TECHNICAL UNIVERSITY OF CRETE

School
of Electrical
and Computer
Engineering

Annual Activity Report

Sep 2019 – Aug 2020

Chania 2020

Key Statistics for Sep. 2019 – Aug. 2020

<u>Total statistics</u>

Journals Published: 49

Conferences Published: 65

Book Chapters: 5

Patents: 1

Diploma thesis: 106

MSc Thesis: 10

PhD Thesis: 4

Projects: 83

<u>Average statistics (per faculty)</u>

Journals Published: 1.96

Conferences Published: 2.6

Book Chapters: 0.2

Patents: 0.04

Diploma thesis: 4.24

MSc Thesis: 0.4

PhD Thesis: 0.16

Projects: 3.32

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
- Ioannidis Sotiris, Associate Professor
- Kalaitzakis Kostas, Professor
- Kanellos Fotios, Associate Professor
- Koutroulis Eftichios, Associate Professor
- Stavrakakis Georgios, Professor

Systems Division

- Bekiaris-Lymperis Nikolaos, Assistant Professor

Telecommunications Division

- Bletsas Aggelos, Professor
- Digalakis Vassilios, Professor - on leave
- Karystinos George, Professor
- 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

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Georgios Chalkiadakis
Rank: Associate Professor
Years in rank: 4.5
Division: Computer Science
Lab affiliation: Intelligent Systems

A – Teaching

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

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

B – Publications

- Publications in refereed journals
    1. Angelos Chliaoutakis and Georgios Chalkiadakis: <u>An Agent-Based Model for Simulating Inter-Settlement Trade in Past Societies</u>. Journal of Artificial Societies and Social Simulation (JASSS), <u>23 (3) 10</u>, 2020.

- Publications in refereed conferences
    1. Ryan Beal, Georgios Chalkiadakis, Timothy Norman and Sarvapali D. Ramchurn: <u>Optimizing Game Tactics for Football</u>. In Proc. of the 19th Int. Conf. on Autonomous Agents and Multiagent Systems (AAMAS-2020), Auckland, New Zealand, May 2020.
    2. Riccardo Sartea, Georgios Chalkiadakis, Alessandro Farinelli, Matteo Murari: <u>Bayesian Active Malware Analysis</u>. In Proc. of the 19th Int. Conf. on Autonomous Agents and Multiagent Systems (AAMAS-2020), Auckland, New Zealand, May 2020.
    3. Michail Mersinias, Stergos Afantenos and Georgios Chalkiadakis: <u>CLFD: A Novel Vectorization Technique and Its Application in Fake News Detection</u>. In Proc. of the 12th Language Resources and Evaluation Conference (LREC-2020), Marseille, France, May 2020.

D – Funded Projects

- Current projects:

  - **Project "PISMA" ("Automating Pistachio Canopy Temperature Identification: A Machine Learning Approach").** A research project focusing on developing novel image recognition and machine learning techniques for precision irrigation scheduling. The project was carried out by Georgios' team at the School of ECE-TUC, while subcontracting to California State University, Fresno Foundation, USA. **Georgios' role:** *Georgios was the Principal Investigator for the Technical University of Crete team.* **Duration: 2020-2021**
  - **Project "TrafficFluid".** An <u>ERC Advanced Grant project</u> aspiring to develop a novel lane-free traffic paradigm in the ear of connected automated vehicels, awarded to and led by Professor Markos Papageorgiou. <u>https://www.trafficfluid.tuc.gr/index.php?id=11785</u> **Georgios' role:** *Georgios is a senior research team member, conducting research on employing AI and Multiagent Learning methods for lane-free traffic, and co-supervising a PhD student to this end.* **Duration: 2019-2024**
  - **Project "ANASA" ("Autonomous Robotic System for Urban Waste Recycling").** A national (co-funded by the EU) 48-month project. **Role:** *Georgios is a research team member, directly supervising a graduate student working for the project* **Duration: 2018-2022**
  - **Project "CO3" ("Digital Disruptive Technologies to Co-create, Co-produce and Co-manage Open Public Services along with Citizens").** A <u>Horizon 2020 RIA</u> project that was accepted under the "H2020-Socioeconomic and cultural transformations in the context of the fourth industrial revolution" call. **Georgios' role:** *Georgios is a member of the participating "Open Lab Athens" research team.* **Duration: 2019-2021**
  - **Project "gE.CO Living Lab" ("Generative European Commons Living Lab").** A <u>Horizon 2020 CSA project</u> that was accepted under the "H2020-Socioeconomic and cultural transformations in the context of the fourth industrial revolution" call. **Georgios' role:** *Georgios is a member of the participating "Open Lab Athens" research team.* **Duration: 2019-2021**

- Project proposals submitted:

  - Submitted a proposal to H.F.R.I. (ELIDEK)
  - Participated as a partner in a CHIST-ERA (ERA-NET Cofund) proposal

E – Professional service

- Society Technical Committee duties

- o ***Deputy Chair*** *of the* ***Board of Directors*** *of the* **European Association for Multi-Agent Systems (EURAMAS)**

- International Workshops Chair and Organizer
    - o Co-organizer and co-Chair of the *AAAI-2020 Workshop on Artificial Intelligence in Team Sports (**AITS@AAAI-2020**), New York, USA, Feb 2020.*

- Conference <u>*Senior*</u> Technical Program Committee service
    - o The 19th International Conference on Autonomous Agents and Multiagent Systems, Auckland, New Zealand, May 2020 (**AAMAS-20**).

