TECHNICAL UNIVERSITY OF CRETE

School of Electrical and Computer Engineering

Annual Activity Report

Sep 2016 – Aug 2017

Chania 2017

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, 2016 to Aug. 31, 2017

Name: Georgios Chalkiadakis
Rank: Associate Professor
Years in rank: 1.5
Division: Computer Science
Lab affiliation: Intelligent Systems

A – Teaching

- Undergraduate courses taught
  - COMP 201: Design and Development of Information Systems (mandatory)
  - COMP 417: Artificial Intelligence
  - COMP 517: Multi-agent Systems

- Graduate courses taught

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

B – Publications

- Publications in refereed journals

  - Published:

    - Filippo Bistaffa, Alessandro Farinelli, Georgios Chalkiadakis, and Sarvapali D. Ramchurn: **A Cooperative Game-Theoretic Approach to the Social Ridesharing Problem**. **Artificial Intelligence (AIJ)**, 246, pages 86-117, May 2017. Available online 24 Feb 2017.

- Charilaos Akasiadis and Georgios Chalkiadakis: **Cooperative Electricity Consumption Shifting**. **Sustainable Energy, Grids and Networks**, Volume 9, pages 38-58, March 2017.

- Charilaos Akasiadis and Georgios Chalkiadakis: **Mechanism Design for Demand-Side Management**. **IEEE Intelligent Systems**, Special Issue on AI and Economics, 32(1), pages 24-31, Jan-Feb 2017.

- Valentin Robu, Georgios Chalkiadakis, Ramachandra Kota, Alex Rogers, and Nicholas R. Jennings: **Rewarding Cooperative Virtual Power Plant Formation Using Scoring Rules**. **Energy**. Volume 117, Part 1, pages 19-28, December 2016.

- Angelos Chliaoutakis and Georgios Chalkiadakis: **Agent-Based Modeling of Ancient Societies and their Organization Structure**. **Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS)**, 30(6), pages 1072-1116, November 2016 (published online first: 25 January 2016).

- Publications in refereed conferences

  - Published:
    - Theocharis Kravaris, George A. Vouros, Christos Spatharis, Konstantinos Blekas, Georgios Chalkiadakis and Jose Manuel Cordero Garcia: **Learning Policies for Resolving Demand-Capacity Imbalances during Pre-Tactical Air Traffic Management.** In Proc. of the 15th German Conference on Multiagent System Technologies (**MATES 2017**), Leipzig, Germany, August 2017.
    - Michail Mamakos and Georgios Chalkiadakis: **Probability Bounds for Overlapping Coalition Formation**. In Proc. of the 26th International Joint Conference on Artificial Intelligence (**IJCAI-2017**), Melbourne, Australia, August 2017.
    - F. Coenen, T. Hoppe, G. Chalkiadakis, C. Akasiadis, and T. Tsoutsos: **Exploring Energy Saving Policy Measures by Renewable Energy Supplying Cooperatives (RESCOOPS).** In the ECEEE 2017 Summer Study on Energy Efficiency, Presqu'île de Giens, France, May-June 2017.
    - C. Akasiadis, N. Savvakis, M. Mamakos, T. Hoppe, F. Coenen, G. Chalkiadakis, and T.Tsoutsos. **Analyzing Statistically the Energy Consumption and Production Patterns of European RESCOOP**

members: Results from the H2020 Project RESCOOP PLUS. In the 9th International Exergy, Energy and Environment Symposium (**IEEES-9**), Split, Croatia, May 2017.

- Filippos Christianos and Georgios Chalkiadakis: **Efficient Multi-Criteria Coalition Formation using Hypergraphs (with Application to the V2G Problem).** In Proc. of the 14th European Conference on Multi-Agent Systems (**EUMAS-2016**), Valencia, Spain, December 2016.

- Evangelos Tripolitakis and Georgios Chalkiadakis: **Probabilistic Topic Modeling, Reinforcement Learning, and Crowdsourcing for Personalized Recommendations.** In Proc. of the 14th European Conference on Multi-Agent Systems (**EUMAS-2016**), Valencia, Spain, December 2016.

C – Awards & Distinctions

➢ *Elected Board Member* ("General Secretary") of the **Hellenic AI Society (EETN)** [elected two consecutive times for two 2-years term; *Jan 2015 – Dec 2016* and *Jan 2017-Dec 2019*]

➢ *Invited Tutorial*: **"Cooperative Games in Structured Environments"**, at the 19th *European Agent Systems Summer School (EASSS-2017)*, Gdansk, Poland, August 2017. Co-tutors: Dr. Gianluigi Greco and Dr. Evangelos Markakis.

D – Funded Projects

- Current projects:
  - **Project "DART".** A Horizon 2020 project accepted under the SESAR-02-15 Call – "Data Science in Air Traffic Management". The objective of the DART project is to deliver understanding on the suitability of applying big data techniques for predicting multiple correlated aircraft trajectories based on data-driven models and accounting for air traffic management network complexity effects. **Duration: 2016-2018**
  - **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:
  - ο ΕΔΒΜ34: «Υποστήριξη ερευνητών με έμφαση στους νέους ερευνητές».

E – Professional service

- Society Technical Committee duties
  - ο General Secretary of the Hellenic AI Society (EETN)

- Conference *Senior* Technical Program Committee service
  - ο The 16th Intern. Conference on Autonomous Agents and Multiagent Systems (**AAMAS-17**), Sao Paolo, Brazil, May 2017

- Conference Technical Program Committee service
  - ο The 26th Intern. Joint Conf. on Artificial Intelligence (for the *AI and Autonomy Track* of **IJCAI-17**), Melbourne, Australia, Aug 2017
  - ο the 31st AAAI Conf. on Artificial Intelligence, San Francisco, USA, (**AAAI-17**), Feb 2017
- Reviewing activities
  - ο Reviewer for the conferences I was a Program Committee member at (mentioned above)
  - ο 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

F – Service to the School and the University

- School responsibilities

- University responsibilities

G – Advising

- Active graduate students supervised

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

  - Ph.D. and M.Sc. theses in progress (supervisor)
    - Akasiadis Charilaos (Ph.D.)
    - Chliaoutakis Aggelos (Ph.D.)
    - Tripolitakis Evaggelos (Ph.D.)
    - Kydonakis Ares (M.Sc.)

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

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

- Undergraduate students supervised

  - Diploma theses in progress
    - Floros Efthimios
    - Gkiata Ioanna
    - Katsigiannis Michail
    - Kehagias Georgios
    - Lintas Stefanos

  - Diploma theses completed (supervisor)
    - Asiminakis Marios
    - Christianos Filippos
    - Karamalegkos Emmanuel
    - Papilaris Michail – Aggelos

  - Diploma theses in progress (committee member)
    - Baroutis Nikolaos
    - Chatzipetrou Konstantinos

- Efthimiou Georgios
- Emmanouilidis Konstantinos
- Gemistos Michail
- Kotzampasakis Georgios
- Koukouzas Christos
- Moulios Argyris
- Nikolopoulos Nikolaos
- Pikionis Petros – Platon
- Poulopoulos Dimitrios
- Soursos Petros

- Diploma theses completed (committee member)
  - Bikas Dimitrios
  - Drakopoulos Panagiotis
  - Konstantakis Georgios
  - Liontiris Andreas
  - Sariggelos Athanasios
  - Vagenas Sotirios

Technical University of Crete
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Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Antonios Deligiannakis
Rank: Associate Professor
Years in rank: 4
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

- o Submitted: those published/appeared (see below)
    - ▪ Nikos Giatrakos, Alexander Artikis, Antonios Deligiannakis, Minos N. Garofalakis: Complex Event Recognition in the Big Data Era. PVLDB 10(12): 1996-1999 (2017)
    - ▪ Ioannis Flouris, Nikos Giatrakos, Antonios Deligiannakis, Minos N. Garofalakis, Michael Kamp, Michael Mock: Issues in complex event processing: Status and prospects in the Big Data era. Journal of Systems and Software 127: 217-236 (2017)
    - ▪ 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)

- o Accepted:
    - ▪ Ioannis Flouris, Nikos Giatrakos, Antonios Deligiannakis, Minos N. Garofalakis, Michael Kamp, Michael Mock: Issues in complex event processing: Status and prospects in the Big Data era. Journal of Systems and Software 127: 217-236 (2017)
    - ▪ Nikos Giatrakos, Alexander Artikis, Antonios Deligiannakis, Minos N. Garofalakis: Complex Event Recognition in the Big Data Era. PVLDB 10(12): 1996-1999 (2017)

- o Published:
    - ▪ Nikos Giatrakos, Alexander Artikis, Antonios Deligiannakis, Minos N. Garofalakis: Complex Event Recognition in the Big Data Era. PVLDB 10(12): 1996-1999 (2017)
    - ▪ Ioannis Flouris, Nikos Giatrakos, Antonios Deligiannakis, Minos N. Garofalakis, Michael Kamp, Michael Mock: Issues in complex event processing: Status and prospects in the Big Data era. Journal of Systems and Software 127: 217-236 (2017)

- ● Publications in refereed conferences
    - o Submitted: those published/appeared (see below)
        - ▪ Nektarios Moumoutzis, George Boukeas, Vassilis Vassilakis, Nikos Pappas, Chara Xanthaki, Ioannis Maragkoudakis, Antonios Deligiannakis, Stavros Christodoulakis, Design, Implementation and Evaluation of a Computer Science Teacher Training Programme for Learning and Teaching of Python Inside and Outside School – Establishing and Supporting Code Clubs to Learn

Computer Programming by Self-contained Examples. IMCL 2017: 575-586

- o Accepted:
    - ▪ Nektarios Moumoutzis, George Boukeas, Vassilis Vassilakis, Nikos Pappas, Chara Xanthaki, Ioannis Maragkoudakis, Antonios Deligiannakis, Stavros Christodoulakis, Design, Implementation and Evaluation of a Computer Science Teacher Training Programme for Learning and Teaching of Python Inside and Outside School – Establishing and Supporting Code Clubs to Learn Computer Programming by Self-contained Examples. IMCL 2017: 575-586

- o Published:

- ● Books and edited book chapters

- ● Patents
    - o *GRANTED*
    - 1.

C – Awards & Distinctions

D – Funded Projects

- • Current projects:
    - o [2014 - 2017] FERARI: Flexible Event pRocessing for big dAta aRchItecture (FP7 project, started Feb 2014, duration 3 years) Role: Main Research Team Member

- • Project proposals submitted:
    - o MAELSTROM (ICT-16-2017 Big Data Call. Result: Reserve List)

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)
    - Manikaki Vasiliki (M.Sc.)

  - 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.)

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

  - 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.)
- Rousopoulou Niki (M.Sc.)
- Skoulakis Ioannis (M.Sc.)
- Thermolia Chriso (M.Sc.)
- Verykokidi Eleni – Angela (M.Sc.)
- Zervoudakis Nikolaos (M.Sc.)

- Undergraduate students supervised

  - Diploma theses in progress
    - Giannopoulos Emmanuel
    - Fragkiadoulakis Emmanuel
    - Katsani Merieme
    - Kyriakidou Ioanna
    - Kyriakopoulos Konstantinos
    - Mantonanaki Christina
    - Mariolou Nektaria
    - Moulios Argyris
    - Papageorgiou Dimitrios
    - Petheriotis Angelos
    - Prountzos Georgios
    - Psarakis Kyriakos
    - Vasilaki Anastasia
    - Vatikiotis Evangelos – Achilios
    - Voltsis Evangelos
    - Zoukas Konstantinos

  - Diploma theses completed (supervisor)
    - Karatza Dimitra

  - Diploma theses in progress (committee member)
    - Bobolakis Georgios
    - Demertzis Raphael Athanasios

- Gemistos Michail
- Geronymakis Theodoros
- Ioannou Kostas
- Kotzampasakis Georgios
- Koutsouris Themistoklis
- Lintas Stefanos
- Marianos Nikolaos – Xenophon
- Moumoulidou Zafiria
- Poulopoulos Dimitrios
- Rempoulaki Anastasia
- Smyrneos Dimitrios
- Sourlantzis Sotirios
- Stavroulakis Alexios
- Theodorou Theodoros
- Troulitakis Apostolos
- Tzourbakis Georgios
- Vratsanos Georgios
- Ziakas Georgios

- Diploma theses completed (committee member)
  - Asiminakis Marios
  - Asteri Eirini
  - Chrysogelos Periklis
  - Devetzakis Georgios
  - Drakopoulos Panagiotis
  - Karamalegkos Emmanuel
  - Konstantakis Georgios
  - Papilaris Michail Aggelos
  - Psychas Konstantinos
  - Tsakalakis Georgios
  - Vagenas Sotirios
  - Vardalakis Nikolaos
  - Vestakis Marios

Technical University of Crete
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Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Minos Garofalakis
Rank: Professor
Years in rank: 9 years
Full-time or part-time: Full-time until 31/5/2017, Part-time onwards
(Director of the Information Management Systems Institute at ATHENA Research and Innovation Center, starting 6/2017)
Division: Computer Science
Lab affiliation: SoftNet – Software Technology and Network Applications Laboratory
(Director)

A – Teaching

- Undergraduate courses taught
    - COMP 401: Algorithms and Complexity (mandatory)
    - COMP 415: Advanced Topics in Database Systems

- 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:
    - Accepted:

- o Published:
  - Ioannis Flouris, Nikos Giatrakos, Antonios Deligiannakis, Minos Garofalakis, Michael Kamp, and Michael Mock. "Issues in Complex Event Processing: Status and Prospects in the Big Data Era", Journal of Systems and Software, 127:217-236, 2017.

