TECHNICAL UNIVERSITY OF CRETE

School of Electrical and Computer Engineering

Annual Activity Report

Sep 2017 – Aug 2018

Chania 2018

Faculty Members

Computer Science Division

- [Chalkiadakis Georgios, Associate Professor](#)
- [Deligiannakis Antonios, Associate Professor](#)
- Garofalakis Minos, Professor
- Lagoudakis Michail, Associate Professor
- [Mania Katerina, Associate Professor](#)
- [Petrakis Euripides, Professor](#)
- Samoladas Vasilis, Assistant Professor

Electronics and Computer Architecture Division

- [Balas Costas, Professor](#)
- [Bucher Matthias, Associate Professor](#)
- [Dollas Apostolos, Professor](#)
- Kalaitzakis Kostas, Professor
- [Koutroulis Eftichios, Associate Professor](#)
- [Papaefstathiou Ioannis, Associate Professor](#)
- [Pnevmatikatos Dionisios, Professor](#)
- [Stavrakakis Georgios, Professor](#)

Telecommunications Division

- [Bletsas Aggelos, Associate Professor](#)
- Digalakis Vassilios, Professor
- [Karystinos George, Associate Professor](#)
- Koutsakis Polychronis, Associate Professor – Exemption due to unpaid leave of absence
- [Liavas Athanasios, Professor](#)
- [Paterakis Michael, Professor](#)
- [Zervakis Michalis, Professor](#)

Faculty in the Sciences

- [Angelakis Dimitris, Associate Professor](#)
- Ellinas Demosthenes, Professor
- [Manoussaki Daphne, Assistant Professor](#)
- [Petrakis Minos, Associate Professor](#)

Emeritus Professor
- [Christodoulakis Stavros](#)

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Georgios Chalkiadakis
Rank: Associate Professor
Years in rank: 2.5
Division: Computer Science
Lab affiliation: Intelligent Systems

A – Teaching

- Undergraduate courses taught
  - COMP 201: Design and Development of Information Systems (mandatory)
  - COMP 517: Multi-agent Systems

- Graduate courses taught

  - At the **Università di Verona**, Georgios Chalkiadakis organized and taught a ten-lectures doctoral course on "Learning in Multiagent Worlds" - *while at sabbatical there during the 2018 Spring semester*.
  - At the **Université Paris-Dauphine**, Georgios Chalkiadakis organized and taught a two-weeks doctoral course on Algorithmic Game Theory (February 2018), as part of a broader course on *Algorihmic Decision Theory* taught by several international experts.

- Curriculum & course development
  - Updated course material/slides for all aforementioned courses taught

B – Publications

- Editorships
  - Nick Bassiliades and Georgios Chalkiadakis: **Artificial Intelligence Techniques for the Smart Grid.** Special Issue, *Advances in Building Energy Research*, Volume 12, Issue 1, 2018. Taylor and Francis. Editorial.

- Book Chapters
  - Georgios Chalkiadakis, Charilaos Akasiadis, Nikolaos Savvakis, Theocharis Tsoutsos, Thomas Hoppe, and Frans Coenen: **Providing a Scientific Arm to Renewable Energy Cooperatives.** *In The Role of Exergy in Energy and the Environment*. Springer Nature, 2018. https://link.springer.com/chapter/10.1007/978-3-319-89845-2_51

- Publications in refereed conferences
  - Published:
    - Michalis Mamakos and Georgios Chalkiadakis: **Overlapping Coalition Formation via Probabilistic Topic Modeling.** In Proc. of the 17th Int. Conf. on Autonomous Agents and Multiagent Systems (**AAMAS-2018**), Stockholm, Sweden, July 2018
    - Christos Spatharis, Theocharis Kravaris, George A. Vouros, Konstantinos Blekas, Georgios Chalkiadakis, Jose Manuel Cordero Garcia and Esther Calvo Fernandez: **Multiagent Reinforcement Learning Methods to Resolve Demand Capacity Balance Problems.** In Proc. of the 10th Hellenic Conference on Artificial Intelligence (**SETN 2018**), Patras, Greece, July 2018.
    - Angelos Chliaoutakis and Georgios Chalkiadakis: **Evolutionary Game-theoretic Modeling of Past Societies' Social Organization.** In Proc. of the 14th European Conference on Artificial Life (**ECAL-2017**), Lyon, France, September 2017.

- Articles in Magazines
  - Koubarakis M., Vouros G., Chalkiadakis G., Plagianakos V., Tjortjis C., Kavallieratou E., Vrakas D., Mavridis N., Petasis G., Blekas K., Krithara A.: **AI in Greece: The Case of Research on Linked Geospatial Data. AI Magazine, Vol 39, No 2, Summer 2018**

C – Awards & Distinctions

  - *Elected in the Board of Directors* ("Deputy Chair") of the **European Association for Multi-Agent Systems** [elected for a four-years term]

  - *Invited Tutorial*: **"From Game Theory to AI in Games"**, at the 17th International Conference on Autonomous Agents and Multiagent Systems (**AAMAS-2018)**, Stockholm, Sweden, July 2018. *Co-tutored with: Dr. Georgios Yannakakis*

  - **Invited Talk: "Overlapping Coalition Formation and its connections to Machine Learning"**. Department of Computer Science, University of Verona, Italy, May 2018.

  - **Invited Talk: "Artificial Intelligence in Our Lives"**. Keynote speech during the celebration of the World Telecommunication and Information Society Day at Nicosia, Cyprus, May 2018.

D – Funded Projects
- Current projects:
  - **Project "RESCOOP Plus".** A Horizon 2020 project accepted under the Energy Efficiency call topic EE-10-2015 – "Consumer engagement for sustainable energy". The objective of the REScoop Plus project is to follow up on the RESCOOP20-20-20 project by making Renewable Energy Sources cooperatives in Europe go beyond their activities of producing and supplying energy, and take up energy savings for their members as a new

pillar in their organisations. **Duration: 2016-2019 <u>Role:</u>** *<u>coordinator for the participating ECE-TUC team</u>*

- Project proposals submitted:
  - o ΕΤΠΑ28 / RIS3 Crete "Ενίσχυση της ανταγωνιστικότητας, καινοτομίας και επιχειρηματικότητας της Κρήτης"
  - o ΕΛΙΔΕΚ-2018 "1η Προκήρυξη ερευνητικών έργων ΕΛΙΔΕΚ για την ενίσχυση των μελών ΔΕΠ και Ερευνητών/τριών και την προμήθεια ερευνητικού εξοπλισμού μεγάλης αξίας»
  - o Συμμετοχή σε ακόμα μία πρόταση ΕΛΙΔΕΚ-2018
  - o Συμμετοχή σε δυο προτάσεις HORIZON-2020

E – Professional service
- Society Executive Committee duties
  - o ***Deputy Chair*** *of the* ***Board of Directors*** of the **European Association for Multi-Agent Systems**
  - o ***General Secretary*** of the **Hellenic AI Society (EETN)**

- Conference <u>*Senior*</u> Technical Program Committee service
  - o The 17th Intern. Conference on Autonomous Agents and Multiagent Systems (**AAMAS-18**), Stockholm, Sweden, July 2018.
  - o The 27th International Joint Conference on Artificial Intelligence *and* the 23rd European Conference on Artificial Intelligence, Stockholm, Sweden, July 2018 (**IJCAI-ECAI-18**).

- Conference Technical Program Committee service
  - o The 32nd AAAI Conference on Artificial Intelligence, New Orleans, USA, February 2018 (**AAAI-18**).
  - o The 16th International Conference on Practical Applications of Agents and Multi-Agent Systems **(PAAMS-18)**, Toledo, Spain, June 2018.
  - o The 10th Hellenic Conference on Artificial Intelligence, Patras, Greece, July 2018 **(SETN-2018)**.

- Reviewing activities
  - o Reviewer for the conferences I was a Program Committee member at (mentioned above)
  - o Reviewer for several journals; a subset of the following: The *International Journal of Game Theory* (**IJGT**); the *International Game Theory Review* **(IGTR)**; the *Artificial Intelligence* journal (**AIJ**); The *Journal of Artificial Intelligence Research* (**JAIR**); the *Journal of Autonomous Agents and Multiagent Systems* (**JAAMAS**); the *Journal of Machine Learning Research* (**JMLR**); the ***IEEE Intelligent Systems*** journal; the journal *IEEE Transactions on Systems, Man and Cybernetics, Part A*; the journal *IEEE Transactions on Systems, Man and Cybernetics, Part B;* the journal *IEEE Transactions on Systems, Man and Cybernetics, Part C*; the *International Journal on Artificial Intelligence Tools* (**IJAIT**); the *ACM Transactions on Autonomous and Adaptive Systems* journal; the *Advances in Artificial Intelligence* journal; the *Journal of the Brazilian Computer Society*; the *Transportation Research Part C* journal; the *Energy and Buildings* journal

G – Advising

- Active graduate students supervised
  - Ph.D. and M.Sc. students completed (supervisor)
    - Akasiadis Charilaos (Ph.D.)

  - Ph.D. and M.Sc. theses in progress (supervisor)
    - Chliaoutakis Aggelos (Ph.D.)
    - Tripolitakis Evaggelos (Ph.D.)
    - Kydonakis Ares (M.Sc.)
    - Ntiniakou Thaleia (M.Sc.)
    - Georgara Athina (M.Sc.)
    - Xenou Konstantia (M.Sc.)

  - Ph.D. Degrees completed (examiner / examining committee member)
    - Andrejczuk_Ewa - Universitat Autònoma de Barcelona / ARTIFICIAL INTELLIGENCE RESEARCH INSTITUTE (IIIA) OF THE SPANISH RESEARCH COUNCIL (CSIC)
    - Mateusz Tarkowski – University of Oxford
    - Paolo Giuliodori – Università di Camerino

  - Ph.D. and M.Sc. Degrees in progress (committee member)
    - Orfanoudakis Emmanuel (M.Sc.)
    - Pateraki Eleni (M.Sc.)
    - Rexakis Ioannis (Ph.D.)
    - Arapi Polyxeni (Ph.D.)

- Undergraduate students supervised
  - Diploma theses in progress
    - Floros Efthimios
    - Gkiata Ioanna
    - Katsigiannis Michail
    - Kechagias Georgios
    - Lintas Stefanos
    - Mpaharis Athanasios
    - Papathanasiou Theodoros
    - Pronios Filippos
    - Voloudakis Konstantinos

  - Diploma theses completed (supervisor)
    - Georgara Athina
    - Xenou Konstantia
    - Floros Efthimios

  - Diploma theses in progress (committee member)
    - Chatzipetrou Konstantinos
    - Efthimiou Georgios
    - Emmanouilidis Konstantinos
    - Gemistos Michail
    - Kotzampasakis Georgios
    - Koukouzas Christos

- Moulios Argyris
- Nikolopoulos Nikolaos
- Pikionis Petros – Platon
- Poulopoulos Dimitrios
- Soursos Petros
- Rempoulaki Anastasia
- Sfyris Nektarios
- Karageorgiadis Anastasios
- Psychas Christoforos
- Tsagkarogianni Eleni
- Vogiatzis Antonios
- Dimitras Sotirios
- Petridis Christos

- Diploma theses completed (committee member)
  - Baroutis Nikolaos

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Antonios Deligiannakis
Rank: Associate Professor
Years in rank: 5
Full-time or part-time: Full-time
Division: Computer Science
Lab affiliation: Distributed Multimedia Information Systems and Applications (MUSIC)

A – Teaching
- Undergraduate courses taught
    - COMP 302 : Databases (mandatory)
    - COMP 516 : Data Processing and Handling in Sensor Networks

- Graduate courses taught
    - COMP 606 : Data Processing and Handling in Sensor Networks (Offered jointly with COMP 516)
    - COMP 613 : Special Issues in Database Systems

- Labs taught

- Curriculum & course development
    - New courses / labs developed
    - Lecture notes / slides developed
    - Authored textbooks

B – Publications
- Publications in refereed journals
    - Submitted: those published/appeared (see below)
        - Ioannis Demertzis, Stavros Papadopoulos, Odysseas Papapetrou, Antonios Deligiannakis, Minos N. Garofalakis, Charalampos Papamanthou: Practical Private Range Search in Depth. ACM Trans. Database Syst. 43(1): 2:1-2:52 (2018)
        - Nikos Giatrakos, Antonios Deligiannakis, Minos N. Garofalakis, Daniel Keren, Vasilis Samoladas: **Scalable approximate query tracking over highly distributed data**

streams with tunable accuracy guarantees. Inf. Syst. 76: 59-87 (2018)
- Ioannis Flouris, Nikos Giatrakos, Antonios Deligiannakis, Minos N. Garofalakis: **Event Analytics over Geographically Distributed Data.** PVLDB.

- o Accepted:
  - Ioannis Demertzis, Stavros Papadopoulos, Odysseas Papapetrou, Antonios Deligiannakis, Minos N. Garofalakis, Charalampos Papamanthou: Practical Private Range Search in Depth. ACM Trans. Database Syst. 43(1): 2:1-2:52 (2018)
  - Nikos Giatrakos, Antonios Deligiannakis, Minos N. Garofalakis, Daniel Keren, Vasilis Samoladas: **Scalable approximate query tracking over highly distributed data streams with tunable accuracy guarantees.** Inf. Syst. 76: 59-87 (2018)

- o Published:
  - Ioannis Demertzis, Stavros Papadopoulos, Odysseas Papapetrou, Antonios Deligiannakis, Minos N. Garofalakis, Charalampos Papamanthou: Practical Private Range Search in Depth. ACM Trans. Database Syst. 43(1): 2:1-2:52 (2018)
  - Nikos Giatrakos, Alexander Artikis, Antonios Deligiannakis, Minos N. Garofalakis: Complex Event Recognition in the Big Data Era. PVLDB 10(12): 1996-1999 (2017)
  - Nikos Giatrakos, Antonios Deligiannakis, Minos N. Garofalakis, Daniel Keren, Vasilis Samoladas: **Scalable approximate query tracking over highly distributed data streams with tunable accuracy guarantees.** Inf. Syst. 76: 59-87 (2018)

- Publications in refereed conferences
  - o Submitted: those published/appeared (see below)
    - Ioannis Flouris, Nikos Giatrakos, Antonios Deligiannakis, Minos N. Garofalakis: **Event Analytics over Geographically Distributed Data.** ACM Sigmod 2018

  - o Accepted:

  - o Published:

- Books and edited book chapters
  - Antonios Deligiannakis: View Maintenance Aspects. Encyclopedia of Database Systems (2nd ed.) 2018

- Patents
  - o *GRANTED*

C – Awards & Distinctions

D – Funded Projects
- Current projects:

- Project proposals submitted:
    - INFORE (ICT-12-2018-2020 Big Data Call. Result: Granted - Ranked 1st)

E – Professional service
- Associate Editor duties

- Society Technical Committee duties

- Conference Technical Program Committee service
    - VLDB - Very Large Data Bases
    - ICDE - IEEE International Conference on Data Engineering
    - EDBT - International Conference on Extending Database Technology

- Conference Organization (specify role):

- Reviewing activities
    - VLDB Journal
    - IEEE Transactions on Knowledge and Data Engineering (TKDE)
    - ACM TODS
    - Big Data Research (ELSEVIER)

F – Service to the School and the University
- School responsibilities
    - Undergraduate students advisor for 6th semester students

- University responsibilities

G – Advising
- Active graduate students supervised
    - Ph.D. and M.Sc. students completed (supervisor)

    - Ph.D. and M.Sc. theses in progress (supervisor)
        - Charalampakis Stergios (Ph.D.)
        - Flouris Ioannis (Ph.D.)
        - Bourdakis Savvas (M.Sc.)
        - Igglezakis Antonios (M.Sc.)

- Palolli Giorgo (M.Sc.)
- Kontaxakis Antonios (M.Sc)

- Ph.D. and M.Sc. Degrees completed (committee member)
  - Alevizos Panagiotis (PhD)
  - Chatzivasilis Georgios (PhD)

- Ph.D. and M.Sc. Degrees in progress (committee member)
  - Toutoudakis Michail (Ph.D.)
  - Vazaios Evangelos (Ph.D.)
  - Babalis Charalampos (M.Sc.)
  - Drakopoulos Panagiotis (M.Sc.)
  - Kalokyri Varvara (M.Sc.)
  - Kargatzis Dimitrios (M.Sc.)
  - Kasimatis Vasilios (M.Sc.)
  - Mantakos Georgios (M.Sc.)
  - Nydriotis Apostolos (M.Sc.)
  - Petrovski Stefan (M.Sc.)
  - Skoulakis Ioannis (M.Sc.)
  - Thermolia Chriso (M.Sc.)
  - Verykokidi Eleni – Angela (M.Sc.)
  - Zervoudakis Nikolaos (M.Sc.)
  - Georgara Athina (M.Sc.)