- Conference Technical Program Committee service
    - o The 11th Hellenic Conference on Artificial Intelligence, *virtual*, held in September 2020 **(SETN-2020)**.

- Reviewing activities
    - o Reviewer for the conferences I was a Program Committee member at (mentioned above)
    - o Reviewer for several journals; a subset of the following:
        1. The "International Journal of Game Theory" (IJGT)
        2. The "International Game Theory Review" journal (IGTR)
        3. The "Artificial Intelligence" journal (AIJ)
        4. The "Journal of Artificial Intelligence Research" (JAIR)
        5. The "Autonomous Agents and Multi-Agent Systems" journal (JAAMAS)
        6. The "Journal of Machine Learning Research" (JMLR)
        7. The "IEEE Intelligent Systems" journal
        8. The "Artificial Intelligence Review" journal (AIRE)
        9. The journal "IEEE Transactions on Systems, Man and Cybernetics, Part A"
        10. The journal "IEEE Transactions on Systems, Man and Cybernetics, Part B"
        11. The journal "IEEE Transactions on Systems, Man and Cybernetics, Part C"
        12. The "ACM Transactions on Autonomous and Adaptive Systems" journal
        13. The "Advances in Artificial Intelligence" journal
        14. The "International Journal on Artificial Intelligence Tools" (IJAIT)
        15. The "Journal of the Brazilian Computer Society"
        16. The "Energy and Buildings" journal
        17. The "Transportation Research Part C" journal
        18. The "Transactions on Intelligent Transportation Systems" journal
        19. The "Frontiers in Sustainable Cities" journal
            - *review editor for the "Smart Technologies and Cities" section*

F – Service to the Department and the School

- School-level responsibilities
  - Member of a committee approving the purchase of research equipment

G – Advising

- Active graduate students supervised

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

  - Ph.D. and M.Sc. theses in progress (supervisor)
    1. Troullinos Dimitrios (Ph.D.) [co-supervised with M. Papageorgiou]
    2. Tripolitakis Evaggelos (Ph.D.)
    3. Kydonakis Ares (M.Sc.)
    4. Antonios Vogiatzis (M.Sc.)
    5. Trigkas Nikolaos (M.Sc.)

- Undergraduate students supervised

  - Diploma theses (MEng level) completed (supervisor)
    1. Mpacharis Athanasios
    2. Portokalakis Petros
    3. Katsigiannis Michail
    4. Pantelidakis Minas
    5. Apostolidou Maria
    6. Ziogas Ioannis-Panagiotis
    7. Papathanasiou Theodoros
    8. Theodoridis Alexios

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Antonios Deligiannakis
Rank: Associate Professor
Years in rank: 7
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 211 : Software Development Tools and Systems Programming

- Graduate courses taught
    - COMP 613 : Special Issues in Database Systems

- Labs taught

- Curriculum & course development
    - New courses / labs developed
        - COMP 211 : Software Development Tools and Systems Programming
    - Lecture notes / slides developed
        - COMP 211 : Software Development Tools and Systems Programming
    - Authored textbooks

B – Publications

- Publications in refereed journals

    - Submitted: those published/appeared (see below)
        -

    - Accepted:

- I. Flouris, N. Giatrakos, A. Deligiannakis, M. Garofalakis: Network-wide complex event processing over geographically distributed data sources. Information Systems.
- N. Giatrakos, A. Deligiannakis, M.N. Garofalakis, Y. Kotidis: Omnibus Outlier Detection in Sensor Networks using Windowed Locality Sensitive Hashing. Future Generation Computer Systems

- Published:
  - N. Giatrakos, E. Alevizos, A. Artikis, A. Deligiannakis, M. Garofalakis: Complex Event Recognition in the Big Data Era: A Survey. VLDB Journal, Volume 29, Issue 1, Pages 313-352, 2020.
  - I. Flouris, N. Giatrakos, A. Deligiannakis, M. Garofalakis: Network-wide complex event processing over geographically distributed data sources. Information Systems.
  - N. Giatrakos, A. Deligiannakis, M.N. Garofalakis, Y. Kotidis: Omnibus Outlier Detection in Sensor Networks using Windowed Locality Sensitive Hashing. Future Generation Computer Systems