- ● Publications in refereed conferences

  - o Accepted:

  - o Published:
    - Minos Garofalakis and Vasilis Samoladas. "Distributed Query Monitoring via Convex Analysis: Towards Composable Safe Zones", Proceedings of the 20th International Conference on Database Theory (ICDT'2017), Venice, Italy, March 2017.
      [** Invited to the "Best of ICDT'2017" Special Issue of Theory of Computing Systems **]
    - Nikos Giatrakos, Alexander Artikis, Antonios Deligiannakis, and Minos Garofalakis. "Complex Event Recognition in the Big Data Era" (Tutorial Abstract), Proceedings of the 43rd International Conference on Very Large Databases (VLDB'2017, PVLDB Vol. 10), Munich, Germany, August 2017.

- ● Books and edited book chapters

- ● Patents

C – Awards & Distinctions

- o Elected *IEEE Fellow*, Class of 2017 ("for contributions to data streaming analytics)

D – Funded Projects

- ● Current projects:
  - o FP7-ICT-2013 (Scalable Data Analytics Objective) Collaborative STREP Project: *"FERARI – Flexible Event Processing for Big Data Architectures"*
    Duration : Feb. 2014 – Jan. 2017
    Total funding: 4.3Me, TUC budget: 693Ke
    Role: *Principal Investigator for TUC*
  - o FP7-ICT-2013 (Scalable Data Analytics Objective) Collaborative STREP Project: "QualiMaster – A Configurable Real-Time Data Processing Infrastructure *Mastering Autonomous Quality Adaptation"*
    Duration: Jan. 2014 – Dec. 2016
    Total funding: 3.7Me, TUC/TSI budget: 915Ke
    Role: *Principal Investigator for TUC/TSI*

● Project proposals submitted:

E – Professional service

● Associate Editor duties
   o PVLDB Vol. 10 (2016-17), Foundations and Trends in Databases, Knowledge and Information Systems (KAIS), Statistical Analysis and Data Mining (SAM), Social Network Analysis and Mining (SNAM)

● Society Technical Committee duties

● Conference Technical Program Committee service
   o ACM SIGKDD'2016 (Senior PC), EDBT'2016, UAI'2016

● Conference Organization (specify role)

● Reviewing activities

F – Service to the School and the University

● School responsibilities
   o Software Technology and Network Applications Laboratory, Director

● University responsibilities

G – Advising

● Active graduate students supervised

   o Ph.D. and M.Sc. students supervised (advisor, completed)
      ▪ Pavlakis Nikolaos (M.Sc.)

   o Ph.D. and M.Sc. students supervised (advisor, in progress)
      ▪ Kalantzaki Calliope (Ph.D.)
      ▪ Toutoudakis Michail (Ph.D.)
      ▪ Vazaios Evangelos (Ph.D.)
      ▪ Nydriotis Apostolos (M.Sc.)

   o Ph.D. and M.Sc. awarded (committee member)
      ▪ Sfakianakis Stylianos (Ph.D.)
      ▪ Giakoumakis Theodoros – Marios (M.Sc.)
      ▪ Kastrinakis Marios (M.Sc.)
      ▪ Kostoulas Georgios (M.Sc.)
      ▪ Manikaki Vasiliki (M.Sc.)

- o Ph.D. and M.Sc. Degrees (committee member)
  - Arapi Polyxeni (Ph.D.)
  - Charalampakis Stergios (Ph.D.)
  - Drymonas Efthimios (Ph.D.)
  - Flouris Ioannis (Ph.D.)
  - Georgogiannis Alexandros (Ph.D.)
  - Konstantakis Christos (Ph.D.)
  - Liampa Irene (Ph.D.)
  - Bourdakis Savvas (M.Sc.)
  - Igglezakis Antonios (M.Sc.)
  - Kalaitzis Konstantinos (M.Sc.)
  - Mantakos Georgios (M.Sc.)
  - Ninos Spyridon (M.Sc.)
  - Palolli Giorgo (M.Sc.)
  - Papathanasiou Athanasios (M.Sc.)
  - Preventis Alexandros (M.Sc.)
  - Rousopoulou Niki (M.Sc.)

- ● Undergraduate students supervised

  - o Diploma theses in progress
    - Demertzis Raphael – Athanasios
    - Ziakas Christos
    - Moumoulidou Zafiria

  - o Diploma theses completed (supervisor)
    - Asteri Eirini
    - Chrysogelos Periklis

  - o Diploma theses in progress (committee member)
    - Barberakis Stylianos
    - Boras Charalampos
    - Christodoulopoulos Christos
    - Fotopoulos Spyridon
    - Fragkiadoulakis Emmanuel
    - Giannopoulos Emmanuel
    - Gompaki Efstathia
    - Katsani Merieme
    - Kontaxakis Antonios
    - Kyriakidou Ioanna
    - Kyriakopoulos Konstantinos
    - Mantonanaki Christina
    - Mariolou Nektaria
    - Moulios Argyris

- Petheriotis Aggelos
- Petrou Eleni
- Prountzos Georgios
- Psarakis Kyriakos
- Stathatos Stefanos
- Tzourbakis Georgios
- Vasilaki Anastasia
- Voltsis Evaggelos

o Diploma theses completed (committee member)
- Iordanou Konstantinos
- Karandeinos Ektor

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For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Katerina Mania
Rank: Associate Professor
Years in rank: 4 year 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 2017)
    - COMP 101 – Introduction to Computers and Computer Science (Winter 2016)

- Graduate courses taught
    - COMP 603 – Visualization and Virtual Reality (Spring 2017)

- 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
        - Ragia, L., Sarri, F., Mania, K. (2016). Precise Photorealistic Visualization for Restoration of Historic Buildings based on

Tacheometry Data. Submitted to *Journal of Geographical Systems,* Springer

- o Published
    - Parthenios, P., Petrovski, S., Chatzopoulou, N., Mania, K. (2016) Reciprocal Transformations between Music and Architecture as a Real-time Supporting Mechanism in Urban Design. *International Journal of Architectural Computing*, Vol 14(4), 349-357
    - Sylaiou, S., Mania, K., Paliokas, I., Pujol-Tost, L., Killintzis, V., Liarokapis, F. (2017). Exploring the Educational Impact of Diverse Technologies in Online Virtual Museums. *Int. J. of Arts and Technology*, 2017, vol. 10, No1, 58-84

- Publications in refereed conferences

    - o 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.

- Books and edited book chapters

- Patents
    - o *GRANTED*

C – Awards & Distinctions

D – Funded Projects

- Project proposals submitted:
    - o 'TRANSFERENCE: Research About Neural Substitution using fMRI Enabled Neurofeedback for Subjective Enrichment', FET, HORIZON2020, PI for ECE TUC
    - o 'CREATOR - CollaboRativE plAtform for digiTal cOntent Repurposing', HORIZON2020, PI for ECE TUC
    - o 'G4M: Serious Gaming for Computer Aided Manufacturing', ERASMUS+ proposal, PI for ECE TUC
    - o 'Virtual Experiences for Training and Certification', COST proposal
    - o 'Serious Gaming for Computer Aided Manufacturing', call EYDE-ETAK, PI for ECE TUC

- o 'Development of the digital game titled Polis-Kratos', call EYDE-ETAK, PI of the proposal

E – Professional Service

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

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

- Conference Technical Program Committee service - membership
  - o Computer Graphics International 2016 (CGI 2016), in co-operation with ACM Siggraph, Eurographics
  - o ACM Symposium on Applied Perception 2016, 2017
  - o Edutainment 2016, 2017, Springer
  - o Second International Conference on Internet of Things and Cloud Computing 2017 (ICC 2017, sponsored by ACM and Springer)
  - o IEEE Int. Conf. in Games and Virtual Worlds for Serious Applications (VSGames), sponsored by IEEE, 2016, 2017
  - o GALA 2016, 2017 (Games and Learning Alliance Conference)
  - o IEEE International Conference on Systems, Man, and Cybernetics (SMC 2016)

- Reviewing activities
  - o Various international conferences and journals

F – Service to the School and the University

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

G – Advising

- Active graduate students supervised

    o Graduate students supervised (completed)
        - Evaggelia Mavromichelaki 'Cyberball3D+: A 3D Serious Game for fMRI Investigating Social Exclusion and Empathy'

    o Graduate students supervised (in progress)
        - Evaggelia Mavromichelaki 'Perception-Driven Advancement of Computer Graphics Rendereing and Virtual Reality Technologies' (PhD candidate)
        - Katerina Malisova 'Conceptual 3D Visualization Methodologies' (M.Eng. candidate)
        - Grigorios Kontadakis 'Pedagogically-driven Interactive 3D Applications' (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 Environment and Serious Games for Training' (M.Eng. candidate)

    o Ph.D. and M.Sc. Degrees completed (committee member)
        - Palogiannidi Elisavet (M.Sc.)
        - Pezoulas Vasilios (M.Sc.)

    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)
        - Panagiotis Drakopoulos 'Virtual Reality Flight Simulator with hand-tracking technology and haptic feedback'
        - Mixalis Bouso 'A Haptic Glove Prototype for Tactile Feedback in 3D Interactive Applications'

- Thanos Sariggelos 'Looparound: Development of a Web-based Platform for Musical Loops using 3D Objects in WebGL and a Virtual Sequencer'
- Thanos Ypermachos '3D Driving Simulator Synchronized With Cardiac Timing Intensifying Fear and Threat Processing'

o Diploma theses supervised (in progress)
- Christos Panou 'An Outdoors Augmented Reality Application for Android featuring a Cultural Route through the Old Town of Chania'
- Kostas Ioannou '3D Racing Game Development with Autonomous Opponents'
- Stavroulakis Alexis 'Virtual Reality User Interface and Game Design using Leap Motion and Oculus Rift Technologies'
- Konstantinos Chatzipetrou '3D computer gaming for Smart Vehicular combat racing'
- Theodoros Theodorou 'Development of a 3D real-time Strategy Game with Intelligent Opponent Behaviours'
- Georgios Bobolakis 'Occupational therapy application for kids diagnosed with Attention-Deficit Hyperactivity Disorder for Android platforms'
- Nikolaos Marianos 'Foveated Rendering Algorithms using Eye-Tracking Technology in Virtual Reality Environment'
- Anastasia Reboulaki 'Visualization of Uncertainty'
- Stavroulakis Alexis 'Virtual Reality User Interface and Game Design using Leap Motion and Oculus Rift Technologies'

o Diploma theses in progress (committee member)
- Fragakis Panteleimon
- Geronymakis Theodoros
- Giannelos Evangelos
- Konstantopoulos Konstantinos
- Koutsouris Themistoklis
- Markolefas Filippos
- Papageorgiou Dimitrios
- Paravolidakis Vasilios
- Pikionis Petros – Platon
- Vatikiotis Evangelos Ahilios
- Zafiriou Odysseas
- Zoukas Konstantinos

- Diploma theses completed (committee member)
    - Patsioura Maria
    - Tryfonas Konstantinos – Georgios

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Euripides G.M. Petrakis
Rank: Professor
Years in rank: 4
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:

  - Published:
    - 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 Midleware Services for Heterogeneous Distributed Computing (MidHDC), 74: 179–189, 2017.
    - Stylianos Balampanis, Stelios Sotiriadis, Euripides Petrakis, "*Internet of Things Architecture in Cloud Computing for Enhanced Living Environments*", Cloud Computing for Enhanced Living Environments: Algorithms, Architectures and Platforms (Cloud4ELE), IEEE Cloud Computing, pp. 28–36, November/December 2016.
    - Konstantinos Stravoskoufos, **Euripides G.M. Petrakis**, Nikolaos Mainas, Sotirios Batsakis, Vasilis Samoladas, "*SOWL QL: Querying Spatio – Temporal Ontologies in OWL*", Journal on Data Semantics, Vol. 5, No. 4, pp. 249–269, 2016.

- Publications in refereed conferences

  - Accepted:

  - Published:
    - Pelagia Tsiachri Renta, Stelios Sotiriadis, **Euripides G.M. Petrakis**, "*Healthcare Sensor Data Management on the Cloud*", Workshop on Adaptive Resource Management and Scheduling for Cloud Computing (ARMS–CC 2017), July 28, 2017, Washington, DC, USA.

- Stelios Sotiriadis, Andrus Lehmets, **Euripides G.M. Petrakis**, Nik Bessis,"*Unit and Integration Testing of Modular Cloud Services*", 31st International Conference on Advanced Information Networking and Applications (AINA 2017), Taipei, Taiwan, March 27-29, 2017

- Stelios Sotiriadis, Andrus Lehmets, **Euripides G.M. Petrakis**, Nik Bessis, "*Testing Cloud Services using the TestCast Tool*", 14th International Conference on Information Technology: New Generations (ITNG 2017), Las Vegas, Nevada, USA, April 10-12, 2017.

- Theodoros Soultanopoulos, Stelios Sotiriadis, **Euripides G.M. Petrakis**, Christianna Amza,"*Data Management of Sensor Signals for High Bandwidth Data Streaming to the Cloud*", The 37th IEEE Sarnoff Symposium 2016, New Jersey Institute of Technology Conference Center, Newark, New Jersey, USA, September 19–21, 2016.