- Undergraduate students supervised

  - Diploma theses in progress
    - Giannopoulos Emmanuel
    - Fragkakis Panteleimon
    - Fragkiadoulakis Emmanuel
    - Kyriakidou Ioanna
    - Kyriakopoulos Konstantinos
    - Mariolou Nektaria
    - Moulios Argyris
    - Papageorgiou Dimitrios
    - Petheriotis Angelos
    - Vasilaki Anastasia
    - Vatikiotis Evangelos – Achilios
    - Zoukas Konstantinos
    - Pikionis Petros-Platon
    - Petheriotis Aggelos
    - Stamatakis Georgios
    - Bitsakis Theodoros

  - Diploma theses completed (supervisor)
    - Prountzos Georgios

- Psarakis Kyriakos
- Mantonanaki Christina
- Katsani Merieme
- Voltsis Evangelos

- Diploma theses in progress (committee member)

  - Demertzis Raphael Athanasios
  - Gemistos Michail
  - Ioannou Kostas
  - Kotzampasakis Georgios
  - Koutsouris Themistoklis
  - Lintas Stefanos
  - Moumoulidou Zafiria
  - Poulopoulos Dimitrios
  - Rempoulaki Anastasia
  - Smyrneos Dimitrios
  - Sourlantzis Sotirios
  - Theodorou Theodoros
  - Troulitakis Apostolos
  - Tzourbakis Georgios
  - Vratsanos Georgios
  - Ziakas Christos
  - Kafritsas Nikolaos
  - Psychas Christoforos

- Diploma theses completed (committee member)
  - Bobolakis Georgios
  - Stavroulakis Alexios
  - Geronymakis Theodoros
  - Marianos Nikolaos – Xenophon
  - Tsakos Konstantinos

Technical University of Crete

Department of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Katerina Mania
Rank: Associate Professor
Years in rank: 5 years 3 months as Assoc. Professor
Full-time or part-time: Full-time
Division: Computer Science
Lab affiliation: Distributed Multimedia Information Systems and Applications (MUSIC)

A – Teaching

- Undergraduate courses taught
    - COMP 418 - Computer Graphics (Spring 2018)
    - COMP 101 – Introduction to Computers and Computer Science (Winter 2017)

- Graduate courses taught
    - COMP 603 – Visualization and Virtual Reality (Spring 2018)

- Curriculum & course development
    - Updated laboratory exercises for COMP 101
    - Updated large project work in new platform (UNITY3D) as well as related laboratory material and exercises for COMP 418
    - Updated project work and exercises for COMP 418 in WEBGL
    - Updated large project work for COMP 603

B – Publications

- Publications in refereed journals

    - Submitted

    - Published
        - Ragia, L., Sarri, F., & Mania, K. (2018). Precise photorealistic visualization for restoration of historic buildings based on tacheometry data. Geographical Systems, 20(2), 115-137

        - Kontadakis, G., Chasiouras, D., Proimaki, D., Halkiadakis, M., Fyntikaki, M., Mania, K. (2018). Gamified Platform for Rehabilitation after Total Knee Replacement Surgery employing Low-cost and Portable Inertial Measurement

Sensor Node. Multimedia Tools and Applications, Springer, 1-28

- Panou, C., Ragia, L., Dimelli, C., Mania, K. (2018). An Architecture for Mobile Outdoors Augmented Reality for Cultural Heritage. ISPRS Geo-Information 7(12): 463 (2018)

- Publications in refereed conferences
  - Published

    - Kontadakis, G., Chasiouras, D., Proimaki, D., Mania, K. (2017). Gamified 3D orthopaedic rehabilitation using low cost and portable inertial sensors. VS-GAMES 2017: 165-168, IEEE sponsored

    - Koulieris, G., Aksit, K., Mantiuk, R., Richardt, C., Mania, K. (2018). Cutting-edge AR/VR Display Technologies (Gaze-, Accommodation-, Motion-aware and HDR-enabled). Full-day tutorial, IEEE Virtual Reality 2018, Germany

    - Panou, C., Ragia, L., Dimelli, D., Mania, K. (2018). Outdoors Mobile Augmented Reality Application Visualizing 3D Reconstructed Historical Monuments. 4th Intl. Conference on Geospatial Information, Systems Theory, Applicatons and Management, GISTAM 2018:59-67, co-sponsored by IEEE and supported by ACM

C – Awards & Distinctions

D – Funded Projects
  - Project proposals submitted

    - SOUVENIR: SOftwarisation, aUgmentation and Virtualisation of tangiblE and iNtangIble heritage, HORIZON2020, Call: DT-TRANSFORMATIONS: Curation of digital assets and advanced digitisation
    - MINDBRAINBODY: Neural correlates and biomarkers of psychosomatic mechanisms in illness: The Mind-Brain-Body Project, HORIZON2020, Call: Understanding causative mechanisms in co- and multimorbidities (SC1-BHC)

  - Project proposals funded

    - 'G4M: Serious Gaming for Computer Aided Manufacturing', call EYDE-ETAK, Principle Investigator
    - 'POLIS-KRATOS: Development of the digital game titled Polis-Kratos', call EYDE-ETAK, Principle Investigator

E – Professional service

- Associate Editor duties
  - Associate Editor, *ACM Transactions on Applied Perception*, ACM Press (since September 2007)
  - Associate Editor, *Presence Tele-operators and Virtual Environments,* MIT Press (since June 2006)

- Conference Technical Program Committee service – co-chair
  - Appointed, Workshops co-chair, IEEE Virtual Reality 2018, Germany
  - Appointed, Posters co-chair, 6th ACM Symposium on Spatial User Interaction 2018, Germany

- Conference Technical Program Committee service - membership
  - ACM Symposium on Applied Perception 2017, 2018
  - Edutainment 2017, 2018 Springer
  - IEEE Int. Conf. in Games and Virtual Worlds for Serious Applications (VSGames), sponsored by IEEE, 2017, 2018
  - GALA 2017, 2018 (Games and Learning Alliance Conference)
  - IEEE International Conference on Systems, Man, and Cybernetics (SMC 2017)
  - EuroVR 2018

- Reviewing activities
  - Various international conferences and journals

F – Service to the Department and the School

- School responsibilities
  - Studies' advisor for 1st year studies
  - Responsible for public relations for the School of ECE
  - Participation in Science Day for primary school children, October 2016
  - Participation in Open Day for high-school students, March 2017
  - Member of Kosmiteia (school council)

G – Advising

- Active graduate students supervised
  - Graduate students supervised (completed)
    - Grigorios Kontadakis 'Gamified 3D Orthopaedic Rehabilitation Using Low Cost and Portable Inertial Sensors (M.Eng. candidate)

  - Graduate students supervised (in progress)
    - Evaggelia Mavromichelaki 'Perception-Driven Advancement of Computer Graphics Rendering and Virtual Reality Technologies' (PhD candidate)

- Katerina Malisova 'Conceptual 3D Visualization Methodologies' (M.Eng. candidate)
- Panos Drakopoulos 'Immersive Multi-modal Interaction for Complex Virtual Environments ' (M.Eng. candidate)
- Giwrgos Tsiganis 'Intelligent Immersive Simulations and Visualization' (M.Eng. candidate)
- Savvas Veziridis 'Immersive Simulation Environments and Serious Games for Training' (M.Eng. candidate)

o Ph.D. and M.Sc. Degrees in progress (committee member)
  - Oikonomidis Dimitrios (Ph.D.)
  - Pitsiladis Andreas (M.Sc.)
  - Sifakis Ioannis (M.Sc.)
  - Syntzanaki Athena (M.Sc.)
  - Trochatou Ioanna (M.Sc.)

o Diploma theses completed (supervisor)
  - Nikolaos Marianos 'Foveated Rendering Algorithms using Eye-Tracking Technology in Virtual Reality Environment'
  - Kirakosian Salva 'Virtual Reality Multitracking Interaction with 3D Characters for Immersive Training Applications'
  - Ioannou Nikolaos 'Multi-Player Virtual Reality Game based on Hand Tracking Interaction'
  - Georgios Bobolakis 'Occupational therapy application for kids diagnosed with Attention-Deficit Hyperactivity Disorder for Android platforms'
  - Christos Panou 'An Outdoors Augmented Reality Application for Android featuring a Cultural Route through the Old Town of Chania'
  - Stavroulakis Alexis 'Virtual Reality User Interface and Game Design using Leap Motion and Oculus Rift Technologies'

o Diploma theses supervised (in progress)
  - Anastasia Reboulaki 'Visualization of Uncertainty'
  - Aggelos Marinakis 'Augmented Reality Application Featuring Interactive Geometric Transformations of 3D CAD Models'
  - Fotios Giariskanis 'ARCHIMUSIC3D: Real-Time Graphical System for Reciprocal Transformations between Music and Refined Urban Architectural Design'
  - Daskalogrigorakis Gregorios 'Holo-board: An Augmented Reality Application Manager supporting Machine Vision'
  - Georgakopoulou Artemis 'Development of an Interactive Projection Mapping System'
  - Konstantinos Kostis 'Web-based Decision Policy Definition and Simulation Application for the Gorgias Argumentation Framework'
  - Theodoros Theodorou 'Development of a 3D real-time Strategy Game with Intelligent Opponent Behaviours'

- Kostas Ioannou '3D Racing Game Development with Autonomous Opponents' (inactive)
- Konstantinos Chatzipetrou '3D Computer Gaming for Smart Vehicular combat racing' (inactive)

o Diploma theses in progress (committee member)
- Fragakis Panteleimon
- Konstantopoulos Konstantinos
- Koutsouris Themistoklis
- Papageorgiou Dimitrios
- Pikionis Petros – Platon
- Vatikiotis Evangelos Ahilios
- Zafiriou Odysseas
- Zoukas Konstantinos
- Chatziioannou Anastasios
- Politis Marios
- Fragkakis Penteleimon
- Pikionis Petros-Platon

o Diploma theses completed (committee member)
- Georgara Athina
- Geronymakis Theodoros
- Voltsis Evaggelos
- Markolefas Filippos
- Paravolidakis Vasilios

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Euripides G.M. Petrakis
Rank: Professor
Years in rank: 5
Full-time or part-time: Full-time
Division: Computer Science
Lab affiliation: Intelligent Systems Laboratory

A – Teaching
- Undergraduate courses taught
  - COMP 202 : Data Structures and File Structures (mandatory)
  - COMP 518 : Services in the Cloud and the Fog

- Graduate courses taught
  - AIS 605 : Special Topics in Information Systems

- Labs taught
  - COMP 518 : Services in the Cloud and the Fog
  - COMP 202 : Data Structures and File Structures

- Curriculum & course development
  - New courses / labs developed
    - COMP518: Services in the Cloud and the Fog

  - Lecture notes / slides developed
    - COMP518: Services in the Cloud and the Fog

  - Authored textbooks

B – Publications
- Publications in refereed journals

  - Submitted:

  - Accepted:

- o Published:
  - ▪ Euripides G.M. Petrakis, Stelios Sotiriadis, Theodoros Soultanopoulos, Pelagia Tsiachri Renta, Rajkumar Buyya, Nik Bessis, "Internet of Things as a Service (iTaaS): Challenges and Solutions for Management of Sensor Data on the Cloud and the Fog", Internet of Things, Vol. 3-4, pp.156-174, October 2018.
  - ▪ Konstantinos Douzis, Stelios Sotiriadis, Euripides G.M. Petrakis, Christiana Amza, "Modular and Generic IoT Management on the Cloud", Future Generation Computer Systems (FGCS), 78: pp. 369–378, 2018.
  - ▪ Sotirios Batsakis, Euripides G.M. Petrakis, Ilias Tachmazidis, Grigoris Antoniou, "Temporal Representation and Reasoning in OWL 2", Semantic Web Journal (SWJ), Vol. 8, No. 6, pp. 981–1000, July 2017
  - ▪ Stelios Sotiriadis, Nik Bessis, Euripides G.M. Petrakis, Cristiana Amza, Catalin Negru, Mariana Mocanu, "Virtual Machine Cluster Mobility in Inter–Cloud Platforms", Future Generation Computer Systems (FGCS), Special Issue Middleware Services for Heterogeneous Distributed Computing (MidHDC), 74: 179–189, 2017.

- • Publications in refereed conferences
  - o Accepted:

  - o Published:
    - ▪ Panagiotis Konstantopoulos, Euripides G.M. Petrakis, Stelios Sotiriadis, "iNaaS: Indoors Navigation as a Service on the Cloud and Smartphone Application", The 39th IEEE Sarnoff Symposium 2017 (IEEE SARNOFF 2018), New Jersey Institute of Technology Conference Center, Newark, New Jersey, USA, September 24–25, 2018
    - ▪ Filippos Antonopoulos, Stelios Sotiriadis, Euripides G.M. Petrakis, Nik Bessis, "A Physical Access Control System on the Cloud", 9th International Conference on Ambient Systems, Networks and Technologies (ANT 2018), May 8-11, 2018, Porto, Portugal
    - ▪ Apostolos Rousalis, Stelios Sotiriadis, Euripides G.M. Petrakis, "CloudFarm: Management of Farms and Crops Data on the Cloud", 32nd IEEE International Conference on Advanced Information Networking and Applications (IEEE AINA 2018), May 16-18, 2018, Cracow, Poland.
    - ▪ Nikolaos Mainas, Euripides G.M. Petrakis, Stelios Sotiriadis, "Semantically Enriched Open API Descriptions in the Cloud", 8th IEEE International Conference on Software Engineering and Service Science (IEEE ICSESS 2017), November 24–26, 2017, Beijing, China.
    - ▪ Dimitrios Kargatzis, Stelios Sotiriadis, Euripides G.M.

Petrakis, "[Virtual Machine Migration in Heterogeneous Clouds: From OpenStack to VMWARE](#)", The 38th IEEE Sarnoff Symposium 2017 (IEEE SARNOFF 2017), New Jersey Institute of Technology Conference Center, Newark, New Jersey, USA, September 18–20, 2017

- Books and edited book chapters
  - Stelios Sotiriadis, Konstantionos Stravoskoufos, Euripides G.M. Petrakis, "[Future Internet Systems Design and Implementation, Cloud and IoT Services based on IoT−A and FIWARE](#)", V. Angelakis, E. Z. Tragos, A. Kapovits, H. C Poehls, A. Bassi (Eds), Designing, Developing and Facilitating Smart Cities: Urban Design to IoT Solutions, Springer, Chapter 10, pp 193–207, 2017.

- Patents

C – Awards & Distinctions

D – Funded Projects
- Current projects:

- Project proposals submitted:
  - Several proposals submitted in various Horizon2020, ESPA, Intereg Calls

E – Professional service
- Associate Editor duties
- Society Technical Committee duties
- Conference Technical Program Committee service
  - Guest Editor in Special Issue on "Multimedia Systems for Critical Engineering Applications", Journal Multimedia Tools and Applications, 2016, 2017.
  - Program committee member of the IEEE Intern. Conference on Imaging Systems and Techniques (IST 2016), October 4-6, 2016, Chania, Greece
  - Technical Program Committee (TPC) member, 38th IEEE Sarnoff Symposium, Newark, NJ, USA, 2017.
  - Organizer of [ADON 2018: International Workshop on Anomaly Detection ON the Cloud and the Internet of Things](#), December 10, 2018, as part of IEEE CloudCom 2018, 11-13 December 2018, Hilton Cyprus, Nicosia, Cyprus
  - Technical Program Committee (TPC) member, 13th Intern. Conference on Future Networks and Communications (FNC 2018), August 13–15, 2018, Gran Canarias, Spain.

- Program committee (PC) member, Intern. Symposium on Visual Computing (ISVC) 2005–2019 (each year).
- Guest Editor in Special Issue on *Multimedia Systems for Critical Engineering Applications*, Journal Multimedia Tools and Applications, 2016, 2017
- Member of the Organizing Committee of the "*The 9th International Conference on Intelligent Networking and Collaborative Systems*" (INCOS 2017), 24-26 August 2017, Reyerson University, Toronto, Canada
- Technical Program Committee (TPC) member, 38th IEEE Sarnoff Symposium (SARNOFF 2017), Newark, NJ, USA, 2017.
- Program Committee (PC) member, 18th IEEE Intern. Conference on E–Health Networking, Applications and Services (HEALTHCOM 2016), 2016, 2017
- IoT Track Chair, 9th Intern. Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN–2018), 5–8 November 2018, Naples, Italy

- Conference Organization (specify role)
  - Organizer of [ADON 2018: International Workshop on Anomaly Detection ON the Cloud and the Internet of Things](), December 10, 2018, as part of IEEE CloudCom 2018, 11-13 December 2018, Hilton Cyprus, Nicosia, Cyprus
  - IoT Track Chair, 9th Intern. Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN–2018), 5–8 November 2018, Naples, Italy

- Reviewing activities
  - Reviewer for Several conferences / journals

F – Service to the School and the University
- School responsibilities
  - Laboratory Director, Intelligent Systems Laboratory, Department of Electronic and Computer Engineering, Technical University of Crete
  - Member of the Board, [Telecommunication Research Institute]()

- University responsibilities

G – Advising
- Active graduate students supervised
  - Ph.D. and M.Sc. students supervised (advisor, completed)

  - Ph.D. and M.Sc. students supervised (advisor, in progress)
    - Stravoskoufos Konstantinos (Ph.D.)
    - Mainas Nikolaos (M.Sc.)
    - Preventis Alexandros (M.Sc.)
    - Thermolia Chryso (M.Sc.)