- Publications in refereed conferences
  - Submitted: those published/appeared (see below)
    - Nikos Giatrakos, David Arnu, Theodoros Bitsakis, Antonios Deligiannakis, Minos N. Garofalakis, Ralf Klinkenberg, Aris Konidaris, Antonis Kontaxakis, Yannis Kotidis, Vasilis Samoladas, Alkis Simitsis, George Stamatakis, Fabian Temme, Mate Torok, Edwin Yaqub, Arnau Montagud, Miguel Ponce de Leon, Holger Arndt, Stefan Burkard: INforE: Interactive Cross-platform Analytics for Everyone. ACM CIKM 2020
    - Antonis Kontaxakis, Nikos Giatrakos, Antonios Deligiannakis: A Synopses Data Engine for Interactive Extreme-Scale Analytics. ACM CIKM 2020: 2085-2088

  - Accepted:
    - Nikos Giatrakos, David Arnu, Theodoros Bitsakis, Antonios Deligiannakis, Minos N. Garofalakis, Ralf Klinkenberg, Aris Konidaris, Antonis Kontaxakis, Yannis Kotidis, Vasilis Samoladas, Alkis Simitsis, George Stamatakis, Fabian Temme, Mate Torok, Edwin Yaqub, Arnau Montagud, Miguel Ponce de Leon, Holger Arndt, Stefan Burkard: INforE: Interactive Cross-platform Analytics for Everyone. CIKM 2020: 3389-3392
    - Antonis Kontaxakis, Nikos Giatrakos, Antonios Deligiannakis: A Synopses Data Engine for Interactive Extreme-Scale Analytics. ACM CIKM 2020: 2085-2088

  - Published:

- Books and edited book chapters

- Patents
  - *GRANTED*
  1.

C – Awards & Distinctions

- Best Demo Paper Award – ACM CIKM 2020, for the paper "INforE: Interactive Cross-platform Analytics for Everyone."

D – Funded Projects

- Current projects:
  - INFORE (ICT-12-2018-2020 Big Data Call. Result: Granted - Ranked 1st)

- Project proposals submitted:

E – Professional service

- Associate Editor duties

- Society Technical Committee duties

- Conference Technical Program Committee service
  - SIGMOD - ACM SIGMOD/PODS Conference on Management of Data
  - 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)
  - Big Data Research (ELSEVIER)
  - ACM Transactions on Database Systems (ACM TODS)

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)
    - Kontaxakis Antonios (M.Sc)

  - Ph.D. and M.Sc. theses in progress (supervisor)
    - Flouris Ioannis (Ph.D.)
    - Bitsakis Theodoros (M.Sc)

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

  - 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.)
    - Thermolia Chriso (M.Sc.)
    - Verykokidi Eleni – Angela (M.Sc.)
    - Zervoudakis Nikolaos (M.Sc.)

- Undergraduate students supervised
  - Diploma theses in progress
    - Giannopoulos Emmanuel
    - Fragkakis Panteleimon
    - Kyriakidou Ioanna
    - Papageorgiou Dimitrios
    - Petheriotis Angelos
    - Vasilaki Anastasia
    - Pikionis Petros-Platon
    - Petheriotis Aggelos
    - Ntelmpizis Asterios

  - Diploma theses completed (supervisor)
    - Efrosyni Anesti
    - Goutziouli Dimitra

  - Diploma theses in progress (committee member)
    - Balambanis Ilias

- Epoure Edouard
- Plataniotis Stergios
- Methymakis Michail

- Diploma theses completed (committee member)
  - Giannakopoulos Konstantinos Orestis
  - Kampioti Sofia
  - Xanthakis Emmanouil
  - Apostolakis Georgios
  - Theodoridis Alexios
  - Zacharioudakis Christos
  - Karageorgiou Kanin Christos
  - Karavasiliou Ekaterini
  - Zacharia Neofytos
  - Gionis Nikolaos
  - Botonakis Stylianos
  - Ziogas Ioannis Panagiotis
  - Tzavaras Emilios
  - Polychronakis Andreas
  - Motos Michail
  - Efraimidis Michail
  - Demertzis Rafail Athanasios
  - Gemistos Michail
  - Smyrneos Dimitrios
  - Vratsanos Georgios

Technical University of Crete

School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Minos Garofalakis
Rank: Professor
Years in rank: 11
Full-time or part-time: Part-time *(full-time Director, Information Management Systems Institute (IMSI), ATHENA Research and Innovation Center)*
Division: Computer Science
Lab affiliation: SoftNet – Software Technology and Network Applications Laboratory (Director)

A – Teaching

- Undergraduate courses taught
    - COMP 401: Algorithms and Complexity (mandatory)