- 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, Designing, Developing and Facilitating Smart Cities: Urban Design to IoT Solutions, Springer Book, 2016

- 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.
    - Program Committee (PC) member, 18th IEEE Intern. Conference on E–Health Networking, Applications and Services (HEALTHCOM 2016), 2016, 2017
    - Technical Program Committee (TPC) member, 37th IEEE Sarnoff Symposium 2016, New Jersey Institute of Technology Conference Center, Newark, New Jersey, USA

- Conference Organization (specify role)

- 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
    - Dean's committee member, elected from faculty body of ECE
    - Member of the Board, Telecommunication Research Institute

- University responsibilities

G – Advising

- Active graduate students supervised

    - Ph.D. and M.Sc. students supervised (advisor, completed)
        - Mainas Nikolaos (M.Sc.) (June 2017)

    - 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)
        - Christoulakis Marios (M.Sc.)

    - 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
        - Myrizakis George
        - Tsakos Konstantinos
        - Christodoulopoulos Christos
        - Konstantopoulos Panagiotios

- Diploma theses completed (supervisor)
  - Antonopoulos Filippos
  - Kargatzis Dimitrios
  - Rousalis Apostolos
  - Tsiachri – Renta Pelagia

- Diploma theses in progress (committee member)
  - Pogas Nektarios

- Diploma theses completed (committee member)
  - Chorozoglou Dimitrios
  - Leska Valsamo
  - Tsakaneli Stavroula

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Vasilis Samoladas
Rank: Assistant Professor
Years in rank: 12 years
Full-time or part-time: Full-time
Division: Computer Science
Lab affiliation: Software Technology and Network Applications Laboratory

A – Teaching

- Undergraduate courses taught
    - COMP 301 : Operating Systems (mandatory)
    - COMP 420 : Principles of Distributed Software Systems

- Graduate courses taught
    - COMP 607 : Principles of Distributed Software Systems (Offered jointly with COMP 420)
    - COMP 616 : Computational Geometry

- 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:

- o Published:

- ● Publications in refereed conferences
    - o Published:
        - ▪ Minos N. Garofalakis, Vasilis Samoladas, *Distributed Query Monitoring through Convex Analysis: Towards Composable Safe Zones*. ICDT 2017: 14:1-14:18
- ● Patents
    - o *GRANTED*
    - 1.

C – Awards & Distinctions

D – Funded Projects

- ● Current projects:

- ● Project proposals submitted:

E – Professional service

- ● Conference Technical Program Committee service
    - o *KDIR-2017 9th International Conference on Knowledge Discovery and Information Retrieval*

F – Service to the School and the University

- ● School responsibilities

- ● 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)
  - Chatzisymeon Georgios (Ph.D.)
  - Babalis Charalampos (M.Sc.)
  - Kasimatis Vasilios (M.Sc.)
  - Mantakos Georgios (M.Sc.)
  - Ninos Spyridon (M.Sc.)

- o Ph.D. and M.Sc. Degrees completed (committee member)
  - Mamakos Michail (M.Sc.)
  - Manikaki Vasiliki (M.Sc.)

- o Ph.D. and M.Sc. Degrees in progress (committee member)
  - Charalampakis Stergios (Ph.D.)
  - Kalantzaki Calliope (Ph.D.)
  - Rossos Christos (Ph.D.)
  - Toutoudakis Michail (Ph.D.)
  - Tripolitakis Evaggelos (Ph.D.)
  - Vazaios Evangelos (Ph.D.)
  - Bervanakis Markos (M.Sc.)
  - Bourdakis Savvas (M.Sc.)
  - Galanommatis Ioannis (M.Sc.)
  - Kargatzis Dimitrios (M.Sc.)
  - Nydriotis Apostolos (M.Sc.)
  - Pissadakis Emmanuel (M.Sc.)
  - Skoulakis Ioannis (M.Sc.)
  - Tsiganis Georgios (M.Sc.)
  - Vardoulakis Emmanuel (M.Sc.)

- Undergraduate students supervised

  - o Diploma theses in progress
    - Tzourbakis Georgios
    - Stathatos Stefanos

  - o Diploma theses completed (supervisor)
    - Bikas Dimitrios

  - o Diploma theses in progress (committee member)
    - Barberakis Stylianos
    - Demertzis Raphael Athanasios

- Drakoulaki Eleni
- Gouzionis Ioannis
- Iggilis Anastasia
- Ioannou Nikolaos
- Konstantopoulos Panagiotis
- Kontaxakis Antonios
- Koukounas Aggelos – Panagiotis
- Krikorian Arman
- Kyriakopoulos Konstantinos
- Moumoulidou Zafiria
- Petheriotis Aggelos
- Pouli Christina
- Prountzos Georgios
- Troulitakis Apostolos
- Varikos Antonios
- Vasilaki Anastasia
- Vatikiotis Evaggelos – Achilios
- Vogiatzis Konstantinos
- Ziakas Georgios

- Diploma theses completed (committee member)
    - Andronikakis Andreas
    - Antonopoulos Filippos
    - Asteri Eirini
    - Bousio Michal
    - Chrysogelos Pericles
    - Kargatzis Dimitrios
    - Lykoudis Georgios
    - Papadakis Orion – Nikolaos
    - Pissadakis Emmanuel
    - Rousalis Apostolos
    - Tsiachri – Renta Pelagia
    - Vardoulakis Emmanuel

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Costas Balas
Rank: Professor
Years in rank: 3
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

- Graduate courses taught
    - ACE 603 : Advanced Electronic Imaging and Applications
    - ACE 607 : Optoelectronics
    (Offered jointly with ACE 412)
    - MTIM disrupting technologies

- Curriculum & course development
    - New courses / labs developed
        - MTIM disrupting technologies
    - Lecture notes / slides developed

    - Authored textbooks

B – Publications

- Publications in refereed journals

    - Submitted: those published/appeared (see below)

- o Accepted:
  - ▪ Balas C., Epitropou G., Tsapras A., Hadjinicolaou N., "Hyperspectral Imaging and Spectral Classification for Pigment Identification and Mapping in Paintings by El Greco and his Workshop", accepted for publication at Multimedia Tools and Application Journal in 4th Quarter of 2017

- o Published:

- Publications in refereed conferences

  - o Published:
    - ▪ A. Tsapras, E.Terzakis, E.Papadakis, C.Balas, A.M. Makris, C.Tsatsanis, E.N. Stathopoulos, "Hyperspectral imaging and spectral classification for assisting in vivo diagnosis of melanoma precursors: preliminary results obtained from mice," 2016 IEEE International Conference on Imaging Systems and Techniques (IST), Chania, 2016, pp. 379-383. doi:10.1109/IST.2016.7738255
    - ▪ C. Balas, G. Epitropou, A. Tsapras and N. Hadjinicolaou, "A novel hyperspectral camera and analysis platform for the non-destructive material identification and mapping: An application in paintings by El Greco," 2016 IEEE International Conference on Imaging Systems and Techniques (IST), Chania, 2016, pp. 211-215. doi: 10.1109/IST.2016.7738225
    - ▪ Vourlaki, G. Livanos, T. Giakoumakis, M. Zervakis, G. Giakos and C. Balas, "Recursive-mode K-means clustering for self-organization of Dynamic Imaging data," 2016 IEEE International Conference on Imaging Systems and Techniques (IST), Chania, 2016, pp. 54-59. doi: 10.1109/IST.2016.7738197

- Patents
  - o *GRANTED*

C – Awards & Distinctions

D – Funded Projects

- Current projects:

- Project proposals submitted:

- o RAFFAELLO: Robotics Aided Farming For Agriculture survEiLLance and Operations, H2020, SFS-5-2017 Call: Robotics Advances for Precision Farming
- o ETERNAL:ExTEnding the autonomy of UAVs by Remote chargiNg with High BeAm Lasers, Call for Funding Applications in the Single Action "RESEARCH - CREATE - INNOVATION", funded by Operational Program "Competitiveness,Entrepreneurship and Innovation"
- o XMMaS:Development of a coherent X-ray multispectral microscopy system, Call for Funding Applications in the Single Action "RESEARCH - CREATE - INNOVATION", funded by Operational Program "Competitiveness,Entrepreneurship and Innovation"
- o Robosep: Robotic Vessel Control System, Call for Funding Applications in the Single Action "RESEARCH - CREATE - INNOVATION", funded by Operational Program "Competitiveness,Entrepreneurship and Innovation"
- o SubDive: A novel robotic-enabled 3D digitization framework providing insuperable & real-time virtual tour experience, Call for Funding Applications in the Single Action "RESEARCH–CREATE - INNOVATION", funded by Operational Program "Competitiveness,Entrepreneurship and Innovation"

E – Professional service

- Associate Editor duties
  - o Academic editor Applied sciences
  - o Guest Editor Applied sciences

- Society Technical Committee duties

- Conference Technical Program Committee service
  - o Co-chair IST-IEEE macao Chania 2016
  - o IST-IEEE International board advisor 2017
  - o IST-IEEE Imaging systems and Techniques, China 2017

- Conference Organization (specify role)

- Reviewing activities
  - o Applied Sciences
  - o Applied optics
  - o Optics Express
  - o Bioelectromagnetics

- o IEEE-IST

F – Service to the School and the University

- School responsibilities
  - o Director of the Electronics Lab
  - o Member of the School's Board (Dean's Committee)

- University responsibilities

G – Advising

- Active graduate students supervised

  - o Ph.D. and M.Sc. students completed (supervisor)
    - Giakoumakis Theodoros – Marios (M.Sc.)
    - Kastrinakis Marios (M.Sc.)
    - Rossos Christos (M.Sc.)

  - o Ph.D. and M.Sc. theses in progress (supervisor)
    - Petrantonaki Maria (Ph.D.)
    - Rossos Christos (Ph.D.)
    - Tsapras Athanasios (Ph.D.)
    - Epitropou Giorgos (M.Sc.)
    - Papathanasiou Athanasios (M.Sc.)
    - Vardoulakis Emmanuel (M.Sc.)

  - o Ph.D. and M.Sc. Degrees completed (committee member)
    - Pezoulas Vasilios (M.Sc.)
    - Vourlaki Ioanna – Theoni (M.Sc.)

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

- Undergraduate students supervised

  - Diploma theses in progress
    - Boras Charalampos
    - Christodoulou Theofilos
    - Emmanouilidis Konstantinos
    - Kalomiris Filippos
    - Karimpidis Dionysios
    - Reppas Panagiotis
    - Sioutas Apostolos
    - Vogiatzis Konstantinos

  - Diploma theses completed (supervisor)
    - Bousias Dimitrios
    - Vardoulakis Emmanuel

  - Diploma theses in progress (committee member)
    - Diamantis Christos
    - Drakos Vissarios
    - Gegkios Nikolaos
    - Gompaki Efstathia
    - Kokkonas Dimitrios
    - Marianos Nikolaos – Xenophon
    - Pappas Nikolaos
    - Siachamis Charalampos
    - Syrigos Dimitrios
    - Zografos Apostolos

  - Diploma theses completed (committee member)
    - Andritsou Daphne
    - Manarolis Xenophon
    - Nikolaou Aristides
    - Papadimitriou Aggelos
    - Patsioura Maria
    - Psarros Theodoros

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Matthias Bucher
Rank: Associate Professor
Years in rank: 3
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture
Lab affiliation: Electronics Laboratory

A – Teaching

- Undergraduate courses taught
    - ECE 311: Electronics II (Fall 2016)
    - ECE 416: Design of CMOS Analog Integrated Circuits (Spring 2017)

- Graduate courses taught
    - ECE 604: Special Themes of Analog Integrated Circuit Design (Spring 2017)

- Labs taught
    - ECE 311 – Electronics II (Fall 2016)
    - ECE 416 – Design of CMOS Analog Integrated Circuits (Spring 2017)

B – Publications

- Publications in refereed journals
    - Submitted:
        - A. Papadimitriou, **M. Bucher**, "Multi-Objective Low Noise Amplifier Optimization Using Analytical Model and Genetic Computation", *Circuits, Systems, and Signal Processing*.

- o Accepted:

  - ▪ A. Papadimitriou, **M. Bucher**, "Multi-Objective Low Noise Amplifier Optimization Using Analytical Model and Genetic Computation", *Circuits, Systems, and Signal Processing.* cssp

  - ▪ N. Mavredakis, N. Makris, P. Habas, **M. Bucher,** "Charge-Based Compact Model for Bias-Dependent Variability of 1/f Noise in MOSFETs", *IEEE Trans. on Electron Devices*.

