement a new multidimensional intervention for cognitive and psychosocial health. The results, showed a significant improvement for the experimental group, as compared with control group, indicating the effectiveness of this new intervention. The dissertation highlighted the role of important variables in cognitive and psychosocial functionality.

Unravelling the Network Structure of Alexithymia and Identifying Pathways Linking Alexithymia with Depression and Other Health Conditions

Supervisor: Georgia Panayiotou, *Professor*

ABSTRACTS OF PHD THESIS JUNE 2022

Maria Sikki

Psychology

The current study examined the network structure of alexithymia and mechanisms connecting alexithymia with illness. Findings supported that alexithymia includes difficulties identifying somatic symptoms and feelings, externally oriented thinking, distraction away from emotions, and difficulties describing emotions, which predict the development of health problems through distinct physiological and cognitive mechanisms.

An exploration of attentional and neural patterns during emotional processing: Combining Attention Modification Training with continuous Theta Burst Stimulatio

Supervisor: Kostas Fantis, ***Associate Professor***

At first, the study aimed to explore attention bias and prefrontal brain activation during the presentation of emotional stimuli among individuals differentiated on anxiety and antisocial traits.

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Maria P. Photiou

Psychology

Then, the effectiveness of Attention Modification Training combined with cTBS over the right DPLFC on emotion processing in anxious individuals was examined.

Spatial Awareness and Domain Expertise: the case of dancers

Supervisor: Marios Avraamides, ***Professor***

A longitudinal dance intervention study found that dancers have better spatial awareness skills and different brain structures than non-dancers. Moreover, dance training improved spatial awareness skills and altered the brain structure of healthy adults who attended dance classes for a year, suggesting that dancing could be used to strengthen the brain and spatial awareness.

ABSTRACTS OF PHD THESIS JUNE 2022

Irene Heraclidou

Psychology

Parenting and internalizing problems: A mixed-method design

Supervisor: Panayiotis Stavrinides, ***Associate Professor***

The current study confirmed the mediating role of children's personality characteristics and coping strategies in the relationship between parenting practices and children's internalizing problems. In addition, a broad range of personal and social factors have been identified as influencing extreme levels of negative parenting in mothers.

Anna Misiaouli

Turkish and Middle
Eastern Studies

Turkish Cypriots' Struggle for Communal Existence: Mobilizations as a Social Movement

Supervisor: Michalis N. Michael, ***Associate Professor***

ABSTRACTS OF PHD THESIS JUNE 2022

This work intended to develop an interdisciplinary understanding of social movements by utilizing social theory. The study situates the Turkish Cypriot mobilizations, which are studied in their historical context and the theoretical implications of the new activist and communication repertoires are drawn. Special focus is on the Turkish Cypriot mobilizations during the period 2000-2015.