- Graduate courses taught
    - COMP 615: Processing and Analyzing Big Data

B – Publications

- Publications in refereed journals

    - Published:
        - Ioannis Flouris, Nikos Giatrakos, Antonios Deligiannakis, and Minos Garofalakis. "Network-Wide Complex Event Processing over Geographically Distributed Data Sources", Information Systems, Vol. 88, February 2020.
        - Nikos Giatrakos, Elias Alevizos, Alexander Artikis, Antonios Deligiannakis, and Minos Garofalakis. "Complex Event Recognition in the Big Data Era: A Survey", The VLDB Journal, Vol. 29, No. 1, January 2020.
        - Nikos Giatrakos, Antonios Deligiannakis, Minos Garofalakis, and Yannis Kotidis. "Omnibus Outlier Detection in Sensor Networks

using Windowed Locality Sensitive Hashing", Future Generation Computer Systems, Vol. 110, 2020.

- Publications in refereed conferences

    o Published:

        ▪ Grigorios Chrysos, Odysseas Papapetrou, Dionisios Pnevmatikatos, Apostolos Dollas, and Minos Garofalakis. "Data stream statistics over sliding windows: How to summarize 150 million updates per second on a single node" (Long Presentation Paper), Proceeedings of the 29th International Conference on Field-Programmable Logic and Applications (FPL'2019), Barcelona, Spain, September 2019.

C – Awards & Distinctions

- **Invited Speaker***: "Distributed Data Streaming and the Power of Geometry"*, Dagstuhl Seminar on Foundations of Composite Event Recognition, Dagstuhl, Germany, February 2020.
- **Invited Speaker:** *"With Big Data Comes Big Responsibility: Towards Private Data Analytics at Scale",* Human Brain Project Open Day (Session on "Big Data and Computational Neuroscience"), Athens, Greece, February 2020.

D – Funded Projects

- Current projects:

    o H2020-ICT-2016 (Big Data PPP: Privacy-Preserving Big Data Technologies) Research and Innovation Action (RIA): "MHMD – My Health My Data" (2016-2019).
    Role: Work-Package Leader for WP5: Privacy-Preserving Data Analytics, for ATHENA RC

E – Professional service

- Conference Organization (specify role)

    - **Co-Chair:** 3rd ACM Europe Summer School on Data Science (Athens, Greece, July 2019)

F – Service to the School and the University

- School – level responsibilities
  - Software Technology and Network Applications Laboratory, *Director*

G – Advising

- Undergraduate students supervised

  - Diploma theses completed (supervisor)

    - Rafail-Athanasios Demertzis ("Efficient Multi-dimensional Range Searchable Encryption for Large Databases", TUC, September 2019)

    - Christos Zaharioudakis ("Large-Scale Differentially-Private Data Synthesis", TUC, February 2020)

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Michail G. Lagoudakis
Rank: Associate Professor
Years in rank: 6
Full-time or part-time: Full-time
Division: Computer Science
Lab affiliation: Intelligent Systems Laboratory

A – Teaching

- Undergraduate courses taught
    - COMP 513: Autonomous Agents (elective, fall semester)
    - COMP 402: Theory of Computation (mandatory, spring semester)

B – Publications

- Publications in refereed conferences

    - Published
        - Fotios Lygerakis, Vassilios Diakoloukas, Michail G. Lagoudakis, Margarita Kotti, "Robust Belief State Space Representation for Statistical Dialogue Managers using Deep Autoencoders," Proceedings of the IEEE Automatic Speech Recognition and Understanding Workshop (ASRU 2019), Singapore, December 2019, pp. 1055–1061.

D – Funded Projects

F – Service to the School and the University

- University responsibilities
    - Vice Rector of Administrative, Academic, and Student Affairs.