- Kargatzis Dimitris (M.Sc.)

- Ph.D. and M.Sc. degrees awarded (committee member)

- Ph.D. and M.Sc. Degrees (committee member)
  - Livanos Georgios (Ph.D)
  - Malandrakis Nikolaos (Ph.D)
  - Moirogiorgou Konstantia (Ph.D)
  - Oikonomidis Dimitrios (Ph.D)
  - Rexakis Ioannis (Ph.D)
  - Chorianopoulou Arodami (M.Sc.)
  - Giannoudaki Maria (M.Sc.)
  - Kydonakis Aris (M.Sc.)
  - Palolli Giorgo (M.Sc.)
  - Pitsiladis Andreas (M.Sc.)
  - Trohatou Ioanna (M.Sc.)
  - Xifaras Konstantinos (M.Sc.)

- Undergraduate students supervised

  - Diploma theses in progress (supervisor)
    - Myrizakis George
    - Christodoulopoulos Christos
    - Konstantopoulos Panagiotios
    - Tsakos Konstantinos

  - Diploma theses completed (supervisor)
    - Christodoulopoulos Christos
    - Konstantopoulos Panagiotios
    - Tsakos Konstantinos

  - Diploma theses in progress (committee member)
    - Pogas Nektarios
    - Doko Aneza
    - Syrigos Demetrios
    - Gligoris Georgios

  - Diploma theses completed (committee member)
    - Panou Christos
    - Konstandinidi Panagiota
    - Polydorou Alexios

Technical University of Crete

School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Costas Balas
Rank: Professor
Years in rank: 4
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture
Lab affiliation: Electronics Laboratory, Director

A – Teaching
- Undergraduate courses taught
    - ACE 204: Electronics I (mandatory)
    - ACE 412: Optoelectronics
    - ACE 513: Biomedical Engineering

- Graduate courses taught
    - ACE 607 : Optoelectronics
    (Offered jointly with ACE 412)

- Curriculum & course development
    - New courses / labs developed

    - Lecture notes / slides developed

    - Authored textbooks

B – Publications
- Publications in refereed journals
    - Submitted: those published/appeared (see below)

    - Accepted:

    - Published:
        - C. Balas, G. Epitropou, A. Tsapras, N. Hadjinicolaou, *"Hyperspectral Imaging and Spectral Classification for Pigment Identification and Mapping in Paintings by El Greco and his Workshop"* in Multimedia Tools and Applications pp 1-17 (spinger), 2018

- Vourlaki, C. Balas, G. Livanos, M. Vardoulakis, G. Giakos, M. Zervakis *Bootstrap clustering approaches for organization of data: Application in improving grade separability in cervical neoplasia*, Biomedical Signal Processing and Control, 49, 263-273, Elsevier 2018

- Publications in refereed conferences
    - Published:

- Patents
    - C. Balas "A HYBRID SPECTRAL IMAGER" USA prov. Patent 62713019, 2018

C – Awards & Distinctions

D – Funded Projects
- Current projects:
    - *SEAVIEWNET (περιφέρεια Κρήτης)*
    - INSPECT – Spectral Photography (ερευνώ καινοτομώ) 199.000 ευρώ (QCELL)

- Project proposals submitted:
    1) H2020_RIA_MG-BG-01-2018, Name: RAFFAELLO - Robotics Aided Farming For Agriculture survEiLLance and Operations

    2) H2020-MG-2018-2019-2020,   Name: OCTAPUS   - Next Generation, Hybrid, Unmanned Autonomous Underwater Vehicle for Extended Deep Ocean Survey Activities

E – Professional service
- Associate Editor duties

    Guest editor Special Issue "Hyper- and Multi-Spectral Imaging" in Applied Sciences

- Editorial Board member Journal of Applied Sciences

- Society Technical Committee duties

- Conference Technical Program Committee service
  Keynote speaker and Organizing committee member in Medical Biology & Bioengineering conference September 27-28, 2017 Chicago, USA
- Conference Organization (specify role)

- Reviewing activities
  - More than 10 reviews of Journal   papers

F – Service to the Department and the School
- Departmental responsibilities
  - Director of the Electronics Lab

- School – level responsibilities
  - Chairman of TUCs Innovation House

G – Advising
- Active graduate students supervised

  - Ph.D. and M.Sc. students supervised (advisor, completed)

  - Ph.D. and M.Sc. students supervised (advisor, in progress)
    - Markellos Dimitrios (Ph.D.)
    - Petrantonaki Maria (Ph.D.)
    - Rossos Christos (Ph.D.)
    - Tsapras Athanasios (Ph.D.)
    - Gouzionis Ioannis (M.Sc.)
    - Epitropou Giorgos (M.Sc.)
    - Papathanasiou Athanasios (M.Sc.)
    - Reppas Panagiotis (M.Sc.)
    - Vardoulakis Emmanuel (M.Sc.)

  - Ph.D. and M.Sc. degrees awarded (committee member)
    - Nikolaou Aristides (M.Sc.)

  - Ph.D. and M.Sc. Degrees (committee member)
    - Bassford Michalis Dimitris (Ph.D.)
    - Makris Nikolaos (Ph.D.)
    - Nikolaou Aristides (Ph.D.)
    - Jaohar Osman (M.Sc.)
    - Kostopoulos Konstantinos (M.Sc.)
    - Savvakos Charalampos (M.Sc.)

- Undergraduate students supervised

  - Diploma theses in progress
    - Boras Charalampos
    - Chatziioannou Anastasios
    - Emmanouilidis Konstantinos
    - Georgiou Georgios

- Karatsoris Herodotos
- Kyriakopoulos Kosmas
- Logothetis Fragkoulis
- Papadogiannis Sevastianos
- Pouros Spyridon
- Tontou Nikoletta
- Vastaroucha Stergiani
- Vogiatzis Konstantinos

- Diploma theses completed (supervisor)
  - Christodoulou Theofilos
  - Gouzionis Ioannis
  - Kalomiris Filippos
  - Karimpidis Dionysios
  - Reppas Panagiotis
  - Tzardis Evaggelos

- Diploma theses in progress (committee member)
  - Apostolakis Apostolos
  - Diamantis Christos
  - Drakos Vissarios
  - Gegkios Nikolaos
  - Gompaki Efstathia
  - Kokkonas Dimitrios
  - Pappas Nikolaos
  - Polidis Petros
  - Stoikotidis Stamatis
  - Syrigos Dimitrios

- Diploma theses completed (committee member)
  - Marianos Nikolaos – Xenophon
  - Siachamis Charalampos
  - Zografos Apostolos

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Matthias Bucher
Rank: Associate Professor
Years in rank: 4
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture
Lab affiliation: Electronics Laboratory

A – Teaching
- Undergraduate courses taught
  - ECE 301 – Electronics II (Fall 2017)
  - ECE 416 – Design of CMOS Analog Integrated Circuits (Spring 2018)

- Graduate courses taught
  - ECE 604 – Special Themes of CMOS Analog Integrated Circuit Design (Spring 2018)

- Labs taught
  - ECE 301 – Electronics II (Fall 2017)
  - ECE 416 – Design of CMOS Analog Integrated Circuits (Spring 2018)

B – Publications
- Publications in refereed journals
  - Submitted:
    - (same as Accepted)
  - Accepted:
    - N. Makris, F. Jazaeri, J.-M. Sallese, R. K. Sharma, **M. Bucher**, "Charge-Based Modeling of Long-Channel Symmetric Double-Gate Junction FETs – Part I: Drain Current and Transconductances", *IEEE Trans. on Electron Devices.*
    - N. Makris, F. Jazaeri, J.-M. Sallese, **M. Bucher**, "Charge-Based Modeling of Long-Channel Symmetric Double-Gate Junction FETs – Part II: Total Charges and Transcapacitances", *IEEE Trans. on Electron Devices.*

- F. Jazaeri, N. Makris, A. Saeidi, **M. Bucher**, J.-M. Sallese, "Charge-based Model for Junction FETs", *IEEE Trans. on Electron Devices.*

  o Published:

  - N. Makris, F. Jazaeri, J.-M. Sallese, R. K. Sharma, **M. Bucher**, "Charge-Based Modeling of Long-Channel Symmetric Double-Gate Junction FETs – Part I: Drain Current and Transconductances", *IEEE Trans. on Electron Devices,* vol. 65, no. 7, pp. 2744-2750, July 2018. doi

  - N. Makris, F. Jazaeri, J.-M. Sallese, **M. Bucher**, "Charge-Based Modeling of Long-Channel Symmetric Double-Gate Junction FETs – Part II: Total Charges and Transcapacitances", *IEEE Trans. on Electron Devices,* vol. 65, no. 7, pp. 2751-2757, July 2018. doi

  - F. Jazaeri, N. Makris, A. Saeidi, **M. Bucher**, J.-M. Sallese, "Charge-based Model for Junction FETs", *IEEE Trans. on Electron Devices,* vol. 65, no. 7, pp. 2694-2698, July 2018. doi

  - A. Papadimitriou, **M. Bucher**, "Multi-Objective Low Noise Amplifier Optimization Using Analytical Model and Genetic Computation", *Circuits, Systems, and Signal Processing*, vol. 36, no. 12, pp. 4963-4993, Dec. 2017. cssp

- Publications in refereed conferences

  - L. Chevas, A. Nikolaou, **M. Bucher**, N. Makris, A. Papadopoulou, A. Zografos, G. Borghello, H. D. Koch, F. Faccio, "Investigation of scaling and temperature effects in total ionizing dose (TID) experiments in 65nm CMOS", *25th Int. Conf. Mixed Design of Integrated Circuits and Systems (MIXDES)*, pp. 313-318, Gdynia, Poland, June 21-23, 2018. ieeexplore

  - A. Nikolaou, **M. Bucher**, N. Makris, A. Papadopoulou, L. Chevas, G. Borghello, H. D. Koch, K. Kloukinas, T. S. Poikela, F. Faccio, "Extending a 65 nm CMOS process design kit for high total ionizing dose effects", *7th Int. Conf. on Modern Circuits and Systems Technologies (MOCAST)*, pp. 1-4, Thessaloniki, Greece, May 7-9, 2018. ieeexplore

  - **M. Bucher**, A. Nikolaou, A. Papadopoulou, N. Makris, L. Chevas, G. Borghello, H. D. Koch, F. Faccio, "Total ionizing dose effects on analog performance of 65 nm bulk CMOS with enclosed-gate and standard layout", *31st IEEE Int. Conf. on Microelectronic Test Structures (ICMTS)*, pp. 166-170, Austin, Texas, Mar. 19-22, 2018. ieeexplore

C – Awards & Distinctions

- Invited Speaker

    - **M. Bucher,** "Noise Variability-Aware Design of CMOS Integrated Circuits," **Invited Plenary Talk**, *40th Int. Semiconductor Conf. (CAS)*, Sinaia, Romania, Oct. 11-14, 2017.

D – Funded Projects

- Current projects:

    - *Compact Modelling of Ionizing Radiation Effects in Advanced CMOS Technology.* The ongoing update of high-energy physics experiments at CERN (High Luminosity – Large Hadron Collider – HL-LHC) requires electronic sensing equipment to withstand extreme Total Ionizing Doses (TID) up to 1Grad. Funding Agency: CERN, Geneva, Switzerland. Duration: 11/2017- 3/2019. Principal Investigator.

    - *INNOVATION EL - Crete: "National Infrastructure of Nanotechnology, Innovative Materials and Micro-Nanoelectronics",* code ΟΠΣ (MIS) 5002772. Funding Agency: Operational Programme "Entrepreneurship, Competitiveness and Innovation 2014-2020", co-financed, Greek National Funds &European Regional Development Fund (ERDF). Coordinator: IESL-FORTH, Heraklion, Greece. Duration: 4/2018 – 3/2021.

- Project proposals submitted:
    - H2020-MSCA-ITN-2018

E – Professional service

- Conference Technical Programme Committee service

    - *TPC member, 25th European Conf. on Silicon Carbide and Related Materials (ECSCRM 2018).*

    - *TPC member, 25th Int. Conf. on Mixed Design of Integrated Circuits and Systems (MIXDES 2018).*

- Reviewing activities

    - *IEEE Transactions on Electron Devices*

    - *IEEE Journal of the Electron Device Society*

    - *Solid-State Electronics*

F – Service to the Department and the School

- Departmental responsibilities

    - Member of Election Committees, Dean of School of ECE, Oct. 2017, Deanship of School of ECE, Nov. 2017.

    - Member of Committee for postgraduate studies.

G – Advising

- Graduate students supervised
  - Ph.D. theses completed (supervisor):

  - Ph.D. students supervised (supervisor):
    - Nikos Makris, Enrollment: Dec. 2015.
    - Aristeidis Nikolaou, Enrollment: June 2018.
  - Ph.D. students co-supervised:
    - Dimitrios Markellos
    - Efstratios Violakis

  - M.Sc. theses completed (supervisor):
    - Aristeidis Nikolaou, Characterization and Modeling of High Total Ionizing Dose Effects and Low Frequency Noise in Standard CMOS Technology, MSc. Thesis, School of Electrical and Computer Engineering, Technical University of Crete, June 2018.

  - M.Sc. students supervised (supervisor):
    - Loukas Chevas, Enrollment: July 2017.
    - Angelos Papadimitriou, Enrollment: Feb. 2017.
    - Alexia Papadopoulou, Enrollment: Sept. 2016.
    - Aristeidis Nikolaou, Enrollment: Sept. 2016.
    - Kostopoulos Konstantinos, Enrollment: Sept. 2010

- Undergraduate students supervised
  - Diploma theses completed (supervisor):
    - Apostolos Zografos, Analysis of radiation effects in CMOS technology at high Total Ionizing Dose (TID), Diploma Thesis, School of Electrical and Computer Engineering, Technical University of Crete, Dec. 2017.

  - Diploma students (supervisor):
    - Christos Kalogerakis
    - Petros Polidis
    - Apostolos Apostolakis
    - Stamatis Stoikotidis
    - Michael Iosifidis
    - Christos Diamantis
    - Vissarion (Aris) Drakos
    - Dimitrios Kokkonas

- - Nicolas Gegios
  - Nikolaos Pappas

- o Diploma theses completed (committee member):
  - Dionysios Karimpidis, Multi-Wavelength Dynamic Imaging of the Pupillary Photomotor Reflex, Mar. 2018.

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Apostolos Dollas
Rank: Professor
Years in rank: 17
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture
Lab affiliation: Microprocessor and Hardware Laboratory

A – Teaching

- Undergraduate courses taught
    - COMP 101: Introduction to the field of ECE (mandatory)
    - ACE 203 :   Advanced Logic Design (mandatory)
    - ACE 411:   Microprocessor-Based Embedded Systems Design

- Graduate courses taught
    - ACE 608:   CAD Tool Development for Integrated Circuit Design

- Labs taught
    - Supervised the labs of ACE 203, in which some of the laboratory exercises were revised for hands-on lab experience with Xilinx Spartan FPGA's.
    - Supervised the labs and projects of ACE 411(11 different projects, all fully implemented).

- Curriculum & course development

    - Lecture notes / slides developed
        - Revised the ACE 203 (Advanced Logic Design) class notes which were distributed in preliminary form through the web-based e-learning environment Webcourses.

B – Publications
- Publications in refereed journals
- Publications in refereed conferences (Published)

    - K. Iordanou, S. Nikolakaki, P. Malakonakis, A. Dollas, A Comparison and Performance Evaluation of Multi-FPGA Architectures for the Computation of Information Transfer, Proceedings of the 18th International Conference on Embedded

Computer Systems: Architectures, Modeling and Simulation (SAMOS XVIII), Samos, Greece, July 15-19, 2018.