- o Published:

  - ▪ N. Mavredakis, N. Makris, P. Habas, **M. Bucher,** "Charge-Based Compact Model for Bias-Dependent Variability of 1/f Noise in MOSFETs", *IEEE Trans. on Electron Devices*, Vol. 63, No. 11, pp. 4201-4208, Nov. 2016. doi ieeexplore

- • Publications in refereed conferences

  - o A. Papadimitriou, M. Bucher, "Optimization of RF Low Noise Amplifier Design Using Analytical Model and Genetic Computation", 24th Int. Conf. on Mixed Design of Integrated Circuits and Systems (MIXDES), pp. 302-307, Bydgoszcz, Poland, pp. 302-307, June 22-24, 2017. ieeexplore

  - o A. Nikolaou, N. Mavredakis, **M. Bucher**, P. Habas, A. Acovic, R. Meyer, "Statistical Analysis of 1/f Noise in Enclosed-Gate N- and PMOS Transistors", *24th Int. Conf. on Noise and Fluctuations (ICNF)*, pp. 1-4, Vilnius, Lithuania, June 20-23, 2017. ieexplore

  - o M. Coustans, F. Jazaeri, C. Enz, F. Krummenacher, M. Kayal, A. Acovic, R. Meyer, P. Habas, **M. Bucher**, "Variability of Low Frequency Noise and Mismatch in Corner Doped and Standard CMOS Technology", *24th Int. Conf. on Noise and Fluctuations (ICNF)*, pp. 1-4, Vilnius, Lithuania, June 20-23, 2017. ieeexplore

  - o N. Mavredakis, **M. Bucher**, P. Habas, A. Acovic, R. Meyer, "Statistical Compact Modeling of Low Frequency Noise in Buried-Channel, Native, and Standard MOSFETs", *24th Int. Conf. on Noise and Fluctuations (ICNF)*, pp. 1-4, Vilnius, Lithuania, June 20-23, 2017. ieexplore

  - o **M. Bucher**, A. Nikolaou, N. Mavredakis, N. Makris, M. Coustans, J. Lolivier, P. Habas, A. Acovic, R. Meyer, "Variability of Low Frequency Noise and Mismatch in Enclosed-Gate and Standard nMOSFETs", *30th IEEE Int. Conf. on Microelectronic Test Structures (ICMTS)*, pp. 177-180, Grenoble, France, March 28-30, 2017. doi ieexplore

- N. Mavredakis, **M. Bucher**, "Compact Model for Variability of Low Frequency Noise due to Number Fluctuation Effect", *46th European Solid-State Device Research Conference (ESSDERC)*, Lausanne, Switzerland, pp. 464-467, Sept. 12-15, 2016. doi ieeexplore

C – Awards & Distinctions

D – Funded Projects

- Current projects:

- Project proposals submitted:
    - H2020 ICT-31-2017.
    - COST OC-2016-2-21733.

- Development of Electronics Laboratory infrastructure:
    - Cadence IC & System software.
    - Keysight ADS and IC-CAP software.

E – Professional service

- Conference Technical Programme Committee service
    - TPC member, 23rd International Conference on Mixed *Design of Integrated Circuits and Systems (MIXDES 2017).*

- Reviewing activities
    - *IEEE Transactions on Electron Devices*
    - *IEEE Transactions on Nuclear Science*
    - *IEEE Journal of the Electron Device Society*
    - *Solid-State Electronics*
    - *Superlattices and Microstructures*

F – Service to the School and the University

- School responsibilities
    - Member of the committee for the admission of undergraduate students.
    - Deputy member of the postgraduate studies committee.

G – Advising

- Graduate students supervised

    - Ph.D. theses completed (supervisor):

    - Ph.D. students supervised (supervisor):
        - Nikos Makris. Charge-based modeling of field-effect transistors. Enrollment: 2015

    - Ph.D. students co-supervised:
        - Efstratios Violakis

    - M.Sc. theses completed (supervisor):

    - M.Sc. students supervised (supervisor):
        - Loukas Chevas, Enrollment: Jul. 2017
        - Angelos Papadimitriou, Design of building blocks of integrated RF CMOS transceivers. Enrollment: Feb. 2017
        - Alexia Papadopoulou, Design of building blocks RF integrated circuit front-ends in CMOS technology. Enrollment: Sept. 2016
        - Aristeidis (Aris) Nikolaou, Modeling and characterization of enclosed gate MOSFETs, Enrollment: Sept. 2016

- Undergraduate students supervised

    - Diploma theses completed (supervisor):
        - Xenofon Manarolis, Statistical analysis of low frequency noise in native MOS transistors, Apr. 2017
        - Angelos Papadimitriou, Optimized design of integrated RF CMOS low noise amplifiers, Feb. 2017

- Alexia Papadopoulou, Design of a 5 GHz integrated radio frequency power amplifier in 90nm CMOS technology, Sept. 2016
- Aristeidis Nikolaou, Statistical analysis of low frequency noise in enclosed gate MOSFETs, Sept. 2016

o Diploma students (supervisor):
  - Christos Diamantis, Characterization of statistical variability of enclosed gate nMOSFETs
  - Vissarion (Aris) Drakos, Characterization of statistical variability of enclosed gate pMOSFETs
  - Apostolos Zografos, Analysis of radiation effects in CMOS technology at high total ionizing dose (TID)
  - Michael Iosifidis, Study of power and high-voltage MOSFETs
  - Dimitrios Kokkonas, Experimental and analytical study of scaling in advanced CMOS technologies
  - Nicolas Gegios, Analysis of analog and RF figures-of-merit of advanced CMOS technology.

o Diploma theses completed (committee member):

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Apostolos Dollas
Rank: Professor
Years in rank: 16
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 101: Logic Design (mandatory)
    - ACE 203: Advanced Logic Design (mandatory)

- Graduate courses taught

- Labs taught
    - Supervised the labs of ACE 101
    - 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.

- 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
  - A. Tripolitsiotis, N. Prokas, S. Kyritsis, A. Dollas, I. Papaefstathiou, and P. Partsinevelos, "Dronesourcing: a modular, expandable multi-sensor UAV platform for combined, real-time environmental monitoring", International Journal of Remote Sensing Vol 38, Issue 8-10, pp. 2757-2770, Taylor and Francis, May, 2017.
  - K. Kalaitzis, E. Sotiriadis, I. Papaefstathiou, A. Dollas "Evaluation of External Memory Access Performance on a High-End FPGA Hybrid Computer", Computation, Vol. 4, Issue 4, p.41 cff., Multidisciplinary Digital Publishing Institute (MDPI) Press, Oct., 2016.

- Publications in refereed conferences (Published)
  - M. Kousanakis, A. Dollas, E. Sotiriades, I. Papaefstathiou, et al., "An Architecture for the Acceleration of a Hybrid Leaky Integrate and Fire SNN on the Convey HC-2ex FPGA-Based Processor", in Proceedings, IEEE 25th Annual International Symposium on Field-Programmable Custom Computing Machines (FCCM), pp. 56-63, Napa Valley, IEEE Press, April 2-4, 2017.
  - A. Brokalakis, N. Tampouratzis, A. Nikitakis, I. Papaefstathiou, S Andrianakis, A. Dollas, "An Open-Source Extendable, Highly-Accurate and Security Aware CPS Simulator", 13th International Conference on Distributed Computing in Sensor Systems (DCOSS 2017), Ottawa, Canada, June 5-7, 2017.
  - C. Kritikakis, G. Chrysos, A. Dollas, D. Pnevmatikatos, "An FPGA-based High-Throughput Stream Join Architecture", Proceedings of the 26th International Conference on Field Programmable Logic and Applications (FPL 2016), pp. 1-4, Lausanne, Switzerland, Aug. 29 – Sep. 2, 2016, IEEE Press.
  - K. Georgopoulos, G. Chrysos, P. Malakonakis, A. Nikitakis, N. Tampouratzis, A. Dollas, D. Pnevmatikatos, Y. Papaefstathiou, "An Evaluation of Vivado HLS for Efficient System Design", Proceedings, 58th ELMAR International Symposium, pp. 195-199, Zadar, Croatia, September 12-14, IEEE Press, 2016.

C – Awards & Distinctions

- o Steering Committee Member, 26th IEEE/ACM International Symposium on Field Programmable Logic (FPL), Lausanne, Switzerland, Aug. 29-Sept. 2, 2016.
- o Steering Committee member, IEEE/ACM 27th International Symposium on Field Programmable Logic (FPL), Ghent, Belgium, Aug 29 – Sept. 4-8, 2017.
- o HIPEAC Paper Award for the paper "An Architecture for the Acceleration of a Hybrid Leaky Integrate and Fire SNN on the Convey HC-2ex FPGA-Based Processor", presented at the IEEE 25th Annual International Symposium on Field-Programmable Custom Computing Machines (FCCM) - https://www.hipeac.net/research/paper-awards/2017/ (under 2017 FCCM tab).

D – Funded Projects

- Current projects:
  - o Participation in the FP7-ICT-2013 (Scalable Data Analytics Objective) Collaborative STREP Project: "QualiMaster – A Configurable Real-Time Data Processing Infrastructure *Mastering Autonomous Quality Adaptation",* Jan. 2014 – Dec. 2016, Project total funding: 3.7Me, TUC/TSI budget: 915Ke, Project PI and TUC PI: Prof. Minos Garofalakis. Role: *WP3 and Hardware Team Leader* (WP3 budget: approx. 300Ke). Duration: Jan. 2014 – Jan. 2017.
  - o "COSSIM "A Novel, Comprehensible, Ultra-Fast, Security-Aware CPS Simulator", Founding Source : European Commission, Total Funding : €274.375,00, Duration : Jan. 2015 – Jan. 2018.

E – Professional service

- Conference Technical Program Committee service
  - o Program Committee Member, 26th IEEE/ACM International Symposium on Field Programmable Logic (FPL), Lausanne, Switzerland, Aug. 29-Sept. 2, 2016.
  - o Program Committee Member, IEEE/ACM 27th International Symposium on Field Programmable Logic (FPL), Ghent, Belgium, Aug 29 – Sept. 4-8, 2017.
  - o Programmable Technology (FPT, IEEE Sponsored), Xi'an, China, December 7-9, 2016.

- o Program Committee Member, International Conference on Field Programmable Technology (FPT, IEEE Sponsored), Melbourne, Australia, December 11-13, 2017.

  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
  - o 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
  - o Dean of ECE (since September, 2013)
  - o Ex-officio Chairman of the Dean's Council
  - o Ex-officio chairman of ECE faculty elections, TUC
  - o Ex-officio member of the ad hoc Undergraduate Studies Committee
  - o Ex-officio member of the ad hoc Graduate Studies Committee
  - o Ex-officio coordinator of Faculty Election Boards for the School of ECE at TUC
  - o Faculty Advisor to the 1st semester students
  - o Member, Undergraduate Studies Committee
  - o Member of faculty election boards at:
    - o the Technical University of Crete (multiple positions)
    - o the University of Crete
    - o the University of Athens
    - o the Aristotelean University of Thessaloniki
    - o the Democritus University of Thrace
    - o the Technological Educational Institute of the Peloponnese
  - o 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.

- University responsibilities
  - o Ex-officio member of the University Senate, TUC

- o Ex-officio member of the board of the corporation for the management of TUC assets
- o Ex-officio member of the TUC Student Services Committee
- o Ex-officio member of the TUC Property Development and Exploitation Committee

G – Advising

- Active graduate students supervised

  - o Ph.D. and M.Sc. students completed (supervisor)
    - Kousanakis Emmanuel (M.Sc.)
    - Rousopoulos Christos (M.Sc.)

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

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

  - o Ph.D. and M.Sc. Degrees in progress (committee member)
    - Brokalakis Andreas (Ph.D.)
    - Chatzivasilis Georgios (Ph.D.)
    - Charitopoulos Georgios (Ph.D.)
    - Ioannou Aggelos (Ph.D.)
    - Tabouratzis Nikolaos (Ph.D.)
    - Vatsolakis Charalampos (Ph.D.)
    - Galanommatis Ioannis (M.Sc.)
    - Giakoumakis Pavlos (M.Sc.)
    - Malavazos Konstantinos (M.Sc.)
    - Mesarhakis Georgios (M.Sc.)
    - Miteloudi Konstantina (M.Sc.)
    - Savvakos Charalampos (M.Sc.)
    - Tsakaneli Stavroula (M.Sc.)

- Undergraduate students supervised

  - o Diploma theses in progress
    - Badogiannis Nikolaos

- Fotinopoulos Georgios
- Fotopoulos Spyridon
- Konstantopoulos Konstantinos
- Kordas Sotiris
- Kyparissas Nikolaos
- Marinaki Eftihia
- Logothetis Fragkoulis
- Politsis Konstantinos
- Sotiropoulos Antonios
- Siachamis Charalampos

- Diploma theses completed (supervisor)
  - Antoniou Leonidas
  - Bozikas Dimitrios
  - Iordanou Konstantinos
  - Karandinos Hector
  - Malandrakis Miller Georgios
  - Mourtzanos Triantaphyllos
  - Sarantaris Eleftherios

- Diploma theses in progress (committee member)
  - Andronikidis Georgios
  - Athanasiou Vasilios
  - Bolonakis Georgios
  - Chondroulis Ioannis
  - Demertzis Eleftherios
  - Drakoulaki Eleni
  - Doitsinis Ioannis
  - Georgiadis Vasilios
  - Grammatopoulos Athanasios – Vasilios
  - Iatrakis Georgios
  - Iatrakis Petros – Pavlos
  - Iggilis Anastasia
  - Katsinelis Konstantinos
  - Kitsakis Dimitrios
  - Kostarelos Fotios
  - Myrkos Demosthenes
  - Panagidis Giannakis
  - Pekridis Georgios
  - Pentafragkas Georgios

- Petsas Dimitrios
- Pouli Christina
- Rekoumis Dimitrios
- Theodoroglaki Ioanna
- Toupas Petros
- Vatsithianos Nikolaos
- Vogiatzis Konstantinos

- Diploma theses completed (committee member)
  - Kyriakidis Konstantinos
  - Magiropoulos Evaggelos
  - Malavazos Konstantinos
  - Michailou Lampros
  - Tryphonas Konstantinos – Georgios

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Eftichios Koutroulis
Rank: Associate Professor
Years in rank: 1
Full-time or part-time: Full – Time
Division: Electronics and Computer Architecture
Lab affiliation: Electric Circuits and Renewable Energy Sources Laboratory

A – Teaching

- Undergraduate courses taught
    - ACE 102 : Basic Circuit Theory (mandatory)
    - ACE 511: VLSI and ASIC Systems Design

- Graduate courses taught
    - ACE 601: VLSI and ASIC Systems Design
      (Offered jointly with ACE 511)
    - ENE 602: Special Topics on Electronic Energy Management Systems

- Curriculum & course development
    - Lecture notes / slides developed
        - ACE 102: Basic Circuit Theory: updated the existing slides
        - ACE 511: VLSI and ASIC Systems Design: updated the existing slides
        - ENE 602: Special Topics on Electronic Energy Management Systems: updated the existing slides & developed new slides

B – Publications

- Publications in refereed journals

    - Published:

- ▪ Y. Yang, E. Koutroulis, A. Sangwongwanich, F. Blaabjerg, "Pursuing Photovoltaic Cost-Effectiveness: Absolute Active Power Control Offers Hope in Single-Phase PV Systems", *IEEE Industry Applications Magazine*, vol. 23, no. 5, pp. 40-49, 2017.