G – Advising
- **Completed** theses supervised as **principal advisor:**

- o Diploma Theses Completed
    1. **Nikolaos Lytridis**, defended on August 19, 2020
       A Deep Machine Learning Architecture for Filtering and Classification of Motor Imagery EEG Data
    2. **Emmanouil Xanthakis**, defended on August 18, 2020
       Development of a Web-Based Information System for the Documentation and Exploitation of the Learning Outcomes of University Courses
    3. **Georgios Gligoris**, defended on August 6, 2020
       Argumentation and Reasoning on the Computational Cloud
    4. **Georgios Dialektakis**, defended on July 28, 2020
       Adversarial Learning in Statistical Dialogue Systems
    5. **Georgios Bolonakis**, defended on February 13, 2020
       Development of an Autonomous Robotic Rover for Collaborative Drone-Rover Monitoring Missions
    6. **Anastasios Karageorgiadis**, defended on October 10, 2019
       FACESiR: Face and Speaker Identity Recognition in Video Streams
    7. **Nadia-Efthimia Frehat**, defended on October 9, 2019
       Exploring Efficiency and Performance of Image Captioning
    8. **Michail Gemistos**, defended on October 8, 2019
       Implementation of Intelligent Agent for the AIBIRDS Competition
    9. **Emmanouil Kritharakis**, defended on October 7, 2019
       Multi-Document Text Summarization
- o MSc Theses Completed
    1. **Ioannis Skoulakis**, defended on October 30, 2019
       Efficient Reinforcement Learning in Alternating Games
- **Ph.D., M.Sc. or Diploma theses <u>principal advisor</u>, <u>in progress</u>:**
  - o MSc Theses in Progress
    1. **Vasileios Sfakianakis**
       Human Activity Recognition from Drone Aerial Images
    2. **Emmanouil Orfanoudakis**
       Event Recognition in Underwater Robot Team Missions
    3. **Eleftherios Chatzilaris**
       Coordinated Action and Learning in RoboCup
  - o Diploma Theses in Progress: **more than 20 students**
- **Ph.D., M.Sc. or Diploma theses <u>committee member</u>:**
  - o Completed
    1. **Angelos Chliaoutakis**, Ph.D. defended on March 02, 2020
       School of ECE, Technical University of Crete
       Agent-Based Modeling of Past Societies and their Social Organization
    2. **Anastasios Chatziioannou**, M.Sc. defended on June 2, 2020
       School of ECE, Technical University of Crete
       A Tomographic Hyperspectral Imaging Method: Application in Quantitative Pathology
    3. Many diploma thesis students
  - o In Progress
       Various students

Annual Activity Report Template

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Katerina Mania
Rank: Associate Professor
Years in rank: 7 years 3 months as Assoc. Professor
Full-time or part-time: Full-time
Division: Computer Science
Lab affiliation: Distributed Multimedia Information Systems and Applications (MUSIC)

A – Teaching (On sabbatical Spring 2020)

- Undergraduate courses taught

    o COMP 101 – Introduction to Computers and Computer Science (Winter 2019)

- Curriculum & course development
    o Updated laboratory exercises for COMP 101

B – Publications

- Publications in refereed journals

    o Published

- Publications in refereed conferences

    o Published

        ▪ Drakopoulos, P., Koulieris, G. A., & Mania, K. (2020). Front Camera Eye Tracking for Mobile VR. In 2020 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW) (pp. 643-644). IEEE.

- Spanoudakis, N., Kostis, K., & Mania, K. (2020). Argumentation for all. In Proceedings of the 35th Annual ACM Symposium on Applied Computing (pp. 980-982).

- Katsiokalis, M., Ragia, L., Mania, K. (2020). Outdoors Mobile Augmented Reality for Coastal Erosion Visualization Based on Geographical Data. In Proc. XR workshop at ACM Intl. conf. on Interactive Surfaces and Spaces (ACM ISS 2020).

- Giariskanis, F., Parthenios, P., & Mania, K. (2019, September). ARCHIMUSIC3D: Multimodal Playful Transformations between Music and Refined Urban Architectural Design. In *2019 11th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games)* (pp. 1-4). IEEE.

- Kirakosian, S., Maravelakis, E., & Mania, K. (2019, September). Immersive Simulation and Training of Person-to-3D Character Dance in Real-Time. In *2019 11th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games)* (pp. 1-4). IEEE.

C – Awards & Distinctions

D – Funded Projects

o Project proposals submitted

- ENCITO: Effects of climate change in the old city of Chania, Latsis Foundation, 2020-2021, PI Dr Lemonia Ragia, Research collaborator.
- TARTAN: culTurAl heRitage enTanglement with digitAl twiNs,DT-TRANSFORMATIONS-12-2018-2020, HORIZON2020.
- CREATOR: Collaborative Platform for Digital Content Repurposing, H2020
- HUMANAISE: Humans and Artificial Intelligent, Social and Emotional Agents Learn Together, EU FET Proactive
- TIMEPIECE: Active Immersive Platform for Scientists providing digital preserved content retrieval, HORIZON2020

o Project proposals funded

- 'G4M: Serious Gaming for Computer Aided Manufacturing', call EYDE-ETAK 'Research-Create-Innovate GSRT, PI
- ANCIENT KYDONIA HISTORY TOUR: Multimedia tour of ancient Kydonia through playful musical elements, using augmented reality technologies, call EYDE-ETAK 'Research-Create-Innovate, GSRT, 2020-2023, PI
- 3D4DELPHI: Modelling Archaeological Uncertainty by Combining Modern 3D Imaging for Scientific Documentation of Cultural Heritage: Application to the Archaeological Site of Delphi, Greece, call EYDE-ETAK 'Research-Create-Innovate GSRT, 2020-2023, PI
- HAPTICS4SURGE: Haptic feedback in Virtual Reality Surgery Systems for Medical Education, call EYDE-ETAK 'Research-Create-Innovate GSRT, 2020-2023, PI
- VARCITIES: Visionary Nature-based Actions for health, well-being & resilience in cities, HORIZON2020, PI and co-ordinator Assoc. Prof. Denia Kolokotsa, research collaborator
- AccelNet: Collaborative Research: An International Network of Networks for Wellbeing in the Built Environment (IN2WIBE), NSF, PI Prof. Panos Parthenios, research collaborator