- o S. Fotopoulos, P. Malakonakis, G. Chrysos, A. Dollas, "Streaming Data Correlation on GPUs", Proceedings of the 7th International Conference on Modern Circuits and Systems Technologies (MOCAST), 5 pages, Thessaloniki, Greece, May 7-9, 2018.
- o K. Georgopoulos, P. Malakonakis, N. Tampouratzis, A. Nikitakis, G. Chrysos, A. Dollas, D. Pnevmatikatos, I. Papaefstathiou, Comparing C and SystemC Based HLS Methods for Reconfigurable Systems Design, Proceedings, Applied Reconfigurable Computing. Architectures, Tools, and Applications: 14th International Symposium, ARC 2018, Santorini, Greece, pp. 459-470, May 2-4, 2018, Springer.
- o A. Brokalakis, N. Tampouratzis, A. Nikitakis, I. Papaefstathiou, S. Andrianakis, A. Dollas, M. Paracchini, M. Marcon, D. P. Pau, E. Plebani, 21st Conference on Innovation in Clouds, Internet and Networks and Workshops (ICIN), Paris, France, 3 pages, Feb. 19, 2018, IEEE Press.
- o D. Bozikas, N. Alachiotis, P. Pavlidis, E. Sotiriades, A. Dollas, "Deploying FPGAs to future-proof genome-wide analyses based on linkage disequilibrium", Proceedings of the 27th International Conference on Field Programmable Logic and Applications (FPL) , IEEE press, 8 pages, September 4-8, 2017.
- o C. Rousopoulos, E. Karandeinos, G. Chrysos, A. Dollas, D. Pnevmatikatos, "A generic high throughput architecture for stream processing", Proceedings of the 27th International Conference on Field Programmable Logic and Applications (FPL) , IEEE press, 5 pages, September 4-8, 2017.

C – Awards & Distinctions
- o Steering Committee member, IEEE/ACM 27th International Symposium on Field Programmable Logic (FPL), Ghent, Belgium, Aug 29 – Sept. 4-8, 2017.
- o Steering Committee member, IEEE/ACM 28th International Symposium on Field Programmable Logic (FPL), Dublin, Ireland, August 27-31,2018.

D – Funded Projects
- Current projects:
  - o Principal Investigator for TSI, EU H2020 project "COSSIM - Novel, Comprehensible, Ultra-Fast, Security-Aware CPS Simulator", Project Reference 644042, funded under the ICT-01-2014 call of the RIA- Research and Innovation Action, Total Funding: 2,882,030 €, TSI funding: € 274.375,00, 2015 (3-year project).
  - o Principal Investigator for TUC, ''Centre for the study and sustainable exploitation of Marine Biological Recourses

(CMBR)'', Sub-project (5) ''Technical University of Crete – Upgrading and operation of research infrastructures within the framework of the CMBR Infrastructure ", Funded by the Ministry of Education, Research and Religious Affairs, General Secretariat for Research and Technology (GSRT), 2018 (3-year project), TUC funding: €153.800

- Participation as a Researcher in Projects:
  - Senior Research Associate in the projects AXIOM and EuroEXA (CARV group, ICS/FORTH), RURAL (TUC)

E – Professional service
- Conference Technical Program Committee service
  - Steering Committee and Program Committee Member, IEEE/ACM 27th International Symposium on Field Programmable Logic (FPL), Ghent, Belgium, Aug 29 – Sept. 4-8, 2017.
  - Program Committee Member, 2017 International Conference on Field Programmable Technology (FPT, IEEE Sponsored), Melbourne, Australia, December 11-13, 2017.
  - Steering Committee and Program Committee Member, IEEE/ACM 28th International Symposium on Field Programmable Logic (FPL), Dublin, Ireland, August 27-31, 2018.
  - Program Committee Member, 2018 International Conference on Field-Programmable Technology (FPT, IEEE Sponsored), Naha, Okinawa, Japan, Dec. 10 - 14, 2018.

  In all the program committees in which I participated (see above), I contributed with reviews of papers (as many as 8 full paper reviews in a single conference), the selection process, organizational issues, and when possible, attendance of the PC meeting. Because my field is rapidly changing, international conferences reflect the state of the art much more than archival journals and I have deliberately given the weight of my reviewing and committee activity on such conferences.
- Reviewing activities
  - Several international conferences, including all in which I participate in the program committee (see above) and journals, as well as project proposals

F – Service to the School and the University
- School responsibilities
  - Dean of ECE (September 1, 2013 – November 30, 2017)
  - Ex-officio Chairman of the Dean's Council (until November 30, 2017)
  - Ex-officio chairman of ECE faculty elections, TUC (until November 30, 2017)
  - Ex-officio member of the ad hoc Undergraduate Studies Committee (until November 30, 2017)
  - Ex-officio member of the ad hoc Graduate Studies Committee (until November 30, 2017)

- Ex-officio coordinator of Faculty Election Boards for the School of ECE at TUC (until November 30, 2017)
- Faculty Advisor to the 1st semester students
- Member, Undergraduate Studies Committee
- Member of staff election boards (TUC)
- Member of faculty election boards at:
  - the Technical University of Crete (multiple positions)
  - the National Technical University of Athens
  - the Democritus University of Thrace
  - the Technological Educational Institute of the Peloponnese
- Member of the Student Placement Committee, supervising the examination in the subject of Logic Design for graduates from other Departments who want to enroll at ECE.
- Speaker at the Summer School of the BEST Student Organization, delivering a lecture on "The Notion of Time in Digital Systems".

- University responsibilities
  - Ex-officio member of the University Senate, TUC (until November 30, 2017)
  - Ex-officio member of the board of the corporation for the management of TUC assets (until November 30, 2017)
  - Ex-officio member of the TUC Student Services Committee (until November 30, 2017)
  - Ex-officio member of the TUC Property Development and Exploitation Committee (until November 30, 2017)

G – Advising
- Active graduate students supervised

  - Ph.D. and M.Sc. theses in progress (supervisor)
    - Malakonakis Pavlos (Ph.D.)
    - Kalaitzis Konstantinos (M.Sc.)

  - Ph.D. and M.Sc. Degrees completed (committee member)
    - Chatzivasilis Georgios (Ph.D.)
    - Tabouratzis Nikolaos (Ph.D.)
    - Galanommatis Ioannis (M.Sc.)

  - Ph.D. and M.Sc. Degrees in progress (committee member)
    - Brokalakis Andreas (Ph.D.)
    - Charitopoulos Georgios (Ph.D.)
    - Ioannou Aggelos (Ph.D.)
    - Vatsolakis Charalampos (Ph.D.)
    - Amourgianos-Lorentzos Vasilios (M.Sc.)
    - Giakoumakis Pavlos (M.Sc.)
    - Malavazos Konstantinos (M.Sc.)
    - Mesarhakis Georgios (M.Sc.)
    - Miteloudi Konstantina (M.Sc.)

- Pekridis Georgios (M.Sc.)
- Savvakos Charalampos (M.Sc.)
- Tsakaneli Stavroula (M.Sc.)

- Undergraduate students supervised

  - Diploma theses in progress
    - Badogiannis Nikolaos
    - Hliaki Anastasia
    - Kalomiris Ioannis
    - Konstantopoulos Konstantinos
    - Kordas Sotiris
    - Koutroumanos Panagiotis
    - Kyparissas Nikolaos
    - Maragkou Sofia
    - Pitsis Antonios-Georgios
    - Marinaki Eftihia
    - Politsis Konstantinos
    - Sotiropoulos Antonios
    - Stavgianoudakis Christos
    - Toupas Petros
    - Fotinopoulos Georgios
    - Fragiadoulakis-Theodorouleas Michail

  - Diploma theses completed (supervisor)
    - Fotopoulos Spyridon
    - Siachamis Charalampos

  - Diploma theses in progress (committee member)
    - Andronikidis Georgios
    - Androulakis Dimitrios
    - Athanasiou Vasilios
    - Bolonakis Georgios
    - Chatzidaki Eleftheria
    - Delakis Nikolaos
    - Demertzis Eleftherios
    - Drakoulaki Eleni
    - Georgiadis Vasilios
    - Iatrakis Georgios
    - Iatrakis Petros – Pavlos
    - Iggilis Anastasia
    - Kampourakis Nomikos
    - Katsinelis Konstantinos
    - Koutroulakis Efstratios
    - Myrkos Demosthenes
    - Panagidis Giannakis
    - Pegkos Athanasios

- Pentafragkas Georgios
- Rekoumis Dimitrios
- Souflakis Emmanuel
- Theodoroglaki Ioanna
- Vatsithianos Nikolaos
- Vogiatzis Konstantinos

- Diploma theses completed (committee member)

  - Chondroulis Ioannis
  - Doitsinis Ioannis
  - Grammatopoulos Athanasios – Vasilios
  - Kitsakis Dimitrios
  - Kontos Nikolaos
  - Kostarelos Fotios
  - Makrygiannis Konstantinos
  - Pekridis Georgios
  - Petsas Dimitrios

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Eftichios Koutroulis
Rank: Associate Professor
Years in rank: 2
Full-time or part-time: Full – Time
Division: Electronics and Computer Architecture
Lab affiliation: Circuits, Sensors and Renewable Energy Sources Laboratory

A – Teaching

- Undergraduate courses taught

    o ACE 102: Basic Circuit Theory (mandatory)
    o ACE 511: VLSI and ASIC Systems Design
    o ACE 515: Special Topics on Electronic Energy Management Systems

- Graduate courses taught

    o ACE 601: VLSI and ASIC Systems Design (Offered jointly with ACE 511)
    o ENE 602: Special Topics on Electronic Energy Management Systems
        (Offered jointly with ACE 515)

- Curriculum & course development

    o Lecture notes / slides developed
        ▪ ACE 102 - Basic Circuit Theory: updated the existing slides
        ▪ ACE 511 - VLSI and ASIC Systems Design: updated the existing slides
        ▪ ACE 515 - Special Topics on Electronic Energy Management Systems: updated the existing slides & developed new slides

B – Publications

- Publications in refereed journals
    o Published:

- I. Mandourarakis, E. Koutroulis, "Unified System- and Circuit-Level Optimization of RES-Based Power-Supply Systems for the Nodes of Wireless Sensor Networks", *IEEE Transactions on Industrial Informatics*, vol. 14, no. 2, pp. 598-607, 2018.

- Publications in refereed conferences
  - Published:
    - G. I. Orfanoudakis, S. M. Sharkh, E. Koutroulis, M. A. Yuratich, "Single-phase transformerless PV inverter topology with AC bypass and mid-DC-link voltage clamping", in *19th European Conference on Power Electronics and Applications (EPE'17 ECCE Europe)*, pp. 1-10, 2017.

- Book chapters
  - Published:
    - E. Koutroulis, "Chapter 5.17: Energy Management in Wind Energy Systems", in "Comprehensive Energy Systems", vol. 5, pp. 707-741, Elsevier, 2018, ISBN: 978-0-12-814925-6.

C – Awards & Distinctions
- Sectorial Scientific Council on Energy / National Council for Research and Innovation (NCRI), Replacement member (since April 2018).

D – Funded Projects
- Current projects:
  - Project Coordinator, "DES^{2}iRES: DESign of DESalination systems based on optimal usage of multiple Renewable Energy Sources", ERANETMED "Energy-Water Nexus".

- Project proposals approved for funding:

  - SmartPV project, "Research - Create - Innovate" call: Project Coordinator.
  - PERPS project, "Research - Create - Innovate" call: Research team member.

E – Professional service
- Associate Editor duties
  - Guest Associate Editor, *IEEE Transactions on Energy Conversion & IEEE Journal of Emerging and Selected Topics in Power Electronics*: Joint Special Issue on "Power Conversion & Control in Photovoltaic Power Plants".

  - Guest Editor, *IEEE Access*: Special Section on "Advanced Sensor Technologies on Water Monitoring and Modeling".

     ○ Associate Editor of the *"Renewable Energy and Environmental Sustainability"* journal (publisher: EDP Sciences).

     ○ Member of the Editorial Board of the *"Renewable Energy"* journal (publisher: Elsevier).

- Conference Technical Program Committee service
  - Program Committee member, "International Conference on Modern Circuits and Systems Technologies (MOCAST)", 7-9 May 2018, Thessaloniki, Greece.

- Reviewing activities
  - Performed 39 reviews of journal papers (including revisions) for:
    IEEE Transactions on Power Electronics
    IEEE Transactions on Energy Conversion
    IEEE Journal of Photovoltaics
    IEEE Journal of Emerging and Selected Topics in Power Electronics
    IEEE Transactions on Instrumentation & Measurement
    IEEE Transactions on Industrial Electronics
    IEEE Access
    IET Power Electronics
    Renewable Energy

F – Service to the School and the University
- School responsibilities
  - Director of the "Circuits, Sensors & Renewable Energy Sources Laboratory" (since February 2018)
  - Dean's Committee member
  - ECE School coordinator of the ERASMUS+ program
  - ECE School coordinator of the undergraduate students practical training program
  - Member of the Technical Council of the Technical University of Crete
  - Undergraduate studies advisor

G – Advising
- Active graduate students supervised
  - Ph.D. and M.Sc. theses in progress (supervisor)
    - Mandourarakis Ioannis (Ph.D.)

  - Ph.D. and M.Sc. theses completed (committee member)
    - Akasiadis Charilaos (PhD)
    - Oikonomakos Panagiotis (M.Sc.)

- Ph.D. and M.Sc. theses in progress (committee member)
  - Pantzekos Panagiotis (PhD)
  - Kladou Anastasia (M.Sc.)
  - Malisovas Athanasios (M.Sc.)
  - Viskadouraki Evaggelia (M.Sc.)

- Undergraduate students supervised

  - Diploma theses in progress
    - Georgiadis Vasilios
    - Giannopoulos Asimakis
    - Glykis Theodoros
    - Dimitriadis Konstantinos
    - Papargiriou Athanasios
    - Patrikas Athanasios
    - Tepelidis Avraam
    - Dimitriou Georgios
    - Kosmopoulos Stefanos
    - Koukouzas Christos
    - Petrakis Emmanuel
    - Politis Vasilios
    - Vatsithianos Nikolaos

  - Diploma theses completed (supervisor)
    - Sason Nektarios
    - Zorbas Sotirios
    - Kitsakis Dimitrios

  - Diploma theses in progress (committee member)
    - Boglou Vasilios
    - Charalampous Charalampos
    - Dimitrakopoulos Dimitrios
    - Fiorentzi Georgia
    - Gioumatzidis Meletios
    - Ioannou Vasilios
    - Iosifides Michail-Ilias
    - Kalogridis Stylianos
    - Kehagias Georgios
    - Kokkonas Dimitrios
    - Kordas Sotiris
    - Kostakis Konstantinos
    - Mavrogianni Ammalia
    - Mitrosilis Ioannis
    - Pronios Filippos
    - Rekoumis Dimitrios
    - Saloustros Vasilios
    - Sfakianakis Konstantinos
    - Smyrneos Dimitrios

- Tsamoudalis Konstantinos
- Vratsanos Georgios

- Diploma theses completed (committee member)
  - Konstantinidis Georgios
  - Kouloukythas Odysseas
  - Papadimitriou Nikolaos
  - Passisis Spyridon
  - Psarras Ioannis

Technical University of Crete

School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Ioannis Papaefstathiou
Rank: Associate Professor and Professor
Years in rank: 7
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture
Lab affiliation: Microprocessor and Hardware Laboratory

A – Teaching

- Undergraduate courses taught
    - ACE 101: Logic Design (mandatory)
    - ACE 201: Digital Computers (mandatory)

- Graduate courses taught
    - ACE 614: Special Topics in Computer Design

- Labs taught

- Curriculum & course development
    - New courses / labs developed
        - I have developed the Special Topics in Computer Design material, exercises and projects
    - Lecture notes / slides developed
    - Authored textbooks

B – Publications

- Publications in refereed journals
    - Submitted: those published/appeared (see below)

    - Accepted:
        - N. Tampouratzis and I. Papaefstathiou, "A Novel, Simulator for Heterogeneous Cloud Systems that incorporate Custom Hardware Accelerators," in IEEE Transactions on Multi-Scale Computing Systems,

    - Published:

- G. Hatzivasilis, K. Fysarakis, O. Soultatos, I. Askoxylakis, I. Papaefstathiou, G. Demetriou, "The Industrial Internet of Things as an enabler for a Circular Economy; Hy-LP: A novel IIoT Protocol, evaluated on a Wind Park's SDN/NFV-enabled 5G Industrial Network", Computer Communications Journal, Elsevier, 2018, doi:10.1016/j.comcom.2018.02.0079

- G. Hatzivasilis, I. Papaefstathiou and C. Manifavas, "SCOTRES: Secure Routing for IoT and CPS," in IEEE Internet of Things Journal, vol. PP, no. 99, pp. 1-1. doi: 10.1109/JIOT.2017.2752801