- Book chapters

  - o Published:
    - ▪ E. Koutroulis and F. Blaabjerg, "Chapter 5 - Overview of Maximum Power Point Tracking Techniques for Photovoltaic Energy Production Systems", In: "Renewable Energy Devices and Systems with Simulations in MATLAB and ANSYS", CRC Press, pp. 91-130, 2017.

C – Awards & Distinctions

➢ Invited talk at the "Wireless Sensor Networks School" (WiSe School), Aristotle University of Thessaloniki, Dec. 17, 2016.

D – Funded Projects

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

- Project proposals submitted:
  - o "ΕΡΕΥΝΩ-ΔΗΜΙΟΥΡΓΩ-ΚΑΙΝΟΤΟΜΩ" call

E – Professional service

- Associate Editor duties

  - o Associate Editor of the "Renewable Energy and Environmental Sustainability" journal (publisher: EDP Sciences).
  - o Member of the Editorial Board of the "Renewable Energy" journal (publisher: Elsevier).

- Reviewing activities

  - Performed 40 reviews of journal papers (including revisions) for:
    - IEEE Transactions on Power Electronics
    - IEEE Journal of Photovoltaics
    - IEEE Journal of Emerging and Selected Topics in Power Electronics
    - IEEE Transactions on Instrumentation & Measurement
    - IEEE Transactions on Energy Conversion
    - IEEE Transactions on Industrial Electronics
    - IEEE Transactions on Sustainable Energy
    - Renewable Energy
    - Electric Power Components and Systems
    - Energy Conversion & Management
    - Scientific Reports

  - Reviewed 2 book proposals for CRC Press and WILEY

F – Service to the School and the University

- School responsibilities

  - School coordinator for the ERASMUS+ program
  - Editing of the postgraduate program guide (in Greek)
  - Undergraduate studies advisor

G – Advising

- Active graduate students supervised

  - Ph.D. and M.Sc. theses in progress (supervisor)
    - Mandourarakis Ioannis (Ph.D.)
    - Christeas Dimitrios (M.Sc.)

  - Ph.D. and M.Sc. Degrees completed (committee member)
    - Daskalakis Spyridon – Nektarios

  - Ph.D. and M.Sc. Degrees in progress (committee member)
    - Akasiadis Charilaos (Ph.D.)
    - Pantzekos Panagiotis (Ph.D.)
    - Kladou Anastasia (M.Sc.)

- ▪ Malisovas Athanasios (M.Sc.)
- ▪ Oikonomakos Panagiotis (M.Sc.)
- ▪ Viskadouraki Evangelia (M.Sc.)

- • Undergraduate students supervised

  - o Diploma theses in progress
    - ▪ Georgiadis Vasilios
    - ▪ Giannopoulos Asimakis
    - ▪ Dimitriadis Konstantinos
    - ▪ Dimitriou Georgios
    - ▪ Kitsakis Dimitrios
    - ▪ Kosmopoulos Stefanos
    - ▪ Koukouzas Christos
    - ▪ Loukas Georgios
    - ▪ Petrakis Emmanuel
    - ▪ Politis Vasilios
    - ▪ Sason Nektarios
    - ▪ Vatsithianos Nikolaos
    - ▪ Zorbas Sotirios

  - o Diploma theses completed (supervisor)
    - ▪ Loukas Georgios
    - ▪ Tryfonas Konstantinos – Georgios

  - o Diploma theses in progress (committee member)
    - ▪ Charalampous Charalampos
    - ▪ Gioumatzidis Meletios
    - ▪ Kalogridis Stylianos
    - ▪ Kehagias Georgios
    - ▪ Kokkonas Dimitrios
    - ▪ Konstantinidis Georgios
    - ▪ Kordas Sotiris
    - ▪ Kostakis Konstantinos
    - ▪ Kouloukythas Odysseas
    - ▪ Mitrosilis Ioannis
    - ▪ Papadimitriou Nikolaos
    - ▪ Passisis Spyridon
    - ▪ Psarras Ioannis
    - ▪ Rekoumis Dimitrios

- Sfakianakis Konstantinos
- Smyrneos Dimitrios
- Vratsanos Georgios

- Diploma theses completed (committee member)
  - Christianos Filippos
  - Manarolis Xenophon
  - Roufagalas Elias
  - Tsaniklidis Georgios

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Ioannis Papaefstathiou
Rank: Associate Professor
Years in rank: 6
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture
Lab affiliation: Microprocessor and Hardware Laboratory

A – Teaching

- Undergraduate courses taught
    - ACE 201: Digital Computers (mandatory)
    - ACE 415: Computer Architecture
    - COMP 519: Information Systems Security

- Graduate courses taught
    - COMP 618: Information Systems Security

- Labs taught

- Curriculum & course development
    - New courses / labs developed

    - Lecture notes / slides developed
        - For ACE415 (which I taught for the first time)
        - For COMP518 and COMP619 so as to cover new material

    - Authored textbooks

B – Publications

- Publications in refereed journals

- Submitted: those published/appeared (see below)

- Accepted:
  - 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

- Published:
  - 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
  - G. Hatzivasilis, K. Fysarakis, I. Papaefstathiou, C. Manifavas, "A review of lightweight block ciphers," Journal of Cryptographic Engineering (JCEN), Springer, Available online 12 April 2017, doi:10.1007/s13389-017-0160-y.
  - Achilleas Tripolitsiotis, Nikolaos Prokas, Sarantis Kyritsis, Apostolos Dollas, Ioannis Papaefstathiou, and Panagiotis Partsinevelos, "Dronesourcing: a modular, expandable multi-sensor UAV platform for combined, real-time environmental monitoring", International Journal Of Remote Sensing Vol 38, Issue 8-10
  - Kalaitzis, K.; Sotiriadis, E.; Papaefstathiou, I.; Dollas A., "Evaluation of External Memory Access Performance on a High-End FPGA Hybrid Computer". Computation 2016, 4, 41.
  - G. Hatzivasilis, I. Papaefstathiou, D. Plexousakis, C. Manifavas, N. Papadakis, "AmbISPDM: Managing Embedded Systems in Ambient Environment and Disaster Mitigation Planning", Applied Intelligence, Springer (2017), Available online 30 August 2017
  - N. Tampouratzis, P. Mattheakis, I. Papaefstathiou, "Accelerating Intercommunication in Highly Parallel Systems", ACM Transactions on Architecture and Code Optimization, Vol 13, Issue 4, Article 40, December 2016

- Publications in refereed conferences
  - Accepted:

  - Published:
    - Andreas Brokalakis, Nikolaos Tampouratzis, Antonios Nikitakis, Ioannis Papaefstathiou, Stamatis Andrianakis, Apostolos Dollas,

"An Open-Source Extendable, Highly-Accurate and Security Aware CPS Simulator", 13th International Conference on Distributed Computing in Sensor Systems (DCOSS 2017), Ottawa, Canada, June 5-7, 2017.

  - Emmanouil Kousanakis, Apostolos Dollas, Euripides Sotiriades, Ioannis Papaefstathiou, Dionisios N. Pnevmatikatos, Athanasia Papoutsiy, Panagiotis C. Petrantonakisy, Panayiota Poiraziy, Spyridon Chavlis and George Kastellakis, "An Architecture for the Acceleration of a Hybrid Leaky Integrate and Fire SNN on the Convey HC-2ex FPGA-Based Processor", 25th Annual International IEEE Symposium on Field-Programmable Custom Computing Machines (FCCM 2017), April 30 - May 2, Napa, CA, USA

  - K. Fysarakis, O. Soultatos, I. Askoxylakis, C. Manifavas, I. Papaefstathiou and V. Katos, "Which IoT Protocol? Comparing standardized approaches over a common M2M application", 2016 IEEE Global Communications Conference (GLOBECOM 2016), Washington, DC, USA, December 4-8, 2016.

  - K. Georgopoulos, G. Chrysos, P. Malakonakis, A. Nikitakis, N. Tampouratzis, A. Dollas, D. Pnevmatikatos, Y. Papaefstathiou, "An Evaluation of Vivado HLS for Efficient System Design", Proceedings, 58th ELMAR International Symposium, pp. 195-199, Zadar, Croatia, September 12-14, IEEE Press, 2016.

- Books and edited book chapters

- 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 DATE
    - IEEE CANDAR
    - IEEE FPL

- Conference Organization (specify role)

- 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
    - Responsible for Co-op, 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)
        - Kalodimas Panagiotis (M.Sc.)

- Ph.D. and M.Sc. theses in progress (supervisor)
  - Brokalakis Andreas (Ph.D.)
  - Chatzivasilis Georgios (Ph.D.)
  - Ioannou Aggelos (Ph.D.)
  - Tampouratzis Nikolaos (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)
  - Baharidis Konstantinos (M.Sc.)
  - Rousopoulos Christos (M.Sc.)

- 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.)

- Undergraduate students supervised

  - Diploma theses completed (supervisor)
    - Malavazos Konstantinos
    - Palavras Emmanuel

  - Diploma theses in progress (supervisor)
    - Athanasiou Vasilios
    - Chondroulis Ioannis
    - Demertzis Eleftherios
    - Grammatopoulos Athanasios - Vasilios
    - Kontos Nikolaos
    - Lytridis Nikolaos
    - Panagidis Giannakis
    - Petsas Dimitrios
    - Pogas Nektarios
    - Sourlantzis Sotirios
    - Theodoroglaki Ioanna

- Toupas Petros
- Vogiatzis Konstantinos

- Diploma theses completed (committee member)
    - Antoniou Leonidas
    - Bousio Michal
    - Bozikas Dimitrios
    - Iordanou Konstantinos
    - Kapellaki Maria
    - Karandinos Ector
    - Magiropoulos Evangelos
    - Malandrakis Miller Georgios
    - Marakakis Georgios
    - Michailou Lampros
    - Sidiropoulos Stefanos

- Diploma theses in progress (committee member):
    - Amourgianos – Lorentzos Vasilios
    - Andronikidis Georgios
    - Fotinopoulos Georgios
    - Fotopoulos Spyridon
    - Iatrakis Petros – Pavlos
    - Kordas Sotiris
    - Kostarelos Fotios
    - Koukounas Angelos – Panagiotis
    - Kyparissas Nikolaos
    - Krikorian Arman
    - Logothetis Fragkoulis
    - Mantonanaki Christina
    - Myrkos Demosthenes
    - Pekridis Georgios
    - Politis Vasilios
    - Politsis Konstantinos
    - Sason Nektarios
    - Sotiropoulos Antonios
    - Varikos Antonios
    - Zoidis Nikolaos

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Dionisios Pnevmatikatos
Rank: 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 302: Computer Organization (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: those published/appeared (see below)

    - Accepted:

- o Published:
  - ▪ George Charitopoulos, Iosif Koidis, Kyprianos Papadimitriou, Dionisios Pnevmatikatos, Run-time management of systems with partially reconfigurable FPGAs, Integration, the VLSI Journal, Volume 57, March 2017, Pages 34–44. DOI: 10.1016/j.vlsi.2016.11.008
  - ▪ 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)

- Publications in refereed conferences

  - o Accepted:

  - o Published:
    - ▪ Charalabos Kritikakis, Grigorios Chrysos, Apostolos Dollas, Dionisios N. Pnevmatikatos, An FPGA-based high-throughput stream join architecture. In Proceedings, International Conference on Field Programmable Logic and Applications (FPL), Sept 2016: 1-4
    - ▪ Somnath Mazumdar, Eduard Ayguadé, Nicola Bettin, Javier Bueno, Sara Ermini, Antonio Filgueras, Daniel Jiménez-González, Carlos Álvarez-Martinez, Xavier Martorell, Francesco Montefoschi, David Oro, Dionisios N. Pnevmatikatos, Antonio Rizzo, Dimitris Theodoropoulos, Roberto Giorgi, AXIOM: A Hardware-Software Platform for Cyber Physical Systems. DSD, Sept 2016: 539-546
    - ▪ Dimitris Theodoropoulos, Nikolaos Alachiotis, Dionisios N. Pnevmatikatos: Multi-FPGA Evaluation Platform for Disaggregated Computing. The 25th IEEE International Symposium on Field-Programmable Custom Computing Machines (FCCM), April 30 - May 2, 2017: 193 (*Poster*)
    - ▪ Emmanouil Kousanakis, Apostolos Dollas, Euripides Sotiriades, Ioannis Papaefstathiou, Dionisios N. Pnevmatikatos, Athanasia Papoutsi, Panagiotis C. Petrantonakis, Panayiota Poirazi, Spyridon