E – Professional service

- Associate Editor duties

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

- Conference Technical Program Committee service – co-chair

  - IEEE Conference on Games 2020, co-chair of AR/VR program track

- Conference Technical Program Committee service - membership

  - IEEE Virtual Reality 2019, 2020 full paper conference track program committee
  - IEEE Conference on Games 2019, 2020
  - ACM Symposium on Applied Perception 2019, 2020
  - [IEEE Int. Conf. in Games and Virtual Worlds for Serious Applications](#) (VSGames), sponsored by IEEE, 2019, 2020
  - GALA 2019, 2020 (Games and Learning Alliance Conference)
  - IEEE AIVR 2020 (IEEE International Conference on Artificial Intelligence and Virtual Reality)
  - FDG 2020, Foundations of Digital Games 2020

- Reviewing activities

    o Various international conferences and journals

F – Service to the Department and the School

- School responsibilities

    o Member of Kosmiteia (School Council)
    o Member of the university-wide ERASMUS committee
    o Responsible for public relations for the School of ECE
    o Studies' advisor for 1st year studies
    o Participation in the University 'Science Day' for primary school children, October 2019

G – Advising

- Active graduate students supervised

    o Graduate students supervised (completed)

    o Graduate students supervised (in progress)

        ▪ Andreas Polychronakis 'Photorealistic 3D Reconstructions in Virtual and Augmented Reality', Ph.D
        ▪ Adonis Paterakis 'Visualization based on Immersive Displays', M.Eng
        ▪ Grigoris Daskalogrigorakis 'Guidance in Office Work Space employing Augmented Reality', M.Eng
        ▪ Panos Drakopoulos 'Immersive Multi-modal Interaction for Complex Virtual Environments ', M.Eng
        ▪ Katerina Malisova 'Conceptual 3D Visualization Methodologies', M.Eng

    o Diploma theses completed (supervisor)

        ▪ Alexandros Koukis 'A mobile app which Automates the Creation Process for the E-Shadow platform'
        ▪ Minas Katsiokalis 'Mobile Augmented Reality for the Visualization of Coastal Erosion based on GIS'
        ▪ Marina Giannaraki 'A Serious Game for the Improvement of Social Skills based on Music Rhythm'

- ▪ Michalis Efraimidis 'Wireless Embedded System based on a Glove for Hand Tracking and Sense of Touch in 3D Environments'

- o Diploma theses supervised (in progress)

    - ▪ Giannis Kritikos 'Interactive Documentary in Virtual Reality'
    - ▪ Algiannaki Maria 'MusicCityX: Real-time 3D Interactive System for the Improvement of Urban Areas based on their Musical Footprint'
    - ▪ Nikos Mouzakitis 'Interaction based on Gaze employing Eye-Tracking in Augmented Reality
    - ▪ Dimitris Marinopoulos 'PentAgRam: Collaborative Augmented Reality for Music Composition'
    - ▪ Anastasia Reboulaki 'Visualization of Uncertainty'
    - ▪ Georgios Gerodidis 'Development of 3D Animated Graphics in Unity based on Open-Source Motion Capture Data'
    - ▪ Michalis Methymakis 'An Input Architecture for Hands Interaction for Immersive Virtual Reality Applications based on Mobile Platforms
    - ▪ Antonis Danas 'Interactive Implementation of Missions based on Graphics in Unity3D'

- o Diploma theses in progress (committee member)
    - ▪ Dimos Christodoulopoulos
    - ▪ Dimitrios Oikonomidis
    - ▪ Marios Mavrakis
    - ▪ Savvas Chaitidis
    - ▪ Nikolaos Sfikas

- o Diploma theses completed (committee member)
    - ▪ Stiliani Spiridaki

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Euripides G.M. Petrakis
Rank: Professor
Years in rank: 7
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
    - AIS 605 : Special Topics in Information Systems

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

  - Authored textbooks

B – Publications

- Publications in refereed journals

  - Submitted:

- Accepted:
    - See below

- Published:
    - **Euripides G.M. Petrakis**, Xenofon Koundourakis, "i*Xen: Secure Service Oriented Architecture and Context Information Management in the Cloud*", International Journal of Ubiquitous Systems and Pervasive Networks (JUSPN), September 2020 (accepted).

    - **Euripides G.M. Petrakis**, Filippos Antonopoulos, Stelios Sotiriadis, Nik Bessis, "*iPACS: A Physical Access Control System as a Service and Mobile Application*", Ambient Intelligence and Humanized Computing (JAIHC), Vol 11, No. 3, pp. 929-943, March 2020.