- K. Makantasis, A. Nikitakis, A. Doulamis, N. Doulamis and Y. Papaefstathiou, "Data-Driven Background Subtraction Algorithm for in-Camera Acceleration in Thermal Imagery," in *IEEE Transactions on Circuits and Systems for Video Technology*, vol. PP, no. 99, pp. 1-1. doi: 10.1109/TCSVT.2017.2711259,

- Publications in refereed conferences
  - o Accepted:

  - o Published:
    - E. Palavras, K. Fysarakis, I. Papaefstathiou and I. Askoxylakis, "SeMIBIoT: Secure Multi-Protocol Integration Bridge for the IoT," *2018 IEEE International Conference on Communications (ICC)*, Kansas City, MO, 2018, pp. 1-7.doi: 10.1109/ICC.2018.8422486
    - K. Georgopoulos, P. Malakonakis, N. Tampouratzis, A. Nikitakis, G. Chrysos, A. Dollas, D. Pnevmatikatos, I. Papaefstathiou "Comparing C and SystemC Based HLS Methods for Reconfigurable Systems Design". ARC 2018, May 2018, Santorini, Greece
    - Malakonakis P., Georgopoulos K., Ioannou A., Lavagno L., Papaefstathiou I., Mavroidis I. "HLS Algorithmic Explorations for HPC Execution on Reconfigurable Hardware – ECOSCALE", ARC 2018, May 2018, Santorini, Greece
    - Brokalakis, N. Tampouratzis, A. Nikitakis, I. Papaefstathiou, S. Andrianakis, D. Pau,E. Plebani, M. Paracchini, M. Marcon, I. Sourdis, P. R. Geethakumari, M. C. Palacios, M. A. Anton. A. Szasz, "COSSIM: An Open-Source Integrated Solution to Address the Simulator Gap for Systems of Systems," *2018*

21st Euromicro Conference on Digital System Design (DSD), Prague, 2018, pp. 115-120.doi: 10.1109/DSD.2018.00033

- Books and edited book chapters
  - M. Cesena, C. Regazzoni, L. Marcenaro, G. Hatzivasilis, K. Fysarakis, C. Manifavas, I. Papaefstathiou, P. Azzoni, and K. Stefanidis, "SHIELD Technology Demonstrators". in "Measurable and Composable Security, Privacy, and Dependability for Cyberphysical Systems: The SHIELD Methodology" (eds. GA. Fiaschetti, J. Noll, P. Azzoni, R. Uribeetxeberria), CRC Press, Taylor & Francis LLC, 2017. (ISBN: 9781138042759)

- Patents
  - *GRANTED*

C – Awards & Distinctions

D – Funded Projects
- Current projects:
  - Energy-efficient Heterogeneous Computing at Exascale (ECOSCALE), Information and Communication Technologies European seventh framework, Award Period October 2015 – September 2018, Overall Funding €4.2M, Budget : €770K. Technical Manager
  - Novel, Comprehensible, Ultra-Fast, Security-Aware CPS Simulator (COSSIM), Information and Communication Technologies H2020, Award Period February 2015 – January 2018, Overall Funding €2.4M, Budget: €470K. Technical Manager

- Project proposals submitted:

E – Professional service
- Associate Editor duties

- Society Technical Committee duties

- Conference Technical Program Committee service
  - IEEE ICC
  - IEEE DATE
  - IEEE CANDAR
  - IEEE FPL
  - IEEE ICT
  - IEEE ISCC
  - IEEE MOCAST

- Conference Organization (specify role)
  - 2019 EuroEXASCALE workshop (HiPEAC conference) General Co-Chair

- Reviewing activities

F – Service to the School and the University
- School responsibilities

  - Member of Internal Evaluation Group (Ομάδας Εσωτερικής Αξιολόγησης - OM.E.A.), ECE School
  - Member of the Committee for the Restructuring of the Undergraduate Syllabus, ECE School
- University responsibilities

  - Member of Board, Telecommunication Systems Institute
  - Member of Committee for Lifelong Learning, Technical University of Crete

G – Advising
- Active graduate students supervised
  - Ph.D. and M.Sc. students completed (supervisor)
    - Chatzivasilis Georgios (Ph.D.)
    - Tampouratzis Nikolaos (Ph.D.)

  - Ph.D. and M.Sc. theses in progress (supervisor)
    - Brokalakis Andreas (Ph.D.)
    - Ioannou Aggelos (Ph.D.)
    - Giakoumakis Pavlos (M.Sc.)
    - Malavazos Konstantinos (M.Sc.)
    - Miteloudi Konstantina (M.Sc.)
    - Savvakos Charalampos (M.Sc.)

  - Ph.D. and M.Sc. Degrees completed (committee member)

  - Ph.D. and M.Sc. Degrees in progress (committee member)
    - Charitopoulos Georgios (Ph.D.)
    - Malakonakis Pavlos (Ph.D.)
    - Moirogiorgou Constantia (Ph.D.)
    - Vatsolakis Charalampos (Ph.D.)
    - Babalis Charalampos (M.Sc.)
    - Kalaitzis Konstantinos (M.Sc.)
    - Pekridis Georgios (M.Sc.)

- Undergraduate students supervised

  - Diploma theses completed (supervisor)

- Chondroulis Ioannis
- Grammatopoulos Athanasios - Vasilios
- Kontos Nikolaos
- Petsas Dimitrios

- Diploma theses in progress (supervisor)
  - Athanasiou Vasilios
  - Chatzidaki Eleftheria
  - Demertzis Eleftherios
  - Lytridis Nikolaos
  - Panagidis Giannakis
  - Pogas Nektarios
  - Sourlantzis Sotirios
  - Theodoroglaki Ioanna
  - Vogiatzis Konstantinos

- Diploma theses completed (committee member)
  - Amourgianos – Lorentzos Vasilios
  - Fotopoulos Spyridon
  - Kostarelos Fotios
  - Koukounas Angelos – Panagiotis
  - Krikorian Arman
  - Mantonanaki Christina
  - Pekridis Georgios
  - Sason Nektarios

- Diploma theses in progress (committee member):
  - Andronikidis Georgios
  - Fotinopoulos Georgios
  - Iatrakis Petros – Pavlos
  - Iliaki Anastasia
  - Kalomiris Ioannis
  - Kordas Sotiris
  - Kyparissas Nikolaos
  - Myrkos Demosthenes
  - Pegkos Athanasios
  - Politis Vasilios
  - Politsis Konstantinos
  - Sotiropoulos Antonios
  - Toupas Petros
  - Varikos Antonios
  - Zoidis Nikolaos

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Dionisios Pnevmatikatos
Rank: Professor
Years in rank: 8
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture
Lab affiliation: Microprocessor and Hardware Laboratory

A – Teaching
- Undergraduate courses taught
  - ACE 302: Computer Organization (mandatory)
  - ACE 415: Computer Architecture (Elective)

- Graduate courses taught
  - ACE 609: Advanced Computer Architecture (Graduate)

- Labs taught

- Curriculum & course development
  - New courses / labs developed
    - ACE 609: Advanced Computer Architecture (Graduate), major rehaul

  - Lecture notes / slides developed
    - ACE 302: Computer Organization (mandatory)
    - ACE 415: Computer Architecture (Elective)

  - Authored textbooks

B – Publications
- Publications in refereed journals
  - Submitted: those published/appeared (see below)

  - Accepted:

  - Published:
    - Dimitris Theodoropoulos, Somnath Mazumdar, Eduard Ayguadé, Nicola Bettin, Javier Bueno, Sara Ermini, Antonio Filgueras, Daniel Jiménez-González, Carlos Álvarez-

Martínez, Xavier Martorell, Francesco Montefoschi, David Oro, Dionisis N. Pnevmatikatos, Antonio Rizzo, Paolo Gai, Stefano Garzarella, Bruno Morelli, Alberto Pomella, Roberto Giorgi, The AXIOM platform for next-generation cyber physical systems. Microprocessors and Microsystems - Embedded Hardware Design 52: 540-555 (July 2017)

- Mario Drumond, Alexandros Daglis, Nooshin Mirzadeh, Dmitrii Ustiugov, Javier Picorel, Babak Falsafi, Boris Grot, Dionisios N. Pnevmatikatos: Algorithm/Architecture Co-Design for Near-Memory Processing. Operating Systems Review 52(1): 109-122 (July 2018)

- Publications in refereed conferences
  - Accepted:

  - Published:
    - Christos Rousopoulos, Ektoras Karandeinos, Grigorios Chrysos, Apostolos Dollas, Dionisios N. Pnevmatikatos: A generic high throughput architecture for stream processing. The 27th International Conference On Field-Programmable Logic And Applications (FPL), 4 - 8 September 2017: 1-5
    - Nikolaos Alachiotis, Dimitris Theodoropoulos, Dionisios N. Pnevmatikatos: Versatile deployment of FPGA accelerators in disaggregated data centers: A bioinformatics case study. The 27th International Conference On Field-Programmable Logic And Applications (FPL), 4 - 8 September 2017: 1-4
    - Maciej Bielski, Ilias Syrigos, Kostas Katrinis, Dimitris Syrivelis, Andrea Reale, Dimitris Theodoropoulos, Nikolaos Alachiotis, Dionisis N. Pnevmatikatos, E. H. Pap, George Zervas, V. Mishra, A. Saljoghei, A. Rigo, Jose Fernando Zazo, Sergio López-Buedo, M. Torrents, Ferad Zyulkyarov, M. Enrico, Óscar González de Dios: dReDBox: Materializing a full-stack rack-scale system prototype of a next-generation disaggregated datacenter. Design, Automation and Test Europe (DATE), March 19-23, 2018: 1093-1098
    - Konstantinos Georgopoulos, Pavlos Malakonakis, Nikolaos Tampouratzis, Antonis Nikitakis, Grigorios Chrysos, Apostolos Dollas, Dionysios N. Pnevmatikatos, Ioannis Papaefstathiou: Comparing C and SystemC Based HLS Methods for Reconfigurable Systems Design. 14th International Symposium on Applied Reconfigurable Computing (ARC), May 2-4, 2018: 459-470
    - George Charitopoulos, Charalampos Vatsolakis, Grigorios Chrysos, Dionisios N. Pnevmatikatos: A decoupled access-

execute architecture for reconfigurable accelerators. ACM International Conference on Computing Frontiers (CF), May 8-10, 2018: 244-247

- Dimitris Theodoropoulos, Andrea Reale, Dimitris Syrivelis, Maciej Bielski, Nikolaos Alachiotis, Dionisios N. Pnevmatikatos: REMAP: Remote mEmory Manager for disAggregated Platforms. The 29th Annual IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP), July 10-12, 2018: 1-8

- George Charitopoulos, Dionisios N. Pnevmatikatos, DARSA: a dataflow analysis tool for reconfigurable platforms, Proceedings of the 2018 International Conference on Embedded Computer Systems: Architectures, Modelling and Simulation (IC-SAMOS), July 15-19, 2018: 65-72

- Catalin Bogdan Ciobanu, Giulio Stramondo, Ana Lucia Varbanescu, Andreas Brokalakis, Antonis Nikitakis, Lorenzo Di Tucci, Marco Rabozzi, Luca Stornaiuolo, Marco D. Santambrogio, Grigorios Chrysos, Charalampos Vatsolakis, Charitopoulos Georgios, Dionisios N. Pnevmatikatos, EXTRA: an open platform for reconfigurable architectures. Proceedings of the 2018 International Conference on Embedded Computer Systems: Architectures, Modelling and Simulation (IC-SAMOS), July 15-19, 2018: 220-229

- Nikolaos Alachiotis, Charalampos Vatsolakis, Grigorios Chrysos, and Dionisios Pnevmatikatos, Accelerated Inference of Positive Selection on Whole Genomes, The 28th International Conference On Field-Programmable Logic And Applications (FPL), August 27-31, 2018 (Stamatis Vassiliadis Best paper Award candidate)

- Books and edited book chapters

- Patents

C – Awards & Distinctions

➢ FPL Stamatis Vassiliadis Best paper Award candidate:
  o Nikolaos Alachiotis, Charalampos Vatsolakis, Grigorios Chrysos, and Dionisios Pnevmatikatos, Accelerated Inference of Positive Selection on Whole Genomes, The 28th International Conference On Field-Programmable Logic And Applications (FPL), August 27-31, 2018 (Stamatis Vassiliadis Best paper Award candidate)

D – Funded Projects

- Current projects:
    - AXIOM, Agile, eXtensible, fast I/O Module for the cyber-physical era. H2020, Institutional budget: 320K€ Duration: Feb 2015 – Jan 2018.
    - dRedBox, H2020, Project Technical Coordinator and Scientific Coordinator, budget 532K€, Duration Jan 2016 – Dec 2018
    - EXTRA, H2020/FET-HPC, Scientific Coordinator, budget 420K€, Duration Sept 2015 – Aug 2018

- Project proposals submitted:

E – Professional service

- Associate Editor duties

- Society Technical Committee duties

- Conference Technical Program Committee service
    - ISCA, DATE, FPL, ICCD, PACET, RAW, Reconfig, SAMOS, PACET
    - ParaFPGA, WRC (workshops)

- Conference Organization (specify role)

- Reviewing activities
    - IEEE Transactions on Computers, IEEE TRETS, ACM TACO, RTSI, Journal of System Architecture

    Proposal Evaluation
    - Canadian National Research Foundation (NSERC),
    - Artemis
    - Eurostars

F – Service to the School and the University

- School – level responsibilities
    - Director Microprocessor and Hardware Laboratory

- University responsibilities

G – Advising

- Active graduate students supervised
    - Ph.D. and M.Sc. students completed (supervisor)
        - Galanommatis Ioannis (M.Sc.)

    - Ph.D. and M.Sc. theses in progress (supervisor)
        - Haritopoulos Georgios (Ph.D.)
        - Vatsolakis Charalampos (Ph.D.)
        - Amourgianos-Lorentzos Vasilios (M.Sc.)

- Kyriakidis Konstantinos (M.Sc.)
- Pekridis Georgios (M.Sc.)
- Pissadakis Emmanuel (M.Sc.)

- Ph.D. and M.Sc. Degrees completed (committee member)
  - Tampouratzis Nikolaos (Ph.D.)
  - Chatzivasilis Georgios (Ph.D.)

- Ph.D. and M.Sc. Degrees in progress (committee member)
  - Brokalakis Andreas (Ph.D.)
  - Ioannou Aggelos (M.Sc.)
  - Miteloudi Konstantina (M.Sc.)
  - Papathanasiou Athanasios (M.Sc.)

- Undergraduate students supervised

  - Diploma theses completed (supervisor)
    - Amourgianos Lorentzos – Vasilios
    - Doitsinis Ioannis
    - Kostarelos Fotios
    - Koukounas Aggelos – Panagiotis
    - Krikorian Arman
    - Makrygiannis Konstantinos
    - Mellos Alexandros
    - Pekridis Georgios
    - Pouli Christina
    - Tampakakis Ioannis

  - Diploma theses in progress (supervisor)
    - Andronikidis Georgios
    - Androulakis Dimitrios
    - Drakoulaki Eleni
    - Delakis Nikolaos
    - Iatrakis Georgios
    - Iatrakis Petros – Pavlos
    - Iggilis Anastasia
    - Kampourakis Nomikos
    - Katsinelis Konstantinos
    - Koutroulakis Efstratios
    - Myrkos Demosthenes
    - Pegos Athamasios
    - Pentafragkas Georgios
    - Souflakis Emmanuel
    - Varikos Antonios

- o Diploma theses completed (committee member)
  - Grammatopoulos Athanasios – Vasilios
  - Petsas Dimitrios

- o Diploma theses in progress (committee member):
  - Fotinopoulos Georgios
  - Fragiadakis-Theodorouleas Michail
  - Iliaki Anastasia
  - Kalomiris Ioannis
  - Koutroumanos Panagiotis
  - Kyparissas Nikolaos
  - Maragkou Sofia
  - Panagidis Giannakis
  - Pitsis Antonios-Georgios
  - Pogas Nektarios
  - Politsis Konstantinos
  - Saloustros Vasilios
  - Sotiropoulos Antonios
  - Theodoroglaki Ioanna
  - Toupas Petros

Technical University of Crete

School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: George S. Stavrakakis
Rank: Full Professor
Years in rank: 23
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture
Lab affiliation: Electric Circuits & Renewable Energy Sources (www.elci.tuc.gr)

A – Teaching
- Undergraduate courses taught
    - ENE 301: Introduction to Power Systems (mandatory)
    - ENE 511: Renewable Energy Sources

- Graduate courses taught
    - SYS 601: Advanced Topics in Optimal Control

- Labs taught
    - Introduction to Power Systems (ENE 301)
    - Renewable Energy Sources (ENE 511)

- Curriculum & course development
    - Introduction to Power Systems (ENE 301)
    - Renewable Energy Sources (ENE 511)

- Authored textbooks : None

B – Publications
- Publications in refereed journals

    - Submitted : 3

    - Accepted : 1

    - Published : 0 (i.e. the one accepted among those submitted it is under publication procedure)
        - KONSTANTINOS BLAZAKIS, GEORGIOS STAVRAKAKIS *"Efficient Power Theft Detection for Residential Consumers*

using mean shift based Data Mining", under publication in: International Journal of Electrical Power and Energy Systems, Ref: IJEPES_2018_998_R2

- Publications in refereed conferences: NONE

- Publications in conferences on abstract review: NONE

- Patents: one in the national level (see below)
  - **GR:** *Έξυπνη μέθοδος και ολοκληρωμένη ηλεκτρονική διάταξη διαχείρισης πληροφοριών σε συστήματα εξασφάλισης εσωτερικής άνεσης με ταυτόχρονη ενεργειακή διαχείριση κτιρίων. (OBI2004010045)*

    EN: *Intelligent methodology and integrated electronic device of information processing ensuring the indoor comfort with simultaneous energy management in buildings. (OBI2004010045)*

C – Awards & Distinctions:

D – Funded Projects
- *Current projects:*
  - *"Centre for the study and sustainable exploitation of Marine Biological Resources (CMBR)", GSRT-Greece financing, Started January 2018-Duration until Match 2021.*
- Project proposals submitted: 2 (still waiting for the submitted proposals evaluation results)

E – Professional service
- Member of the Editorial Board and permanent reviewer of the peer review international journal "ENERGIES" i.e. http://www.mdpi.com/journal/energies/editors#editorialboard

- Society Technical Committee duties : once in the International Committee of Electrical Machines- ICEM

- Conference Organization (specify role) : none

  Regular Reviewer in eight high quality international Journals with referees:

- Journal of Intelligent and Robotic Systems.