Chavlis, George Kastellakis: An Architecture for the Acceleration of a Hybrid Leaky Integrate and Fire SNN on the Convey HC-2ex FPGA-Based Processor. The 25th IEEE International Symposium on Field-Programmable Custom Computing Machines (FCCM), April 30 - May 2, 2017: 56-63

- Dirk Stroobandt, Catalin Bogdan Ciobanu, Marco D. Santambrogio, Gabriel Figueiredo, Andreas Brokalakis, Dionisios N. Pnevmatikatos, Michael Hübner, Tobias Becker, Alex J. W. Thom: An open reconfigurable research platform as stepping stone to exascale high-performance computing. DATE 2017: 416-421

- Mario Drumond, Alexandros Daglis, Nooshin Mirzadeh, Dmitrii Ustiugov, Javier Picorel, Babak Falsafi, Boris Grot, Dionisios N. Pnevmatikatos: The Mondrian Data Engine. The 44th International Symposium on Computer Architecture (ISCA), June 24-28, 2017: 639-651

- 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

- Books and edited book chapters

- Patents

C – Awards & Distinctions

➢ HiPEAC paper award (https://www.hipeac.net/research/paper-awards/2017) for three papers:
  o An Architecture for the Acceleration of a Hybrid Leaky Integrate and Fire SNN on the Convey HC-2ex FPGA-Based ProcessorEmmanouil Kousanakis, Apostolos Dollas, Euripides Sotiriades, Ioannis Papaefstathiou, Dionisios N. Pnevmatikatos, Athanasia Papoutsi, Panagiotis C. Petrantonakis, Panayiota Poirazi, Spyridon Chavlis, George Kastellakis

- o Multi-FPGA Evaluation Platform for Disaggregated ComputingDimitris Theodoropoulos, Nikolaos Alachiotis, Dionisios N. Pnevmatikatos
- o The Mondrian Data EngineMario Drumond, Alexandros Daglis, Nooshin Mirzadeh, Dmitrii Ustiugov, Javier Picorel, Babak Falsafi, Boris Grot, Dionisios N. Pnevmatikatos

D – Funded Projects

- Current projects:
  - o AXIOM, Agile, eXtensible, fast I/O Module for the cyber-physical era. H2020, Institutional budget: 320K€ Duration: Feb 2015 – Jan 2018.
  - o dRedBox, H2020, Project Technical Coordinator and Scientific Coordinator, budget 532K€, Duration Jan 2016 – Dec 2018
  - o 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
  - o DATE, FPL, ICCD, PACET, RAW, Reconfig, SAMOS, PACET
  - o ParaFPGA, WRC (workshops)

- Conference Organization (specify role)

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

  - o 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)

    - Ph.D. and M.Sc. theses in progress (supervisor)
        - Haritopoulos Georgios (Ph.D.)
        - Vatsolakis Charalampos (Ph.D.)
        - Galanommatis Ioannis (M.Sc.)
        - Pissadakis Emmanuel (M.Sc.)

    - Ph.D. and M.Sc. Degrees completed (committee member)
        - Kousanakis Emmanuel (M.Sc.)
        - Rousopoulos Christos (M.Sc.)
        - Rossos Christos (M.Sc.)

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

- Undergraduate students supervised

    - Diploma theses completed (supervisor)
        - Andronikakis Andreas
        - Kapellaki Maria
        - Kyriakidis Konstantinos
        - Magiropoulos Evaggelos
        - Papadakis Orion Nikolaos
        - Pissadakis Emmanuel

- Sidiropoulos Stefanos

o Diploma theses in progress (supervisor)
  - Amourgianos Lorentzos – Vasilios
  - Andronikidis Georgios
  - Doitsinis Ioannis
  - Drakoulaki Eleni
  - Iatrakis Georgios
  - Iatrakis Petros – Pavlos
  - Iggilis Anastasia
  - Katsinelis Konstantinos
  - Kostarelos Fotios
  - Koukounas Aggelos – Panagiotis
  - Krikorian Arman
  - Mellos Alexandros
  - Myrkos Demosthenes
  - Pekridis Georgios
  - Pentafragkas Georgios
  - Pouli Christina
  - Tampakakis Ioannis
  - Varikos Antonios

o Diploma theses completed (committee member)
  - Bozikas Dimitrios
  - Gerolymatos Dionysios
  - Malandrakis Miller Georgios
  - Malavazos Konstantinos
  - Mourtzanos Triantafyllos

o Diploma theses in progress (committee member):
  - Fotinopoulos Georgios
  - Grammatopoulos Athanasios – Vasilios
  - Kyparissas Nikolaos
  - Panagidis Giannakis
  - Petsas Dimitrios
  - Pogas Nektarios
  - Politsis Konstantinos
  - Sotiropoulos Antonios
  - Theodoroglaki Ioanna
  - Toupas Petros

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: George Stavrakakis
Rank: Full Professor
Years in rank: 22
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 : 1
  - Konstantinos Blazakis, Sima Davarzani, Georgios Stavrakakis, Ioana Pisica, "Lessons Learnt from Mining Meter Data of Residential Consumers" Periodica Polytechnica Electrical Engineering and Computer Science, Vol. 60(4), pp. 266 - 272, 2016.

● 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:
  - Design of an intelligent system for sustainable management of water networks: application to Crete Island – Greece. Oct. 1st 2015-Dec. 31st 2016. Project code: ΣΑ075/8.Funding code: GR02XM EOX 2009-2014. Partner.

● Project proposals submitted: 2

E – Professional service

● **Member of the Editorial Board of the peer review international journal "ENERGIES"** i.e. http://www.mdpi.com/journal/energies/editors#editorialboard

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

- Conference Organization (specify role) : none
- Reviewing activities : In seven high quality international Journals with referees:
  - Permanent invited Reviewer of the Journal of Intelligent and Robotic Systems.
  - Permanent invited Reviewer of the IEEE Transactions on Energy Conversion.
  - Permanent invited Reviewer of the Electric Power Systems Research
  - Reviewer on call basis International Journal of Distributed Sensor Networks
  - Reviewer on call basis Renewable Energy journal
  - Reviewer on call basis IEEE Transactions on Automation Science and Engineering
  - Reviewer on call basis Neural Computing and Applications

- Participation in National Committees (e.g. ΕΔΕΤ) : one
  - "Permanent Committee of the Prefecture of Crete for the Energy Planning of Crete Island"

F – Service to the School and the University

- School – level responsibilities: none

- University responsibilities : none

G – Advising

- Active graduate students supervised

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

  - Ph.D. and M.Sc. students supervised (advisor, in progress)
    - Blazakis Konstantinos (Ph.D.)
    - Yotis Thomas (Ph.D.)
    - Kladou Anastasia (M.Sc.)
    - Mesarchakis Georgios (M.Sc.)
    - Syntzanaki Athena (M.Sc.)

- ▪ Viskadouraki Evangelia (M.Sc.)

- o Ph.D. and M.Sc. degrees awarded (committee member)
  - ▪ Vamvoukakis Konstantinos (M.Sc.)

- o Ph.D. and M.Sc. Degrees (committee member)
  - ▪ Mandourarakis Ioannis (Ph.D.)
  - ▪ Tripolitakis Evangelos (Ph.D.)
  - ▪ Bardis Stamatios (M.Sc.)
  - ▪ Brellas Konstantinos (M.Sc.)
  - ▪ Chatzidakis Panagiotis (M.Sc.)
  - ▪ Fytraki Evangelia (M.Sc.)
  - ▪ Xifaras Konstantinos (M.Sc.)

- ● Undergraduate students supervised

  - o Diploma theses in progress (supervisor):
    - ▪ Arakadakis Stavros
    - ▪ Bitirini Maria
    - ▪ Fiorentzis Konstantinos
    - ▪ Gioumatzidis Meletios
    - ▪ Kouloukythas Odysseas
    - ▪ Margonis Panagiotis – Georgios
    - ▪ Melagoniti Konstantina
    - ▪ Tsokas Vasilios
    - ▪ Verigou Sofia
    - ▪ Vogiatzis Georgios

  - o Diploma theses completed (supervisor):
    - ▪ Fanouraki Irene
    - ▪ Kousanakis Vasilios
    - ▪ Tsiamalos Christos
    - ▪ Asmargiannakis Petros
    - ▪ Roufagalas Ilias

  - o Diploma theses in progress (committee member):
    - ▪ Aretakis Konstantinos
    - ▪ Aronis Spyridon
    - ▪ Bitzanakis Joseph
    - ▪ Dimitriadis Konstantinos

- Drosopoulos Andreas
- Gentsis Charalampos
- Giannopoulos Asimakis
- Kosmopoulos Stefanos
- Papanikoalou Marios
- Parlanis Dimitrios
- Petrakis Emmanuel
- Polomarkaki Sofia
- Sfakianakis Konstantinos
- Sioutas Apostolos
- Spyridakis Georgios
- Tzionis Grigorios

o Diploma theses completed (committee member):
- Achillas Dimitrios
- Papantonakis Theodosios
- Psychogios Marios
- Tzionis Grigorios
- Tanzanakis Alexandros

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Aggelos Bletsas
Rank: Associate Professor
Years in rank: 3,5
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)
    - TEL 412: Analysis & Design (Synthesis) of Telecom Modules (13 lectures + 12 laboratory sessions)

- Graduate courses taught
    - TEL 602: Detection & Estimation Theory (25 lectures)

B – Publications

- Publications in refereed journals

    - Published:
        - N.B. Carvalho et al, "Europe and the Future for Wireless Power Transmission", *IEEE Microwave Magazine (MM)*, Vol. 18, No. 4, pp. 56-87, June 2017.
        - P.N. Alevizos, **A. Bletsas** and G.N. Karystinos, "Noncoherent Short Packet Detection and Decoding for Scatter Radio Sensor Networking", *IEEE Transactions on Communications (TCOM)*, Vol. 65, No. 5, pp. 2128-2140, May 2017.

- P.N. Alevizos and **A. Bletsas**, "Network Localization Cramèr-Rao Bounds for General Measurement Models", *IEEE Communications Letters (CL),* Vol. 20, No. 9, pp. 1840-1843, Sept. 2016.

- Publications in refereed conferences

  - Submitted:
    - G. Vougioukas and **A. Bletsas**, "24Watt 26m Range Batteryless Backscatter Sensors with FM Remodulation and Selection Diversity", submitted to IEEE IEEE RFID-TA, Sept. 2017, Warsaw, Poland.

  - Published:
    - P.N. Alevizos, X. Fu, N. Sidiropoulos, Y. Yang and **A. Bletsas**, "Non-uniform Directional Dictionary-Based Limited Feedback for Massive MIMO Systems", 15th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), May 2017, Paris, France.

- Patents
  - G. Vougioukas and **A. Bletsas**, "Ultra-low Power and Cost Purely Analog Backscatter Sensors with Extended Range Smartphone/Consumer Electronics FM Reception", U.S.P.T.O. Provisional Patent Application 62514825, June 3, 2017.

C – Awards & Distinctions

> **Feb. 2017:** WCL 2014 paper

E. Alimpertis, N. Fasarakis-Hilliard and A. Bletsas, "Community RF Sensing for Source Localization", IEEE Wireless Communications Letters (WCL), Vol. 3, No. 4, pp. 393 – 396, Aug. 2014.

> in a list of 3 WCL papers among all WCL papers published in the 2014-2016 period, nominated by the journal for the **2017 IEEE Communications Society (ComSoc) Heinrich Hertz Award**.

D – Funded Projects

- Current projects:
  - 1 Project funded through EU COST Action IC1301 "WIPE".

- Project proposals submitted:
  - 2 proposals to EU H2020.

E – Professional service

- Associate Editor duties
  - **Associate Editor *IEEE Transactions on Wireless Communications*.**
  - **Associate Editor *IEEE Wireless Communications Letters*.**

- Conference Technical Program Committee service
  - IEEE ICC 2017 Ad – hoc & Sensor Networks Track (AHSN)
  - IEEE ICC 2017 Mobile Wireless Networks Track (MWN)
  - IEEE International Workshop on Wireless Communications and Networking in Extreme Environments 2017
  - IEEE Globecom 2017 Ad-hoc & Sensor Networks Track (AHSN)
  - IEEE Globecom 2017 Mobile Wireless Networks Track (MWN)
  - IEEE Globecom 2017 Cognitive Radio & Networks Track (CRN)

- 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.

G – Advising

- Diploma theses supervised as **principal advisor – COMPLETED Diploma THESES:**

  - Diploma theses completed (supervisor)
    - Tzagkarakis Eleftherios
    - Vestakis Marios

- **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, 2016 to Aug. 31, 2017

Name: George Karystinos
Rank: Associate Professor
Years in rank: 5
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 416: Information Theory and Coding (elective)

- Graduate courses taught
    - TEL 614: Coding Theory

- Labs taught

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

B – Publications

- Publications in refereed journals

    - Submitted: those accepted (see below)

    - Accepted: those published (see below), plus
        - 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, submitted Sept. 2016, accepted July 2017.

- o Published:
    - ▪ P. N. Alevizos, A. Bletsas, and **G. N. Karystinos**, "Noncoherent short packet detection and decoding for scatter radio sensor networking," IEEE Transactions on Communications, vol. 65, pp. 2128-2140, May 2017.