- Publications in refereed conferences

    - Accepted:
        - See below

    - Published:
        - Christos Karageorgiou Kaneen and **Euripides G.M. Petrakis**, "*Towards evaluating GDPR compliance in IoT applications*", 24th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES 2020), Virtual Conference, September 16-18, 2020.

        - Michail S. Alexiou and **Euripides G.M. Petrakis**, "*An Agent for Supporting Elasticity in Docker Swarm*", 34th International Conference on Advanced Information Networking and Applications (AINA 2020), Caserta, Italy, April 15-17, 2020.

        - Aimilios Tzavaras, Stelios Botonakis and **Euripides G.M. Petrakis**, "*iSWoT: Service Oriented Architecture in the Cloud for the Semantic Web of Things*", 34th International Conference on Advanced Information Networking and Applications (AINA 2020), Caserta, Italy, April 15-17, 2020.

        - Neofytos Zacharia, Konstantinos Tsakos, and **Euripides G.M. Petrakis**, "*iZen: Secure Federated Service Oriented Architecture for the Internet of Things in the Cloud"*, 34th International Conference on Advanced Information Networking and Applications (AINA 2020), Caserta, Italy, April 15-17, 2020.

        - Nikos Mainas and **Euripides G.M. Petrakis**, "*SOAS 3.0:*

Semantically Enriched OpenAPI 3.0 Descriptions and Ontology for REST Services", 14th International Conference on Semantic Computing, San Diego, USA, February 3-5, 2020.

- Xenofon Koundourakis, **Euripides G.M. Petrakis**, "*iXen: Content-driven Service Oriented Architecture for the Internet of Things in the Cloud*", 11th International Conference on Ambient Systems, Networks and Technologies (ANT 2020), Warsaw, Poland, April 6-9, 2020.

- **Euripides G.M. Petrakis**, Stelios Sotiriadis, Theodoros Soultanopoulos, Pelagia Tsiachri Renta, Konstantionos Tsakos, "*The Role and Prospects of IoT and Cloud Computing in Remote Health Monitoring*", 19th IEEE International Conference on Bioinformatics and Bioengineering (IEEE BIBE 2019), Athens, Greece, October 28-30, 2019.

- Books and edited book chapters

  - **Euripides G.M. Petrakis,** George Myrizakis: "*iHome: Secure Smart Home Management in the Cloud and the Fog*", in Edge Computing for Massive Parallel Processing of IoT Data Streams, Fatos Xhafa, Arun Kumar Sangaiah (Eds). Vol 35: Advances in Parallel Computing, IOS Press, pp. 237-263, 2020.

- Patents

C – Awards & Distinctions
  - IEEE Senior Member, 2019

D – Funded Projects

- Current projects:
  - "*BorderUAS: Semi-autonomous border surveillance platform combining next generation unmanned aerial vehicles with ultra-high-resolution multi-sensor surveillance payload*" (2020-2023), HORIZON 2020 (H2020-BES-02-2019), Duration 36 months, Project budget €6,997,332, Budget for TUC: €735,625, Role in project: **Co-Principal Investigator (Co-PI)**.
  - "*MARS, sMart fArming with dRoneS*", (2018-2021), Ministry of Development, Greek Secretariat for Research and Technology, Research and Innovation Initiative, Project Budget €841,100, Budget for TUC €130,000, Role in project: **Co-Principal Investigator (Co-PI).**

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

E – Professional service

- Associate Editor duties
  - [Member of the Edtorial Board, Internet of Things Journal (](Scopus and in WoS Science Citation Index of Clarivate).

- Society Technical Committee duties

  - Conference Technical Program Committee service
  - Session chair, International Conference on Advanced Information Networking and Applications (AINA), 2020 in sessions (a) AINA-S20: Services Computing and Data Centers and (b) AINA-S21: Internet of Things Security.
  - Program Committee (PC) member, International Conference on Advanced Information Networking and Applications (AINA), 2018-2021 (each year).
  - IoT Track Chair, Intern. Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN), 2018-2021 (*each year*).
  - Program Committee (PC) member, 12th International Conference on Ambient Systems, Networks and Technologies (ANT), 2021.
  - Program committee (PC) member, Intern. Symposium on Visual Computing (ISVC), 2005–2021 (*each year*).
  - Program Committee (PC) member, 19th International Conference on Web Engineering (ICWE), 2019-2020 (*each year*).
  - Technical Program Committee (TPC) member and session chair, IEEE Bioinformatics and Bioengineering (IEEE BIBE), 2015 & 2019.
  - Technical Program Committee (TPC) member, IEEE Sarnoff Symposium (IEEE SARNOFF), NJ, USA, 2016-2019 (*each year*).