- IEEE Transactions on Energy Conversion.

- Electric Power Systems Research

- International Journal of Distributed Sensor Networks

- Renewable Energy journal

- Reviewer on call basis IEEE Transactions on Automation Science and Engineering

- Neural Computing and Applications

- Applied Sciences

- Participation in National Committees (e.g. ΕΔΕΤ) : one

  "Member of the Permanent Committee of the Prefecture of Crete for the Energy Planning of Crete Island"

F – Service to the Department and the School
- Departmental responsibilities : none
- School – level responsibilities: none

G – Advising
- **Active graduate students supervised**

  o Ph.D. students supervised (advisor, in progress)
    - Blazakis Constantinos (Ph.D)
    - Yotis Thomas (Ph.D.)

  o M.Sc. students supervised (advisor, in progress)
    - Kladou Anastasia (M.Sc.)
    - Mesarchakis Georgios (M.Sc.)
    - Syntzanaki Athena (M.Sc.)
    - Viskadouraki Evangelia (M.Sc.)

  o Ph.D. and M.Sc. Degrees (committee member)
    - Mandourarakis Ioannis (Ph.D.)
    - Tripolitakis Evangelos (Ph.D.)
    - Fytraki Evangelia (M.Sc.)
    - Xifaras Konstantinos (M.Sc.)

  o Ph.D. and M.Sc. Degrees completed (committee member)
    - Brellas Konstantinos (M.Sc.)
    - Akasiadis Charilaos (Ph.D.)
    - Georgios Kontes (Ph.D.-Production & Management Engineering School)

- **Undergraduate students supervised**
  - Diploma theses in progress (supervisor):
    - Gioumatzidis Meletios
    - Fiorentzi Georgia
    - Titakis Georgios
    - Liliopoulos Sotirios
    - Sgourou Maria
    - Chalevidis Dimitrios
    - Mavrogianni Amalia
    - Tsiamoudalis Konstantinos
    - Boglou Vasileios
    - Tsokas Vasilios
    - Dais Georgios
    - Bardoutsou Artemis
    - Lekkas Christos
    - Maragkos Praxitelis
    - Nikoloudis Stavros
    - Rousakis Skouloudis
    - Kefalas Vasileios
    - Zarkada Savvoula

  - Diploma theses completed (supervisor):
    - Bitirini Maria
    - Kouloukythas Odysseas
    - Melagoniti Konstantina
    - Verigou Sofia
    - Vogiatzis Georgios
    - Arakadakis Stavros
    - Fiorentzis Konstantinos
    - Venianaki Georgia

  - Diploma theses in progress (committee member):
    - Antonios –Fivos Peristeropoulos
    - Asimakis Giannopoulos
    - Aronis Spyridon
    - Bitzanakis Joseph
    - Dimitriadis Konstantinos
    - Gentsis Charalampos
    - Kosmopoulos Stefanos
    - Papanikolaou Marios
    - Parlanis Dimitrios
    - Petrakis Emmanuel
    - Polomarkaki Sofia
    - Sfakianakis Konstantinos
    - Spyridakis Georgios
    - Papargyriou Athanasios
    - Tepelidis Avraam
    - Glikis Theodoros
    - Dimitriou Georgios
    - Polymenopoulou Alexandra

- Charalampous Charalampos
- Diploma theses completed (committee member):

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Aggelos Bletsas
Rank: Associate Professor
Years in rank: 4,5
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Telecommunications Laboratory

A – Teaching
- Undergraduate courses taught
    - TEL 303: Telecommunication Systems II (mandatory, 25 lectures)
    - TEL513 Satellite Communications (new class developed, 13+ lectures, 3 projects, 1 lab)

- Graduate courses taught
    - TEL606 Introduction to Probabilistic Graphical Models & Inference Algorithms (24 lectures)

B – Publications
- Publications in refereed journals
    - Published:
        - P.N. Alevizos, K. Tountas and **A. Bletsas**, "Multistatic Scatter Radio Sensor Networks for Extended Coverage", *IEEE Transactions on Wireless Communication (TWC)*, Vol. 17, No. 7, pp. 4522-4535, July 2018.

        - P.N. Alevizos and **A. Bletsas**, "Sensitive and Nonlinear Far Field RF Energy Harvesting in Wireless Communications", *IEEE Transactions on Wireless Communications (TWC)*, Vol. 17, No. 6, pp. 3670-3685, June 2018.

        - G. Vougioukas, A. Dimitriou, **A. Bletsas** and J.N. Sahalos, "Practical Energy Harvesting for Batteryless Ambient Backscatter Sensors", *Electronics, Special Issue on RFID, WPT and Energy Harvesting*, Vol. 7, No. 6, June 2018.

- Publications in refereed conferences
  - Published:
    - G. Vougioukas, P.N. Alevizos and **A. Bletsas**, "Coherent Detector for Pseudo-FSK Backscatter under Ambient Constant Envelope Illumination", *19th IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, June 2018, Kalamata, Greece.

    - P.N. Alevizos, G. Vougioukas and **A. Bletsas**, "Nonlinear Energy Harvesting Models in Wireless Information and Power Transfer", *19th IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, June 2018, Kalamata, Greece.

    - M. Vestakis, P.N. Alevizos, G. Vougioukas and **A. Bletsas**, "Multistatic Narrowband Localization in Backscatter Sensor Networks", *19th IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, June 2018, Kalamata, Greece.

    - M. Ouroutzoglou, **A. Bletsas** and G. N. Karystinos, "Intelligent Noncoherent Sequence equals Coherent Detection: Experimental Proof in Industrial RFID", *IEEE International Conference on Modern Circuits and System Technologies for Electronics and Communications (MOCAST)*, May 2018, Thessaloniki, Greece. **Received Best Student Paper Award** 🏆

    - G. Vougioukas and A. Bletsas, "24μW 26m Range Batteryless Backscatter Sensors with FM Remodulation and Selection Diversity", *IEEE International Conference on RFID-Technology and Applications (RFID-TA)*, September 2017, Warsaw, Poland. **Received Best Student Paper Award** 🏆

- Book Chapters
  - G. Vougioukas and **A. Bletsas**, "Smartphone Reception of MicroWatt Power, Meter-Kilometer Range, Backscatter Resistive/Capacitive Sensors with Ambient FM Remodulation & Selection Diversity", Elements Series, CAMBRIDGE UNIVERSITY PRESS, Editor N. Carvalho, submitted Mar. 2018.

- Patents
  - G. Vougioukas and **A. Bletsas**, "Switching Frequency Methods and Apparatus for Ambient Backscatter Networking and Jamming", U.S. Patents & Trademark Office (USPTO) Provisional Patent Application 62650426, March 30, 2018.

C – Awards & Distinctions

Two best student paper awards received at IEEE RFID-TA 2017 and MOCAST 2018.

Specifically, IEEE RFID-TA 2017 offered only one best student paper award (to G. Vougioukas) and MOCAST 2018 awarded two best student paper awards, one at the Telecommunications track (to M. Ouroutzoglou) and another at the Electronics track:

- M. Ouroutzoglou, **A. Bletsas** and G. N. Karystinos, "Intelligent Noncoherent Sequence equals Coherent Detection: Experimental Proof in Industrial RFID", *IEEE International Conference on Modern Circuits and System Technologies for Electronics and Communications (MOCAST)*, May 2018, Thessaloniki, Greece. **Received Best Student Paper Award** 🏆

- G. Vougioukas and A. Bletsas, "24μW 26m Range Batteryless Backscatter Sensors with FM Remodulation and Selection Diversity", *IEEE International Conference on RFID-Technology and Applications (RFID-TA)*, September 2017, Warsaw, Poland. **Received Best Student Paper Award** 🏆

D – Funded Projects
- Current projects:
  - 1 Project funded through National Strategic Reference Framework (NSRF) - Praxi 34.
  - 1 Project funded through Action "Research-Create-Innovate" (EYDE ETAK).

E – Professional service
- Associate Editor duties
  - **Associate Editor *IEEE Transactions on Wireless Communications*.**

- Conference Technical Program Committee service
  - IEEE 5G World Forum 2018
  - IEEE Globecom 2018 (Ad-hoc & Sensor Networks Track)
  - IEEE Globecom 2018 (Mobile Wireless Networks Track)
  - IEEE Globecom 2018 (Cognitive Radio & Networks Track)
  - IEEE International Conference on Wireless for Space and Extreme Environments 2018
  - EURASIP Workshop on RFID Technology 2018
  - IEEE SPAWC 2018

- Reviewing activities
  - Reviewer for various class A IEEE Journals.

F – Service to the School and the University

- School responsibilities
  - Substitute Member of the School of ECE Graduate Studies Committee.
  - Member of the TUC Library Committee.

G – Advising

- **Diploma** theses supervised as **principal advisor – COMPLETED Diploma THESES:**
  - Completed Diploma theses supervisor for
    - Ioannis Tsetis
    - Eirini Stratigi
    - Evangelos Giannelos

- **M.Sc** theses supervised as **principal advisor – COMPLETED M.Sc. THESES:**
  - Completed M.Sc. theses supervisor for
    - Nikos Psaromanolakis
    - Panos   Oikonomakos

- **Ph.D.** theses supervised as **principal advisor – COMPLETED Ph.D. THESES:**
  - Completed Ph.D. thesis supervisor for
    - Panos Alevizos

- **Ph.D., M.Sc. or Diploma theses principal advisor**, in progress:
  Various students

- **Ph.D., M.Sc. or Diploma theses committee member**, completed or in progress:
  Various students

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: George Karystinos
Rank: Associate Professor
Years in rank: 6
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Telecommunications Laboratory

A – Teaching
- Undergraduate courses taught
  - TEL 201: Signals and Systems (mandatory)
  - TEL 415: Statistical Signal Processing for Communications
  - TEL 416: Information Theory and Coding (elective)

- Labs taught

- Curriculum & course development
  - New courses / labs developed
  - Lecture notes / slides developed
  - Authored textbooks

B – Publications
- Publications in refereed journals
  - Submitted:

  - Accepted:

  - Published:
    - P. P. Markopoulos and **G. N. Karystinos**, "Noncoherent Alamouti phase-shift keying with full-rate encoding and polynomial-complexity maximum-likelihood decoding," *IEEE Transactions on Wireless Communications*, vol. 16, pp. 6688-6697, Oct. 2017.

- Publications in refereed conferences
  - Submitted: those published (see below)

  - Accepted: those published (see below)

  - Published:

- ▪ M. Ouroutzoglou, A. Bletsas, and **G. N. Karystinos**, "Intelligent noncoherent sequence equals coherent detection: Experimental proof in industrial RFID," in *Proc. IEEE MOCAST 2018 - International Conference on Modern Circuits and System Technologies for Electronics and Communications*, Thessaloniki, Greece, May 2018 (Best Paper Award).

- Books and edited book chapters

- Patents

C – Awards & Distinctions
- IEEE MOCAST 2018 Best Student Paper Award (Intern. Conf. Modern Circuits System Tech. Electr. Commun.) for paper "Intelligent noncoherent sequence equals coherent detection: Experimental proof in industrial RFID" by M. Ouroutzoglou, A. Bletsas, and G. N. Karystinos.

D – Funded Projects
- Current projects:
  - o *"Plasma Antenna Technologies,"* Funding Source: European Commission, Horizon 2020 Program, Budget: € 153.000,00, Duration: Jan. 1, 2017 - Dec. 31, 2020.

- Project proposals submitted:

E – Professional service
- Associate Editor duties

- Society Technical Committee duties

- Conference Technical Program Committee service
  - o IEEE International Conference on Communications 2018 (IEEE ICC 2018).
  - o IEEE International Symposium on Personal, Indoor and Mobile Radio Communications 2018 (IEEE PIMRC 2018).
  - o IEEE Wireless Communications and Networking Conference 2018 (IEEE WCNC 2018).
  - o IEEE INFOCOM Workshop on Wireless Communications and Networking in Extreme Environments (WCNEE) 2018.

- Conference Organization (specify role)

- Reviewing activities

F – Service to the School and the University

- School – level responsibilities
  - Director of Graduate Studies, School of Electrical and Computer Engineering, Technical University of Crete, July 2016 - Nov. 2017.
  - Undergraduate Studies Committee, School of Electrical and Computer Engineering, Technical University of Crete, 2013 - present.

- University responsibilities
  - Member of the Research Committee, Technical University of Crete, 2017 - present.
  - Member of the Board of Directors, Property Development and Management Company, Technical University of Crete, 2015 - present.

G – Advising

- Active graduate students supervised

  - Ph.D. and M.Sc. students completed (supervisor)

  - Ph.D. and M.Sc. theses in progress (supervisor)
    - Fountzoulas Ioannis (Ph.D.)
    - Koupatsiaris Dimitrios (Ph.D.)

  - Ph.D. and M.Sc. Degrees completed (committee member)
    - Alevizos Panagiotis (Ph.D.)
    - Lourakis Georgios (M.Sc)
    - Oikonomakos Panagiotis (M.Sc)
    - Psaromanolakis Nikolaos (M.Sc)

  - Ph.D. and M.Sc. Degrees in progress (committee member)
    - Giotis Thomas (Ph.D.)
    - Vougioukas Georgios (Ph.D.)
    - Karakasis Paris (M.Sc.)

- Undergraduate students supervised

  - Diploma theses in progress
    - Dafoulis Nikolaos
    - Delis Georgios
    - Grypiotis Ioannis
    - Nasoulis Nikolaos
    - Papaioannou Dimitrios
    - Sgourakis Andreas
    - Tazes Athanasios
    - Theofilou Eleni
    - Zafiriou Odysseas

- Diploma theses completed (supervisor)
  - Amiridi Magda
  - Antoniou Eleni
    Bountrogiannis Konstantinos

- Diploma theses in progress (committee member)
  - Boras Charalampos
  - Fragkakis Panteleimon
  - Giariskanis Fotios
  - Logothetis Fragkoulis
  - Ouroutzoglou Michail
  - Pouros Spyridon
  - Siaminou Ioanna
  - Skyvalakis Konstantinos

- Diploma theses completed (committee member)
  - Digalakis Vasilios
  - Loukopoulos Alexandros
  - Stavrianoudaki Thalia-Anastasia
  - Stratigi Irene
  - Tsetis Ioannis
  - Zekai Orestis

Technical University of Crete
School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Athanasios P. Liavas
Rank: Professor
Years in rank: 8
Full-time or part-time: Full-time
Division: Telecommunications Division
Lab affiliation: Telecommunications Lab, Director

A – Teaching

- Undergraduate courses taught
    - TEL 301: Telecommunications Systems I (mandatory)
    - Wireless Communication
    - Convex Optimization (jointly offered with TEL 609)

- Graduate courses taught
    - TEL 609: Convex Optimization

- Labs taught
    - Wireless Communication (Matlab exercises for wireless communication)
    - Convex Optimization (Matlab exercises for convex optimization algorithms)

- Curriculum & course development
    - New courses / labs developed
    - Lecture notes / slides developed
        - Convex Optimization (updated electronic notes)
    - Authored textbooks

B – Publications

- Publications in refereed journals
    - Submitted

        - A. Balatsoukas-Stimming and A. P. Liavas, "Design of LDPC Codes for the Unequal Power Two-User Gaussian Multiple Access Channel," submitted to the *IEEE Wireless Communications Letters*.