- ● Publications in refereed conferences

    - o Submitted: those published (see below)

    - o Accepted: those published (see below)

    - o Published:
        - ▪ P. P. Markopoulos, D. A. Pados, **G. N. Karystinos**, and M. Langberg, "L1-norm principal-component analysis in L2-norm-reduced-rank data subspaces," in Proc. SPIE Compressive Sensing VI: From Diverse Modalities to Big Data Analytics, Anaheim, CA, Apr. 2017.
        - ▪ P. P. Markopoulos, N. Tsagkarakis, D. A. Pados, and **G. N. Karystinos**, "Direction-of-arrival estimation by L1-norm principal components," IEEE PHASED ARRAY 2016 - International Symposium on Phased Array Systems and Technology (PAST), Boston, MA, Oct. 2016.
        - ▪ M. Gkizeli and **G. N. Karystinos**, "Polynomial-complexity GLRT-optimal noncoherent PNC," IEEE ISWCS 2016 - International Symposium on Wireless Communication Systems, Poznan, Poland, Sept. 2016, pp. 258-264.

- ● Books and edited book chapters

- ● Patents

C – Awards & Distinctions

D – Funded Projects

- Current projects:
    - *"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
    - IEEE Wireless Communications and Networking Conference 2017 (IEEE WCNC 2017).
    - IEEE INFOCOM Workshop on Wireless Communications and Networking in Extreme Environments (WCNEE) 2017.
    - IEEE GLOBECOM Workshop on Low Power Wide Area Networking Technologies for Emerging Internet of Things (LPWA4IoT) 2017.
    - IEEE International Symposium on Computer and Communications 2017 (IEEE ISCC 2017).

- 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 - present.
    - Undergraduate Studies Committee, School of Electrical and Computer Engineering, Technical University of Crete, 2013 - present.

- University responsibilities
  - 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)
    - Sfakianakis Stylianos (Ph.D.)
    - Tountas Konstantinos (M.Sc.)
    - Kostoulas Georgios (M.Sc.)

  - Ph.D. and M.Sc. Degrees in progress (committee member)
    - Alevizos Panagiotis (Ph.D.)
    - Giotis Thomas (Ph.D.)
    - Vougioukas Georgios (Ph.D.)
    - Lourakis Georgios (M.Sc)
    - Oikonomakos Panagiotis (M.Sc)
    - Psaromanolakis Nikolaos (M.Sc)

- Undergraduate students supervised

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

- Diploma theses completed (supervisor)
    - Konstantinidis Konstantinos

- Diploma theses in progress (committee member)
    - Fragkakis Panteleimon
    - Loukopoulos Alexandros
    - Stratigi Irene
    - Tsetis Ioannis
    - Zekai Orestis

- Diploma theses completed (committee member)
    - Lykoudis Georgios
    - Papakonstantinou Triantaphyllos
    - Tzagkarakis Eleftherios
    - Vestakis Marios

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

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)
    - TEL 413: Convex Optimization
    - COMP 421: Randomized Algorithms

- Graduate courses taught
    - TEL 609: Convex Optimization
    - COMP 617: Randomized Algorithms

- Labs taught

- Curriculum & course development

    - New courses / labs developed

    - Lecture notes / slides developed
        - Development of supplementary electronic notes on "Introduction to Convex Optimization"

    - Authored textbooks

B – Publications

- Publications in refereed journals

    - Submitted:
        - A. P. Liavas, G. Kostoulas, G. Lourakis, K. Huang, and N. D. Sidiropoulos, "Nesterov-based Alternating Optimization for Nonnegative Tensor Factorization: Algorithm and Parallel Implementation", submitted to the *IEEE Transactions on Signal Processing.*

    - Published:
        - K. Huang, N. D. Sidiropoulos, and A. P. Liavas, "A Flexible and Efficient Algorithmic Framework for Constrained Matrix and Tensor Factorization", *IEEE Transactions on Signal Processing,* Volume 64, Issue 19, 1 October 2016, Article number 7484753, Pages 5052-5065.

- Publications in refereed conferences

    - Published:
        - A. P. Liavas, G. Kostoulas, G. Lourakis, K. Huang, and N. D. Sidiropoulos, "Nesterov-based parallel algorithm for large-scale nonnegative tensor factorization," *2017 International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, New Orleans, March 2017.

- Books and edited book chapters

- Patents

C – Awards & Distinctions

D – Funded Projects

- Current projects:

- Project proposals submitted:
      FET-Open "VERSUS: VEry laRge StrUctured tenSor optimization."

E – Professional service

- Associate Editor duties

- Society Technical Committee duties

- Conference Technical Program Committee service

- Conference Organization (specify role)

- Reviewing activities
  - *IEEE Transactions on Signal Processing, IEEE ICASSP, IEEE Signal Processing Letters, IEEE SPAWC.*

F – Service to the School and the University

- School responsibilities
  - Member of the Board, Telecommunication Systems Research Institute (T.S.I.), Technical University of Crete
  - Telecommunications Laboratory, Director

- University responsibilities

G – Advising

- Active graduate students supervised

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

  - Ph.D. and M.Sc. theses in progress (supervisor)
    - Georgogiannis Alexandros (Ph.D.)
    - Lourakis Georgios (M.Sc.)

  - Ph.D. and M.Sc. Degrees completed (committee member)
    - Athanasopoulou Georgia (M.Sc.)
    - Pechlivanis Konstantinos (M.Sc.)
  - Ph.D. and M.Sc. Degrees in progress (committee member)
    - Alevizos Panagiotis (Ph.D.)

- Koupatsiaris Dimitrios (Ph.D.)
- Moutzianou Georgios (Ph.D.)
- Dougiakis Lazaros (M.Sc.)
- Orphanoudakis Emmanuel (M.Sc.)
- Sklivanitis Georgios (M.Sc.)
- Tsakaneli Stavroula (M.Sc.)

- Undergraduate students supervised

  - Diploma theses in progress
    - Charitakis George
    - Karakasis Paris
    - Loukopoulos Alexandros
    - Zekai Orestis

  - Diploma theses completed (supervisor)
    - Lykoudis Georgios
    - Papakonstantinou Triantafyllos

  - Diploma theses in progress (committee member)
    - Amiridi Magda
    - Antoniou Eleni
    - Charitakis Spyridon
    - Chondroulis Ioannis
    - Delis Georgios
    - Nasoulis Nikolaos
    - Ntafoulis Nikolaos
    - Papaioannou Dimitrios
    - Petrou Eleni
    - Sofikitis Emmanuel
    - Tsitsikas Georgios
    - Zoidis Nikolaos

  - Diploma theses completed (committee member)
    - Alexiou Aristides

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Michael Paterakis
Rank: Professor
Years in rank: 18
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)

B – Publications

- Publications in refereed conferences

    - Submitted:
        - M. Theodorou and M. Paterakis, "Design and Performance Evaluation of Channel Sensing Algorithms for Homogeneous Multiple CRNs".
        - M. Theodorou and M. Paterakis, "Design and Performance Evaluation of Cooperative Relay Selection Protocols for Multichannel Cognitive Radio Networks".

    - Published:
        - M. Theodorou and M. Paterakis, "Design and Performance Evaluation of a Distributed Algorithm for Heterogeneous

Multichannel CRNs", in Proc. of the 12th International Wireless Communications and Mobile Computing Conference (IWCMC 2016), 5 – 9 September 2016, pp. 309 - 314.

C – Awards & Distinctions

D – Funded Projects

- Current projects:

  o Independent Auditor for the Project: "Development of Broadband Infrastructure on 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: € 1.448.540

E – Professional Service

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

F – Service to the School and the University

- School responsibilities

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

- University responsibilities

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

G – Advising

- Active graduate students supervised

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

- Undergraduate students supervised

    - Diploma theses completed (supervisor)
        - Alexiou Aristides

    - Diploma theses in progress
        - Sofikitis Emmanuel (supervisor)

    - Diploma theses completed (committee member)
        - Gerolymatos Dionysios
        - Papakonstantinou Triantaphyllos
        - Tsakalakis Georgios

    - Diploma theses in progress (committee member)
        - Loukopoulos Alexandros
        - Tsetis Ioannis
        - Zekai Orestis

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Michalis Zervakis
Rank: Professor
Years in rank: 17
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)
    - TEL 312: Digital Image Processing
    - AIS 414: Machine Vision

- Graduate courses taught
    - TEL 613: Special Topics in Digital Image Processing

- 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
    - Pezoulas VC, Michalopoulos K, Klados MA, Micheloyannis S, Bourbakis N, Zervakis M (2017). Spatially constrained spectral clustering for functional connectivity analysis of cerebellum. Under submission in the IEEE Biomedical Health and Informatics (BHI) or IEEE Transactions in Biomedical Engineering Journal.

  - Published:
    - Kostas Michalopoulos, Michalis Zervakis, Marie-Pierre Deiber, Nikolaos Bourbakis, "Classification of EEG Single Trial Microstates Using Local Global Graphs and Discrete Hidden Markov Models", International Journal of Neural Systems, Volume 26, Issue 06, September 2016
      DOI: http://dx.doi.org/10.1142/S0129065716500362
    - George Livanos, Michalis Zervakis, Nikos Pasadakis, Marouso Karelioti and George Giakos, "Deconvolution of petroleum mixtures using mid-FTIR analysis and non-negative matrix factorization", Measurement Science and Technology, IOP Publishing, Volume 27, Sept 2016
    - Koumakis, L., Kanterakis, A., Kartsaki, E., Chatzimina, M., Zervakis, M., Tsiknakis, M., Vassou, D.,Kafetzopoulos, D., Marias, K., Moustakis, V., Potamias, G. "MinePath: Mining for Phenotype Differential Sub-paths in Molecular Pathways" (2016) PLoS Computational Biology, 12 (11), DOI: 10.1371/journal.pcbi.1005187
    - Sfakianakis, S., Bei, E.S., Zervakis, M., "Exploratory analysis of local gene groups in breast cancer guided by biological networks", Health

and Technology 7(1), pp. 119-132, 2017 doi: 10.1007/s12553-016-0155-1

- Suman Shrestha, Aditi Deshpande, Tannaz Farrahi, Thomas Cambria, Tri Quang, Joseph Majeski, Ying Na, Michalis Zervakis, George Livanos, George C.Giakos, "Label-free discrimination of lung cancer cells through Mueller matrix decomposition of diffuse reflectance imaging", Biomedical Signal Processing and Control, Article in Press, Available Online 9 July 2017

- Pezoulas VC, Zervakis M, Michelogiannis S and Klados MA (2017). Resting-State Functional Connectivity and Network Analysis of Cerebellum with Respect to Crystallized IQ and Gender. Front. Hum. Neurosci. 11:189. doi: 10.3389/fnhum.2017.00189

- Bacharidis K, Moirogiorgou K, Koukiou G, Giajkos G, Zervakis M (2017) Stereo System for Remote Monitoring of River Flows. Multimedia Tools and Applications. doi: 10.1007/s11042-017-5148-1

- Publications in refereed conferences

  o Published:
    - A. Alevyzaki, S. Sfakianakis, E.S. Bei, E. Obermayr, R. Zeillinger, D. Fotiadis, and M. Zervakis, "Biclustering strategies for genetic marker selection in gynecologic tumor cell lines". In Proceedings of the 38th International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2016, Orlando, FL, pp. 1430-1433, Oct. 2016.
    - Antonakakis, M., Dimitriadis, S., Zervakis, M., Papanicolaou, A., Zouridakis, G., "Mining cross-frequency coupling microstates from resting state MEG: An application to mild traumatic brain injury". In Proceedings of the 38th International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2016, Orlando, FL, pp. 5513-5516, Oct. 2016.
    - V. Paravolidakis, K. Bacharidis, F. Sarri, L. Ragia, M. Zervakis, "Reduction of Building Façade Model Complexity using Computer Vision". Imaging Systems and Techniques (IST), 2016 IEEE International Conference, Chania, Greece, 4-6 Oct. 2016
    - I. Voyrlaki, G. Livanos, M. Zervakis, G. Giakos, C. Balas "Recursive-Mode K-means Clustering for Self-organization of Dynamic Spectral Imaging Data". Imaging Systems and Techniques (IST), 2016 IEEE International Conference, Chania, Greece, 4-6 Oct. 2016

- G. Livanos, N. Pasadakis, M. Zervakis, G. Giakos, "Qualitative and Quantitative Determination of Oil Base Mud Using Non-Negative Matrix Factorization". Imaging Systems and Techniques (IST), 2016 IEEE International Conference, Chania, Greece, 4-6 Oct. 2016

- R. Rodriguez, S. Shrestha, R. Pascone, K. Lynch, E. Voudouri, G. Livanos, M. Zervakis, A. Deshpande, C. Narayan, Y. Na and G.C. Giakos, "Low-Order Statistical Analysis of 1-D Diffuse Reflectance Signals from Cancer Cells using 2-D Scalogram Images". Imaging Systems and Techniques (IST), 2016 IEEE International Conference, Chania, Greece, 4-6 Oct. 2016

- M. Antonakakis, S.I. Dimitriadis, A.C. Papanicolaou, G. Zouridakis, M. Zervakis, "Improving the Detection of mTBI Via Complexity Analysis in Resting – State Magnetoencephalography". Imaging Systems and Techniques (IST), 2016 IEEE International Conference, Chania, Greece, 4-6 Oct. 2016

- Pezoulas V, Zervakis M, Micheloyannis S and Klados MA (2016). Investigating the correlation between crystallized IQ and network metrics in cerebellum using resting-state fMRI. Front. Hum. Neurosci. Conference Abstract: SAN2016 Meeting. doi: 10.3389/conf.fnhum.2016.220.00013

- Chalepakis Ntellis DA, Bei E S, Kafetzopoulos D, Zervakis M (2017): Assembly of Gene Expression Networks Based on a Breast Cancer Signature. In: Rojas I., Ortuño F. (eds) Bioinformatics and Biomedical Engineering (IWBBIO 2017), Granada, Spain, 2017 April 26-28, Lecture Notes in Computer Science, 10209:62-73, Springer, Cham. doi: 10.1007/978-3-319-56154-7_7.

