

## Department of Electrical and Computer Engineering

Title: «*Detection of Collaborative Cyber-Attacks through Correlation and Time Dependency Analysis*»

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**Wednesday**, 2 March 2016, 17:00 – 18:00  
Room XOD 02 – 013, New Campus - University of Cyprus

### **Abstract:**

The presentation focuses on the problem of detecting suspiciously high correlation between malicious Internet users that are collaborating in order to cause a Denial of Service (DoS) Attack. The main goal of the proposed method is to recognise cyber incidents (more specifically, collaboration/dependency between different users) in order to ultimately isolate their behaviour and avoid the consequences of the DoS attack. The method relies on the analysis of data traffic across the concerned network (with both incoming and outgoing traffic) in an effort to identify correlations between different users. The proposed technique models normal and malicious behaviour via hidden Markov models, and analyses the performance of the detection methodology using both mathematical reasoning and simulations.

### **Biography:**

Marios Thoma is a PhD Candidate in the Department of Electrical and Computer Engineering at the University of Cyprus. He has graduated from the Hellenic Military Academy and he holds a Master of Science degree in communications and computer science from the University of Athens, Greece. His research focuses in the study of cyberspace defence and specifically in the modelling and detection of cyber attacks.