    - Accepted:

- - *A. Balatsoukas-Stimming and A. P. Liavas, "Design of LDPC Codes for the Unequal Power Two-User Gaussian Multiple Access Channel," submitted to the IEEE Wireless Communications Letters.*

  - Published:

    - A. P. Liavas, G. Kostoulas, G. Lourakis, K. Huang, and N. D. Sidiropoulos, "Nesterov-based Alternating Optimization for Nonnegative Tensor Factorization: Algorithm and Parallel Implementations," *IEEE Transactions on Signal Processing,* vol. 66, no. 4, February 2018.

- Publications in refereed conferences
  - Accepted:

  - Published:
    - G. Lourakis, A. P. Liavas "Nesterov-based Alternating Optimization for Nonnegative Tensor Completion: Algorithm and Parallel Implementation," *Proc. IEEE 19th International Workshop on Signal Processing Advances in Wireless Communications (SPAWC),* Kalamata, June 2018.

    - P. A. Karakasis and A. P. Liavas "Alternating Optimization for Tensor Factorization with Orthogonality Constraints: Algorithm and Parallel Implementation," *International Conference on High Performance Computing & Simulation (HPCS),* Orleans, July 2018

- Books and edited book chapters

- Patents

C – Awards & Distinctions

D – Funded Projects
- Current projects: PARTENSOR: parallel algorithms for processing very large tensors (EYDE-ETAK): June 2018 – May 2021. Project Coordinator.

- Project proposals submitted:

E – Professional service
- Associate Editor duties
- Society Technical Committee duties

- Conference Technical Program Committee service

- Conference Organization (specify role)

- Reviewing activities

    o IEEE Transactions on Signal Processing, IEEE ICASSP.

F – Service to the Department and the School
- Departmental responsibilities

  Dean of the ECE School

- School – level responsibilities

    o Member of the Board, Telecommunication Systems Research Institute (T.S.I.), Technical University of Crete
    o Member of TUC Senate

G – Advising
- Active graduate students supervised

    o Ph.D. and M.Sc. students supervised (advisor, completed)
      - Lourakis Georgios (M.Sc.)

    o Ph.D. and M.Sc. students supervised (advisor, in progress)
      - Georgogiannis Alexandros (Ph.D.)
      - Karakasis Paris (M.Sc.)

    o Ph.D. and M.Sc. degrees awarded (committee member)
      - Alevizos Panagiotis (Ph.D.)

    o Ph.D. and M.Sc. Degrees (committee member)
      - Koupatsiaris Dimitrios (Ph.D.)
      - Moutzianou Georgios (Ph.D.)
      - Dougiakis Lazaros (M.Sc.)
      - Orphanoudakis Emmanouel (M.Sc.)
      - Pechlivanis Konstantinos (M.Sc.)
      - Sklivanitis Georgios (M.Sc.)
      - Sofikitis Emmanuel (M. Sc.)
      - Tsakaneli Stavroula (M.Sc.)

- Undergraduate students supervised

  - Diploma theses in progress
    - Siaminou Ioanna
    - Charitakis Spyridon

  - Diploma theses completed (supervisor)
    - Karakasis Paris
    - Loukopoulos Alexandros
    - Zekai Orestis
    - Stavrianoudaki Thalis-Anastasia

  - Diploma theses in progress (committee member)
    - Delis Georgios
    - Dimakopoulos Vasileios
    - Kyriakou Charalambos
    - Nasoulis Nikolaos
    - Ntafoulis Nikolaos
    - Papaioannou Dimitrios
    - Politof Konstantinos
    - Ziodis Nikolaos

  - Diploma theses completed (committee member)
    - Amiridi Magda
    - Antoniou Eleni
    - Bountrogiannis Konstantinos
    - Chondroulis Ioannis
    - Petrou Eleni
    - Sofokitis Emmanuel
    - Tsitsikas Georgios

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Michael Paterakis
Rank: Professor
Years in rank: 19
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Information and Computer Networks Laboratory

A – Teaching
- Undergraduate courses taught
    - TEL 202: Probability and Random Signals (Mandatory)
    - TEL 401: Computer Networks I (Mandatory)

- Graduate courses taught
    - TEL 601: Probability Theory and Stochastic Processes

- Curriculum & Course Development
    - New courses developed: *Probability Theory and Stochastic Processes (TEL 601).* The development included the course material and the homework assignments.

B – Publications

C – Awards & Distinctions

D – Funded Projects
- Current projects:
    - Independent Auditor for the Project: "Development of Broadband Infrastructure in Rural "White" Areas of Greek Territory and Operations Services – Development of Infrastructure", Public Private Partnerships Project. Funded for the period 1/1/2015 – 31/12/2031 by the special purpose entities "OTE Rural North" and "OTE Rural South". Budget: € 1.843.208.

E – Professional Service

- *June 2016 – June 2019.* Member of the Board of Directors, Greek Universities Network (GUnet), a no-profit company founded by all the Greek Academic Institutions.

- Award Co-Chair for the *13th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob),* 2018.

- Technical Program Committee Member for the *13th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob),* 2018.

- Technical Program Committee Member for the *5th IEEE International Workshop on Cooperative Wireless Networks - CWN (*2018).

F – Service to the School and the University

- School responsibilities
  - 2013 - , Member, Graduate Committee, ECE School, Technical University of Crete.

  - 2017 - , Member of the Deanery, ECE School, Technical University of Crete.

- University responsibilities
  - June 2013 – June 2021, Director and Chairman of the Board of Directors, Telecommunication Systems Research Institute (T.S.I.), Technical University of Crete.
  - 2013 - , Member of the Quality Assurance Unit for Higher Education, Technical University of Crete.

  - 2017 - , Deputy Member of the University Senate.

G – Advising

- Active graduate students supervised
  - Ph.D. and M.Sc. Degrees in progress (supervisor)
    - Sofikitis Emmanuel (M.Sc.)

  - Ph.D. and M.Sc. Degrees completed (committee member)
    - Psaromanolakis Nikolaos (M.Sc.)
    - Alevizos Panagiotis (Ph.D.)

  - Ph.D. and M.Sc. Degrees in progress (committee member)
    - Loizidis Orestis – Stavros (M.Sc.)

- Undergraduate students supervised

  o Diploma theses completed (supervisor)
    ▪ Sofikitis Emmanuel

  o Diploma theses completed (committee member)
    ▪ Loukopoulos Alexandros
    ▪ Tsetis Ioannis
    ▪ Zekai Orestis

  o Diploma theses in progress (committee member)
    ▪ Skyvalakis Konstantinos

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Michalis Zervakis
Rank: Professor
Years in rank: 18
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: 1. Digital Image and Signal Processing Lab
  2. Lab of Automation

A – Teaching
- Undergraduate courses taught
  - TEL 302: Digital Signal Processing (mandatory)

- Graduate courses taught

- Labs taught

- Curriculum & course development
  - New courses / labs developed

  - Lecture notes / slides developed

  - Authored textbooks

B – Publications
- Publications in refereed journals
  - Submitted:
    - Maria Papadogiorgaki, Panagiotis Koliou, Michalis E. Zervakis, "Glioma Growth Modeling based on the Effect of Vital Nutrients and Metabolic Products", revision submitted to Medical & Biological Engineering & Computing, Springer, 2017
    - Ioanna Vourlaki, Costas Balas, George Livanos, Manos Vardoulakis, George Giakos, Michalis Zervakis, "Bootstrap Clustering Approaches for Organization of Data: Application in improving grade separability in cervical neoplasia", Manuscript No. JBHI-00209-2017 Submitted for publication in Journal of Biomedical and Health Informatics, May 2017

- o Published:
  - Antonakakis, M., Dimitriadis, S.I., Zervakis, M., Papanicolaou, A.C., Zouridakis, G., "Reconfiguration of dominant coupling modes in mild traumatic brain injury mediated by δ-band activity: A resting state MEG study" , Neuroscience 356, pp. 275-286, 2017
  - Antonakakis, M., Dimitriadis, S.I., Zervakis, M., Papanicolaou, A.C., Zouridakis, G., "Altered rich-club and frequency-dependent subnetwork organization in mild traumatic brain injury: A MEG resting-state study", Frontiers in Human Neuroscience 11, 416, 2017
  - Paravolidakis, V., Ragia, L., Moirogiorgou, K., Zervakis, M.E., "Automatic coastline extraction using edge detection and optimization procedures", Geosciences 8(11), p. 407, 2018
  - Bacharidis, K., Sarri, F., Paravolidakis, V., Ragia, L., Zervakis, M., "Fusing georeferenced and stereoscopic image data for 3D building Facade reconstruction", 2018   ISPRS International Journal of Geo-Information, 7(4),151
  - Pezoulas, V.C., Michalopoulos, K., Klados, M., Micheloyannis S., Bourbakis N., Zervakis M., "Functional connectivity analysis of cerebellum using spatially constrained spectral clustering", IEEE Journal of Biomedical and Health Informatics, in press 2018 DOI:10.1109/JBHI.2018.2868918

- Publications in refereed conferences
  - o Published:
    - Pezoulas VC, Pologiorgi I, Seferlis S, Tsalikis GM, Zarifis G, Zervakis M, and Giakos GC (2017). A tissue classification approach for brain tumor segmentation using MRI. IEEE International Conference on Imaging Systems and Techniques, Beihang University, Beijing, China (October 18-20, 2017).
    - Vaggelis Chalkiadakis, Nikos Papandroulakis, George Livanos, Konstantia Moirogiorgou, George Giakos, Michalis Zervakis, "Designing a Small-sized Autonomous Underwater Vehicle Architecture for Regular Periodic Fish-cage Net Inspection", IEEE Conference on Imaging Systems and Techniques, Beijing, China| October 18-20, 2017
    - Panagiotis Koulountzios, Michael Zervakis, Panagiotis Karakitsios, Georgios Stavroulakis, "A semi-automatic algorithm for reconstruction and NURBS surface generation of thoracic aorta" IEEE International Conference on Imaging Systems and Techniques, Beihang University, Beijing, China (October 18-20, 2017).

- Pezoulas, V.C., Athanasiou, A., Nolte, G., Zervakis M., Fratini A., Fotiadis, D.I., Klados, M.A., "FCLAB: An EEGLAB module for performing functional connectivity analysis on single-subject EEG data", 2018 IEEE EMBS International Conference on Biomedical and Health Informatics (BHI 2018), 2018-January, pp. 96-99
- George Livanos, Michalis Zervakis, Vaggelis Chalkiadakis, Konstantia Moirogiorgou, George Giakos, Nikos Papandroulakis, "Intelligent Navigation and Control of a Prototype Autonomous Underwater Vehicle for Automated Inspection of Aquaculture net pen cages", 2018 IEEE International Conference on Imaging Systems and Techniques (IST), Krakow, Poland, 2018
- F Markolefas, K Moirogiorgou, G Giakos, M Zervakis , "Virtual Video Synthesis for Personalized Training", 2018 IEEE International Conference on Imaging Systems and Techniques (IST), Krakow, Poland, 2018
- E. Sergaki, G. Spiliotis, I. Vardiambasis, T. Kapetanakis, A. Krasoudakis, G. Giakos, M. Zervakis, A. Polydorou, "Application of ANN and ANFIS for detection of brain tumors in MRIs by using DWT and GLCM texture analysis", 2018 IEEE International Conference on Imaging Systems and Techniques (IST), Krakow, Poland, 2018
- A. Beninati, N. Douard, G. Bauman, J. Hoogerhyde, A. Passalaris, Z. Giakos, M. Nowak, S. Shrestha, H. Mohamed, M. Zervakis, G. Livanos, G. Giakos, "Space Target Motion Salient Classification using Polarimetric Retina Vision Sensing Principles", 2018 IEEE International Conference on Imaging Systems and Techniques (IST), Krakow, Poland, 2018
- A. Zormpas, K. Moirogiorgou, K. Kalaitzakis, G. Plokamakis, P. Partsinevelos, G. Giakos, M. Zervakis, "Power Transmission Lines Inspection using Properly Equipped Unmanned Aerial Vehicle (UAV)", 2018 IEEE International Conference on Imaging Systems and Techniques (IST), Krakow, Poland, 2018

- Books and edited book chapters

- Patents

D – Funded Projects
- Current projects:
  - *ΥΠΟΥΡΓΕΙΟ ΑΓΡΟΤΙΚΗΣ ΑΝΑΠΤΥΞΗΣ ΚΑΙ ΤΡΟΦΙΜΩΝ, "ΚΑΙΝΟΤΟΜΙΑ ΣΤΗΝ ΥΔΑΤΟΚΑΛΛΙΕΡΓΕΙΑ", «Εφαρμογή έξυπνων*

συστημάτων για τη βελτίωση της διαχείρισης και της ευζωίας των ψαριών σε συνθήκες καλλιέργειας σε κλωβούς (iFish)»
- ο *ΥΠΕΠΘ, ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ, «ΠΡΟΤΥΠΕΣ ΥΠΗΡΕΣΙΕΣ ΙΑΤΡΙΚΗΣ ΑΞΙΟΛΟΓΗΣΗΣ, ΠΡΟΛΗΨΗΣ ΚΑΙ ΔΙΑΣΤΡΩΜΑΤΩΣΗΣ ΣΤΡΑΤΕΥΣΙΜΩΝ ΚΑΙ ΕΚΤΙΜΗΣΗ ΔΕΙΚΤΩΝ ΥΓΕΙΑΣ (e-Mass)»*
- ο *ΥΠΕΠΘ, ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ, «Προηγμένο Σύστημα Πρόληψης Επικίνδυνων Καταστάσεων για Βρέφη - x (επι) ΒΛΕΨΙΣ)»*
- ο *ΥΠΕΠΘ, ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ, «Αυτόνομο ρομποτικό σύστημα για ανακύκλωση αστικών απορριμμάτων (ΑΝΑΣΑ)»*
- ο *ΥΠΕΠΘ, ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ, «Έξυπνη Γεωργία με την χρήση Drones - (MARS)»*

- Project proposals submitted:
  - ο *Interreg V-A Ελλάδα Κύπρος «Σύστημα συλλογής απορριμμάτων - Ο κάδος που σκέφτεται και ενεργεί χρησιμοποιώντας τεχνολογία του διαδικτύου των πραγμάτων και έξυπνα συστήματα προστασίας του περιβάλλοντος με αποδοτικούς τρόπους (iSenseBin)»*
  - ο *Διεθνής Συνεργασία Ελλαδα_Κίνα, «Information Management in Internet Of Things Applications for Healthy Aging (IMAGINE)»*
  - ο *Διεθνής Συνεργασία Ελλαδα_Κίνα, « Information Fusion Platform for Multiple Imaging Modalities (INFLATE)»*
  - ο *Διεθνής Συνεργασία Ελλαδα_Κίνα, « Image Content Management in Clinical Diagnostic Centers (IT-Diagnosis)"*
  - ο *Διεθνής Συνεργασία Ελλαδα_Κίνα, « PEACE: PErsonalised Coaching for people as they Age to favour healthy lifestyles, longevity and wEllbeing"*
  - ο *EEA Grants, « Analysis, Evaluation and Documentation of life-changing Effects in Coastal Cities due to progressive Environmental changes – DECIdE »*
  - ο *ΕΛΙΔΕΚ «Multilevel Constrained Predictive Models for Systems-Level Analysis in Osteoarthritis»*
  - ο *Horizon-2020 SEC-16-BES-2017 "Semi-autonomous border surveillance platform combining next generation unmanned aerial vehicles with ultrahigh resolution multi-sensor surveillance payload"*

E – Professional service
- Associate Editor duties
  - **Associate Editor**, since 1/1/2017, Journal of Biomedical Signal Processing and Control, https://ees.elsevier.com/bspc
  - **Associate Editor**, since 1/1/2017, IEEE Journal of Biomedical and Health Informatics, http://jbhi.embs.org/editorial-board/associate-editors/
  - Society Technical Committee duties
  - Technical Committee co-chair, IEEE Instrumentation and Measurement Society, TC-19 Imaging Measurements and Systems, since 20/1/2017
  - Conference Technical Program Committee service
    - Honorary Chair, Steering Committee member, International Technical Committee member, 2017 IEEE Intl Conference on

Imaging Systems and Techniques, Oct. 18-20 Beijing, China, http://ist2017.ieee-ims.org/

- Technical Program Committee member, IEEE Intl Conference on Biomedical and Health Informatics, http://bhi.embs.org/2017/
- Guest Editor, IEEE Journal of Biomedical and Health Informatics, Special Issue on "Informatics for personalized, precision and preventive Healthcare (3P Healthcare)", 2017
- Guest Editor, Journal of Biomedical Signal Processing and Control, Special Issue on "Biomedical Imaging Systems", 2017 https://www.journals.elsevier.com/biomedical-signal-processing-and-control/call-for-papers/special-issue-on-biomedical-imaging-systems
- Guest Editor, Journal Multimedia Tools and Applications, Special Issue on "Multimedia Systems for Critical Engineering Applications", 2017 http://static.springer.com/sgw/documents/1597858/application/pdf/Full+Call+Special+Issue+of+MTAP.pdf
- Guest Editor, Measurement Science and Technology journal, Special Issue on "Imaging Systems and Techniques", 2017 http://iopscience.iop.org/journal/0957-0233

- Conference Organization (specify role)

- Reviewing activities
  - Reviewer for IEEE BHI2017, IEEE EMBC2017, IEEE IST2017, HealthCom2017

F – Service to the School and the University
- School responsibilities
  - Vice-Rector of Research and Life-long Learning, TUC
  - Digital Image and Signal Processing Laboratory, Director
  - Automation Laboratory, Director

- University responsibilities
  - President of ELKE
  - Member of the Senate, TUC

G – Advising
Undergraduate students supervised
- Active graduate students supervised

  - Ph.D. and M.Sc. students completed (supervisor)

  - Ph.D. and M.Sc. theses in progress (supervisor)
    - Liaba Irini (Ph.D.)
    - Livanos Georgios (Ph.D.)