- Tsiouris KM, Pezoulas VC, Koutsouris DD, Fotiadis DI, and Zervakis M (2017). Discrimination of Preictal and Interictal Brain States from Long-Term EEG Data. 30th IEEE International Symposium on Computer-Based Medical Systems, Thessaloniki, Greece, June 22-24, 2017.

- Books and edited book chapters

- Patents

D – Funded Projects

- Current projects:

- Project proposals submitted:
    - Horizon2020 SC1-PM-15-2017 "Intelligent and personalised COaching services for people at risk of becoming frail as they Age to favour healthy lifestyles, lonGevity and wEllbeing (ICoage)"
    - Horizon 2020 Societal Challenges "Eco-intensification in European marine aquaculture based on improved feeding and nutrition recapturing (BALANCED)"
    - Horizon2020 SEC-16-2017-BES: Through-foliage detection, including in the outermost regions of the EU
    - Interreg "ISense_Bin", "NHRIIS", "e-Crisis", "e-Hippocrates"
    - ITN Training "Escalating"
    - ERANET TRANSCAN-2 "Minimally and non-invasive methods for early detection and/or progression of cancer"
    - LIFE Environment and Resource Efficiency "INNOVative framework of recycling household used cooking oils (INNOVUCO)"

E – Professional service

- Associate Editor duties
    - **_Receiving 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
- o 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
- o 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
- o 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
  - o Reviewer for IEEE BHI2017, IEEE EMBC2017, IEEE IST2017, HealthCom2017

F – Service to the School and the University

- School responsibilities
  - o Member and Vice-Dean of ECE School
  - o Digital Image and Signal Processing Laboratory, Director
  - o Automation Laboratory, Director

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

G – Advising

Undergraduate students supervised

- Active graduate students supervised

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

- Pezoulas Vasilios (M.Sc.)
- Vourlaki Ioanna – Theoni (M.Sc.)

- o 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.)
  - Tsakaneli Stavroula (M.Sc.)
  - Xifaras Constantinos (M.Sc.)

- o Ph.D. and M.Sc. Degrees completed (committee member)
  - Sfakianakis Stylianos (Ph.D.)
  - Giakoumakis Theodoros – Marios (M.Sc.)
  - Kastrinakis Marios (M.Sc.)
  - Rossos Christos (M.Sc.)

- o Ph.D. and M.Sc. Degrees in progress (committee member)
  - Chliaoutakis Aggelos (Ph.D.)
  - Kalantzaki Calliope (Ph.D.)
  - Oikonomidis Dimitrios (Ph.D.)
  - Tsapras Athanasios (Ph.D.)
  - Christeas Dimitrios (M.Sc.)
  - Epitropou Giorgos (M.Sc.)
  - Kalokyri Varvara (M.Sc.)
  - Malavazos Konstantinos (M.Sc.)
  - Thermolia Chryso (M.Sc.)

- Undergraduate students supervised

  - o Diploma theses completed (supervisor)
    - Andritsou Daphne
    - Michailou Lampros
    - Patsioura Maria
    - Tanzanakis Alexandros

  - o Diploma theses in progress (supervisor)
    - Barberakis Stylianos
    - Baroutis Nikolaos

- Gompaki Efstathia
- Konstantinidi Panagiota
- Lemonis Ioannis
- Markolefas Filippos
- Ntoko Aneza
- Paravolidakis Vasilios
- Petrou Eleni
- Politis Marios
- Polydorou Alexios
- Spiliotis Georgios
- Syrigos Dimitrios
- Zoidis Nikolaos

o Diploma theses completed (committee member)
- Asmargiannakis Petros
- Bousias Dimitrios
- Mourtzanos Triantaphyllos
- Ypermahos Athanasios

o Diploma theses in progress (committee member)
- Badogiannis Nikolaos
- Bardoutsou Artemis
- Boras Charalampos
- Chatziparaschis Dimitrios
- Demertzis Eleftherios
- Gkiata Ioanna
- Karakasis Paris
- Katsinelis Konstantinos
- Kontos Nikolaos
- Lytridis Nikolaos
- Margoni Ioanna
- Marinaki Eftichia
- Melagoniti Konstantina
- Mellos Alexandos
- Papadopoulos Theodoros
- Pentafragas Georgios
- Siahamis Charalampos
- Vardakis Konstantinos
- Vogiatzis Konstantinos
- Zorbas Alexandros

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Dimitris Angelakis
Rank: Associate Professor
Years in rank: 1
Full-time or part-time: Full-time
Division:
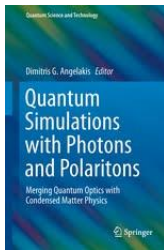**Lab affiliation:**

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
  - _ Physics (Electromagnetism) (mandatory)_

- Curriculum & course development

  - New courses / labs developed

  - Lecture notes / slides developed
  - FYS 102: Physics (Electromagnetism) (mandatory)
  - FYS 411: Quantum Technology

  - Authored textbooks

B – Publications

- Publications in refereed journals

  - Submitted
    - 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" arXiv:1707.04423
    - M. Namazi, B. Jordaan, C. Noh, D. G. Angelakis, E. Figueroa "Realizing topological relativistic dynamics with slow light polaritons at room temperature" arXiv:1711.09346

  - Accepted:
    - 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**

  - Published:
    - TF See, C Noh, **D.G. Angelakis**, "A diagrammatic Diagrammatic Approach to Multiphoton Scattering", Phys. Rev. A 95, 053845 (2017)
    - E. Compagno, G. De Chiara, **D. G. Angelakis**, and G. M. Palma, "Tunable Polarons in Bose Einstein Condensates", Scientific Reports 7, 2355 (2017)
    - J. Tangpatinanon, V. M. Bastidas, P. Roushan, S. Assam, D. Jaksch, **D. G. Angelakis***, "Topological pumping with photons in nonlinear resonator arrays", arXiv: 1607.04050, Physical Review Letters, 117, 213603 (2017).
    - Sebastian Restrepo, Javier Cerrillo, V. M. Bastidas, **D. G. Angelakis**, T. Brandes, "Driven open quantum systems and Floquet stroboscopic dynamics". Phys Rev. Let. 117, 250401 (2016).
    - C. Koke, C. Noh, **D. G. Angelakis***, "Dirac equation in 2-dimensional curved spacetime, particle creation, and coupled waveguide arrays", Annals of Physics 374, 162 (2016).

- Publications in refereed conferences

  - o Accepted:

  - o Published:

- **Books**
  - o D. G. Angelakis, editor "Quantum Simulators with Photons and Polaritons: Merging Quantum Optics with Condensed Matter Physics" (edited volume invited by Springer), 2017. Series on Quantum Science and Technology.

- *Book chapters*

  - o C. Noh, S. Clark, D. Jacksh and D.G. Angelakis "Out-of-equilibrium physics in driven dissipative coupled resonator arrays" in "Quantum Simulators with Photons and Polaritons: Merging Quantum Optics with Condensed Matter Physics" (Springer), 2017. Series on Quantum Science and Technology.

- Patents

C – Awards & Distinctions

- ➢ Member of EU Quantum Community Network for the European Flagship in Quantum Technologies, representing Greece (one scientist per EU country)

- ➢ Accepted publication in Science, 9/2018

- ➢ Invited visiting Professor Centre at Quantum Technologies, National University of Singapore October 2016 to January 2017

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.
  - EU COST Action "Nanoscale Quantum Optics". National representative, member of the core and management committee for Greece and deputy WG4 leader for 2015-2018. Receiving travel support and conference organizing support. Total budget allocated ~150K Euros per year, ~30K for a conference to be organized by in Crete, June 4-11, 2016. Website: http://www.cost-nqo.eu/

- **Project proposals submitted:**
  - Ministry of Education, Greece, ELIDEK Funding for Greek Research Group.
  - EU Quantum Technologies Flagship H2020 Call
  - FET Proactive 2018 Call

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
  - Main guest editor of a special issue on "Many-body physics with light" for New Journal of Physics, IOP, 2017

- 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
  - Program committee, International Workshop on "Strongly correlated fluids of light and matter" held in Corsica, France, 8-12 May 2017. http://qflm2017.org/

- o Program committee, The Nanoscale Quantum Optics Workshop, Prague February 2017. http://www.cost-nqo.eu/event/nanoscale-quantum-optics-conference-mc-meeting-prague-czech-republik/
  - o Program committee, AQIS18, 18th AsianQuantum Information Science Conference, http://aqis-conf.org/2018/, Nagoya Japan, September 8-12, 2018

- Reviewing activities
  - o 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 talks in international conferences
  - o From Mott transitions to many-body localization with interacting photons: An old story and a recent experiment" Conference on Hybrid Photonics and Materials, Mykonos, September 2017
  - o "From Mott transitions to many-body localization with interacting photons: An old story and a recent experiment" in conference: The many facets of non-equilibrium physics: from many body theory to quantum thermodynamics, Sicily, September 2017
  - o "Spectral Signatures of Many-Body Localization with Interacting Photons: An experiment", International ICTP Workshop in Quantum Science and Technology, ICTP Trieste, September 2017
  - o "Spectral Signatures of Many-Body Localization with Interacting Photons", CCPQ Workshop on Dynamics of Complex Quantum Systems, Royal Society- Cumberland Lodge, UK, August 2017
  - o "Probing Many-Body Physics with Light", Symposium on Quantum Matter, Internation Conference on Statistical Physics, $\Sigma\Phi$2017, Corfu, Greece, July 2017
  - o "Quantum simulations and many-body physics with light", Thai-Singapore Scholars Workshop in Quantum Technologies, Thailand, January 2017 (Keynote)
  - o "Topological and gauge fields with photons", Quantum and Topological Nanophotonics Workshop, Nanyang Technological University, Singapore, December 2016.

- Invited talks and colloquia in universities and institutions abroad

- "Spectral Signatures of Many-Body Localization with Interacting Photons", Physics Department, University College London, August 2017
- "Quantum Simulations with Strongly Interacting Photons: Merging Condensed Matter Physics with Quantum Optics", Colloquium of the Centre for Quantum Technologies, National University of Singapore, July 2017
- "Quantum Simulations with Light", Physics Department, University of Queensland Australia, Brisbane, November 2016
- Topological pumping with photons", Physics Department, Macquarie University, Sydney. November 2016
- Many-body physics with light: From Mott transition to topological pumping with photons", Physics Department, University College London, September 2016
- "From Mott transition to topological pumping with photons", Physics Department, University of Oxford, September 2016

F – Service to the School and the University

- School responsibilities
  - Member of the departmental staff committee

- University responsibilities
  - Member of the school of ECE staff committee

G – Advising

- Active graduate students supervised

  - Ph.D. and M.Sc. students completed (supervisor)
    - Markela Tsafantaki (MSc), defended March 2017, Quantum electrodynamics of superconducting circuits and applications in quantum information

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

  - Ph.D. and M.Sc. Degrees completed (committee member)
    - External examiner of RADITYA WEDA BOMANTARA, National University Singapore PhD thesis entitled " EMERGENCE AND

CONSTRUCTION OF NOVEL GAPLESS TOPOLOGICAL PHASES", Singapore, September 2017

- 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)
        - ▪ Vardakis Konstantinos

    - o Diploma theses completed (committee member)
        - ▪ Devetzakis Georgios

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Daphne Manoussaki
Rank: Assistant Professor
Years in rank: 11
Full-time or part-time: Full
Division:
Lab affiliation:

A – Teaching

- Undergraduate courses taught
  - MATH 101: Mathematics I (mandatory)
  - MATH 202: Numerical Analysis
  - MATH 203: Differential Equations

- Graduate courses taught
  - MATH 603: Mathematical Biology

B – Publications

- Publications in refereed journals
  - 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 Member of the undergraduate curriculum 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)

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

  o Ph.D. and M.Sc. Degrees in progress (committee member)
    ▪ Papadakis Nikolaos (Ph.D.)

● Undergraduate students supervised

  o Diploma theses in progress (committee member)
    ▪ Grypiotis Ioannis
    ▪ Nikolaos Kontos

  o Diploma theses completed (committee member)
    ▪ Konstantinidis Konstantinos

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2016 to Aug. 31, 2017

Name: Minos Petrakis
Rank: Associate Professor
Years in rank: 3,5
Full-time or part-time: Full-time
Division:
Lab affiliation:

A – Teaching

- Undergraduate courses taught
  o MATH 102: Mathematics II (mandatory)
  o MATH 107: Probability Theory – Statistics (mandatory)
  o MATH 302: Applied Mathematics

- Graduate courses taught
  o Fourier Series and Complex Analysis
  o Applied Functional Analysis

  - Curriculum & course development
  o New courses / labs developed

  o Lecture notes / slides developed

  o Authored textbooks

B – Publications

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

  o Accepted:

- o   Published:

- ● Publications in refereed conferences
    - o   Published:
- ● Patents
    - o   *GRANTED*
    - 1.

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
    - o   Reviews zentralblatt-math

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)

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

- Undergraduate students supervised

  - Diploma theses in progress

  - 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, 2016 to Aug. 31, 2017

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+