- Mirogiorgou Constantia (Ph.D.)
- Feigler Igor (M.Sc.)
- Jaohar Osman (M.Sc.)
- Paterkaki Eleni (M.Sc.)
- Tsakaneli Stavroula (M.Sc.)
- Xifaras Constantinos (M.Sc.)

- Ph.D. and M.Sc. Degrees completed (committee member)

- Ph.D. and M.Sc. Degrees in progress (committee member)
  - Chliaoutakis Aggelos (Ph.D.)
  - Kalantzaki Calliope (Ph.D.)
  - Oikonomidis Dimitrios (Ph.D.)
  - Rexakis Ioannis (Ph.D.)
  - Tsapras Athanasios (Ph.D.)
  - Giakoumakis Pavlos (M.Sc.)
  - Epitropou Giorgos (M.Sc.)
  - Kalokyri Varvara (M.Sc.)
  - Kontadakis Grigorios (M.Sc.)
  - Malavazos Konstantinos (M.Sc.)
  - Thermolia Chryso (M.Sc.)

- Undergraduate students supervised

  - Diploma theses completed (supervisor)
    - Badourakis Stylianos
    - Baroutis Nikolaos
    - Konstantinidi Panagiota
    - Koulountzios Panagiotis
    - Markolefas Filippos
    - Paravolidakis Vasilios
    - Petrou Eleni
    - Polydorou Alexios
    - Spiliotis Georgios

  - Diploma theses in progress (supervisor)
    - Barberakis Stylianos
    - Dimitrakopoulos Vasilios
    - Gompaki Efstathia
    - Lemonis Ioannis
    - Ntoko Aneza
    - Politis Marios
    - Politof Konstantinos

- Syrigos Dimitrios
- Zoidis Nikolaos

- Diploma theses completed (committee member)
  - Karakasis Paris
  - Kirakosian Salva
  - Melagoniti Konstantina
  - Mellos Alexandos
  - Papadopoulos Theodoros
  - Pouli Christina
  - Siahamis Charalampos
  - Venianaki Georgia
  - Zorbas Alexandros

- Diploma theses in progress (committee member)
  - Badogiannis Nikolaos
  - Bardoutsou Artemis
  - Brellas Ioannis
  - Chatziparaschis Dimitrios
  - Daskalogrigorakis Grigorios
  - Demertzis Eleftherios
  - Georgakopoulou Artemis
  - Georgiou Georgios
  - Katsinelis Konstantinos
  - Kefalas Vasilios
  - Kontzedakis Dimitrios
  - Koutroumanos Panagiotis
  - Liliopoulos Sotirios
  - Lytridis Nikolaos
  - Margoni Ioanna
  - Marinaki Eftichia
  - Pentafragas Georgios
  - Sgourou Maria
  - Stavgianoudakis Christos
  - Titakis Georgios
  - Tontou Nikoletta
  - Vardakis Konstantinos
  - Vardaxis Ioannis
  - Vogiatzis Konstantinos

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Dimitris Angelakis
Rank: Associate Professor
Years in rank: 2
Full-time or part-time: Full-time
Division:
Lab affiliation:

A – Teaching
- Undergraduate courses taught
  - FYS 102: Physics (Electromagnetism) (mandatory)
  - FYS 411: Quantum Technology
  - Physics II, School of Mineral Resources Engineering

- Graduate courses taught
  - FYS 602: Quantum Technology (FYS 602) (crosslisted)

- Labs taught

- Curriculum & course development

  - New courses / labs developed

  - Lecture notes / slides developed

  - Authored textbooks

B – Publications
- Publications in refereed journals
  - Submitted

  - Accepted:
    - Tian Feng, See, V. M., Bastidas, Jirawat, Tangpanitanon, **Dimitris G., Angelakis***, "Strongly correlated photon transport in nonlinear photonic lattice with disorder: Probing signatures of the localization transition.

- Wing Chi Yu, P. D. Sacramento, Y. Chao, **D. G. Angelakis**, and Hai-Qing Lin, "Detection of topological phases by quasilocal operators"

  - Published:
    - V. M. Bastidas, T.H. Kyaw, J. Tangpanitanon, G. Romero, L.C. Kwek, **D.G. Angelakis*** "Floquet stroboscopic divisibility: coherence preservation in non-Markovian dynamics" New Journal of Physics, New J. Phys. 20 093004 (2018)

    - P. Roushan, C. Neill, J. Tangpanitanon, V.M. Bastidas, A. Megrant, R. Barends, Y. Chen, Z. Chen, B. Chiaro, A. Dunsworth, A. Fowler, B. Foxen, M. Giustina, E. Jeffrey, J. Kelly, E. Lucero, J. Mutus, M. Neeley, C. Quintana, D. Sank, A. Vainsencher, J. Wenner, T. White, H. Neven, **D. G. Angelakis***, J. Martinis, "Spectral signatures of many-body localization with interacting photons" **in Science, 01 Dec 2017**: Vol. 358, Issue 6367, 2017

- Publications in refereed conferences
  - Accepted:

  - Published:
- Books and edited book chapters
- Patents

C – Awards & Distinctions
- Invited visiting Professor Centre at Quantum Technologies, National University of Singapore October 2016 to January 2017
  - **Google Quantum Innovation Awards 2018** for "Quantum Simulations of exotic physics in driven quantum hardware architectures and for "Spectroscopic signatures of localization with interacting photons in superconducting chips "

D – Funded Projects

- Current projects:
  - Ministry of Education, Greece, Funding for Greek-Russia Bilateral Collaboration in Quantum Technologies. Participating PI with budget 56K Euros, total proposal budget 496K Euros
- Project proposals submitted:
  - EU Quantum Technologies QuantERA Call 2018

E – Professional service

- Associate Editor duties
  - Member of the editorial board of European Physical Journal: Quantum Technology, Springer, since 2014
  - Member of the editorial board of Advanced Quantum Technology, Wiley, since 2018

- Society Technical Committee duties
  - Member of the Management Committee, the Core group and WG4 deputy leader for the EU COST Action "Nanoscale Quantum Optics", 2014-2018

- Conference Technical Program Committee service
  1. Program committee, AQIS18, 18th Asian Quantum Information Science Conference, http://aqis-conf.org/2018/, Nagoya Japan, September 8-12, 2018

- Program committee, The Nanoscale Quantum Optics Workshop, Prague February 2018. http://www.cost-nqo.eu/event/nanoscale-quantum-optics-conference-mc-meeting-prague-czech-republik
- Conference Organization (specify role)
  Main organizer and **chairman** of "The 1st workshop on Quantum Technologies in Greece : Towards a national program", Crete June 22-23, 2018

- Reviewing activities
  - Referee for research proposals submitted to: the EU ERC Starting Grant scheme, the EU ERC Consolidator Grant scheme, the European Young Investigators Award Scheme, the Netherlands Organization for Scientific Research, Swiss Research Council, Polish Research Council, Austrian Research Council, the FET open Proactive Call H2020

Invited and Keynote talks in international conferences and advanced schools

- "Quantum simulators with near scale devices", 8th International Conference on Quantum Information, Tehran, Iran September 2018 (**Keynote)**

- "Many-body physics with strongly confined optical fields" International School of Physics "E. Fermi" - Nanoscale Quantum Optics, Italy July 2018.

- Quantum simulations with interacting photons: Spectral signatures of many-body localization in quantum superconducting chips, Quantum Simulations with Atoms and Light, Aarhus, August 2018

- "Many-body physics with strongly confined optical fields" International School of Physics "E. Fermi" - Nanoscale Quantum Optics, Italy July 2018.
- **INVITED SEMINARS AND COLLOQUIA IN UNIVERSITIES AND INSTITUTIONS**

- "Quantum computing and quantum simulations", ECE School, Technical University of Crete, June 2018, **Colloquium**

- "Quantum simulations of material science with interacting photons", Materials Department, University of Crete, April 2018, **Colloquium**

- "Quantum simulations with light", Physics Department, University of Crete, Greece, March 2018, Special **Colloquium** to open the 40th year anniversary celebrations of the department

- "Quantum simulations with interacting photons in superconducting qubits", Physics Department, University of Melbourne, Melbourne, December 2017

- "Quantum simulations with interacting photons: Spectral Signatures of Many-Body Localization with Interacting Photons", Physics Department, University of New South Wales, Syndey December 2017

- "Spectral Signatures of Many-Body Localization with Interacting Photons", Physics and Astronomy Department, Macquarie University, Sydney, December 2017

- "Spectral Signatures of Many-Body Localization with Interacting Photons", Physics Department, University College London, August 2017

F – Service to the School and the University
- School responsibilities
  - Member of the ECE School Executive Committee

- University responsibilities

G – Advising
- Active graduate students supervised

  o Ph.D. and M.Sc. students completed (supervisor)

  o Ph.D. and M.Sc. theses in progress (supervisor)
    - Kalogerakis Michalis (Ph.D.)
    - Shetakis Nikolaos (Ph.D.)

  o Ph.D. and M.Sc. Degrees completed (committee member)

  o Ph.D. and M.Sc. Degrees in progress (committee member)
    - Bassford Michalis – Dimitris (Ph.D.)
    - Konstantakis Christos (Ph.D.)
    - Moutzianou Georgios (Ph.D.)

- Undergraduate students supervised

  o Diploma theses in progress

  o Diploma theses completed (supervisor)
    -

  o Diploma theses in progress (committee member)

  o Diploma theses completed (committee member)
    - Devetzakis Georgios
    - Vardakis Konstantinos

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Daphne Manoussaki
Rank: Assistant Professor
Years in rank: 12
Full-time or part-time: Full
Division:
Lab affiliation:

A – Teaching
- Undergraduate courses taught
  - o MATH 101: Mathematics I (mandatory)
  - o MATH 203: Differential Equations
  - o MATH 411: Matthematical Biology

- Graduate courses taught

B – Publications
- Publications in refereed journals
  - o Submitted:

C – Awards & Distinctions

D – Funded Projects

E – Professional service
- Society Technical Committee duties
- Conference Organization (specify role)

F – Service to the School and the University
- School responsibilities
  - o Committee for undergraduate curriculum reform
- University responsibilities
  - o Science day for elementary school students – Voluntary participation: organized one of the sections for the day.

G – Advising

- Active graduate students supervised
  - Ph.D. and M.Sc. students completed (supervisor)

  - Ph.D. and M.Sc. theses in progress (supervisor)

  - Ph.D. and M.Sc. Degrees completed (committee member)

  - Ph.D. and M.Sc. Degrees in progress (committee member)

- Undergraduate students supervised
  - Diploma theses in progress (supervisor)
    - Golfides Antonios-Andreas

  - Diploma theses in progress (committee member)
    - Grypiotis Ioannis

  - Diploma theses completed (committee member)
    - Nikolaos Kontos

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Minos Petrakis
Rank: Associate Professor
Years in rank: 4,5
Full-time or part-time: Full-time
Division:
Lab affiliation:

A – Teaching
- Undergraduate courses taught
  - MATH 102: Mathematics II (mandatory)
  - MATH
    : Probability Theory – (mandatory)-ΜΠΔ

- Graduate courses taught
- Curriculum & course development
  - New courses / labs developed

  - Lecture notes / slides developed

  - Authored textbooks

B – Publications
- Publications in refereed journals
  - Submitted: those published/appeared (see below)

  - Accepted:

  - Published:

- Publications in refereed conferences
  - Published:

- Patents
  - *GRANTED*

C – Awards & Distinctions

D – Funded Projects
- Current projects:
- Project proposals submitted:

E – Professional service
- Associate Editor duties
- Society Technical Committee duties
- Conference Technical Program Committee service
- Conference Organization (specify role)
- Reviewing activities
  - Zentralblatt MATH Reviewer

F – Service to the School and the University
- School responsibilities
- University responsibilities

G – Advising
- Active graduate students supervised
  - Ph.D. and M.Sc. students supervised (advisor, completed)

  - Ph.D. and M.Sc. students supervised

  - Ph.D. and M.Sc. degrees awarded (committee member)
    - Konstantakis Christos (Ph.D.)

  - Ph.D. and M.Sc. Degrees (committee member)

- Undergraduate students supervised
  - Diploma theses in progress
    - Gountoumas Filippos
    - Kyriakou Charalampos

  - Diploma theses completed (supervisor)

  - Diploma theses in progress (committee member)

  - Diploma theses completed (committee member)

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2017 to Aug. 31, 2018

Name: Stavros Christodoulakis
Rank: Emeritus professor

A - FUNDED PROJECTS

1.)   [CARAVAN NEXT] "Feed the Future: Art moving cities"
Budget: € 300.020
Duration: 1/9/2015 - 28/2/2019
Project Type: Creative Europe Culture / Cooperation Projects

2.) [eARTinED] "A new approach to education using the arts"
Project No: 2015-1-SE01-KA201-012267"
Budget: € 66.604
Duration: 1/9/2015 - 31/8/2018
Project Type: ERASMUS+

3.) [MechMate] "Strategic Partnership in the field of Mechatronics for innovative and smart growth of European manufacturing SMEs"
Budget: € 62.683
Duration: 1/11/2016 - 31/12/2018
Project Type: ERASMUS+

4.) [MultiLib] "The Multilingual Library for Children in Europe"
Budget: € 57.955
Duration: 1/9/2016 - 31/8/2018
Project Type: ERASMUS+

5.) [DISCOVER] "Developing Innovative Science Outreach for Vocational Education to Encourage STEM Careers and Education"
Budget: € 37.597
Duration: 1/10/2017 - 30/9/2019
Project Type: ERASMUS+

B - PROJECT PROPOSALS SUBMITTED AND ACCEPTED

6.) G4M «Ανάπτυξη Πλατφόρμας Δημιουργίας και Αναπαραγωγής Ψηφιακών Παιχνιδιών για την Προώθηση Προϊόντων και Υπηρεσιών», Περιφέρεια Κρήτης,
Budget: € 198.786,27 €
Duration: 15/3/2019 - 14/3/2022
Project Type: ΕΣΠΑ

7.) [MILAN] "Multifunctional Innovative Learning Assisting Network for VET in Advanced Manufacturing"
Budget: € 77.765,00
Duration: 1/11/2018 - 30/4/2021
Project Type: ERASMUS+

8.) [TIM] "Theatre in Mathematics"
Budget: € 64.159,00
Duration: 1/9/2018 - 31/8/2021
Project Type: ERASMUS+

9.) [MUSILIB] "Music for children's multicultural learning "
Budget: € 32.710,00
Duration: 1/9/2018 - 28/2/2021
Project Type: ERASMUS+

10.) [Rythm4inclusion] "Promoting Social, Emotional, and Learning Skills of Students with and without Special Education Needs by Developing Teachers' Capabilities in Music, Dance and Digital Competences"
Budget: € 54.785,00
Duration: 1/9/2018 - 31/8/2021
Project Type: ERASMUS+

C – Service to the School and the University

- University responsibilities
  - Member of the Scientific Council of the Telecommunication Systems Research Institute (T.S.I.), Technical University of Crete.