- Conference Organization (specify role)
  - IoT Track Chair, 9th Intern. Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN–2018), 2018-2019 (*each year*).

- Reviewing activities
  - Reviewer for Several conferences / journals

F – Service to the School and the University

- School responsibilities
  - Laboratory Director, Intelligent Systems Laboratory, Department of Electronic and Computer Engineering, Technical University of Crete
  - Member of the Board, Telecommunication Research Institute
  - Research Committee, Technical University of Crete (TUC), elected from faculty body (2019 – *2020*)

- University responsibilities

G – Advising
- Active graduate students supervised

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

  o Ph.D. and M.Sc. students supervised (advisor, in progress)
    - Preventis Alexandros (M.Sc.)
    - Thermolia Chryso (M.Sc.)
    - Tsakos Konstantinos (M.Sc)
    - Aimilios Tzavaras (M.Sc)

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

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

- Undergraduate students supervised
  o Many

- Diploma theses in progress (supervisor)
  - Many (more than 10)

- Diploma theses completed (supervisor)

  - Karageorgiou Kaneen C.: Methodology for designing GDPR compliant IoT applications, Diploma Thesis, School of Electrical

and Computer Engineering, Technical University of Crete, December 2019.

- Service Synthesis for Application Development in a Semantic Internet of Things (IoT) Environment, Diploma Thesis, School of Electrical and Computer Engineering, Technical University of Crete, December 2019.
- Karavasileiou A.: An ontology for describing OpenAPI version 3 services in the cloud, Diploma Thesis, School of Electrical and Computer Engineering, Technical University of Crete, November 2019.
- Zacharia N.: LINCA: Service Oriented Architecture for Supporting Multi-Cloud Ecosystems, Diploma Thesis, School of Electrical and Computer Engineering, Technical University of Crete, October 2019.
- Tzavaras A.: Supporting Semantic Web of Things Functionality in the Cloud, Diploma Thesis, School of Electrical and Computer Engineering, Technical University of Crete, October 2019.

- Diploma theses in progress (committee member)
  - Many

- Diploma theses completed (committee member)
  - Many

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
    - COMP 416 : Computational Geometry

- Graduate courses taught
    - COMP 607 : Principles of Distributed Software Systems (Offered jointly with COMP 420)
    - COMP 616 : Computational Geometry (Offered jointly with COMP 416)

- Curriculum & course development
    - New courses / labs developed

    - Lecture notes / slides developed

    - Authored textbooks

B – Publications

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

    - Accepted:

    - Published:

- Publications in refereed conferences
  - Published:
    - Vasilis Samoladas, Minos N. Garofalakis: Functional Geometric Monitoring for Distributed Streams. EDBT 2019: 85-96

- Patents
  - *GRANTED*
  - 1.

C – Awards & Distinctions

D – Funded Projects

- Current projects:

- Project proposals submitted:

E – Professional service

- Conference Technical Program Committee service
  - *KDIR-2019 International Conference on Knowledge Discovery and Information Retrieval*
  - *EUSPN-19 International Conference on Emerging Ubiquitous Systems and Pervasive Networks (*

F – Service to the Department and the School

- Departmental responsibilities

- School – level responsibilities

G – Advising

- Active graduate students supervised

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

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

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

- o Ph.D. and M.Sc. Degrees in progress (committee member)
  - ▪ Vardoulakis Emmanuel (M.Sc.)

- Undergraduate students supervised

  - o Diploma theses in progress
    - ▪ ΚΑΜΠΙΩΤΗ ΣΟΦΙΑ
    - ▪ ΜΠΑΛΑΜΠΑΝΗΣ ΗΛΙΑΣ
    - ▪ ΕΠΟΥΡΕ ΕΝΤΟΥΑΡΝΤ
    - ▪ ΜΠΑΡΑΚΟΣ ΠΑΝΑΓΙΩΤΗΣ
    - ▪ ΣΕΙΣΑΚΗ ΕΥΤΥΧΙΑ

  - o Diploma theses completed (supervisor)
    - ▪

  - o Diploma theses in progress (committee member)
    - ▪

  - o Diploma theses completed (committee member)
    - ▪

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

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

A – Teaching

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

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

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

B – Publications

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

  - Accepted:

  - Published:

- Publications in refereed conferences
  - Published:

- Patents

C – Awards & Distinctions

- **Beijing Institute of Technology, Distinguished Lecture Series**

  - 'Smart, ultra-wide band hyperspectral imaging for chemical/pathology mapping: Emerging applications in microscopy and in nondestructive analysis of artwork', 20-21 November 2019, Beijing China
  - 'Video-Rate Hyperspectral Imaging Enables Spectral Hyper Vision: A Game-Changing Technology in Clinical Diagnosis and Surgery', 20-21 November 2019, Beijing China

D – Funded Projects

- Current projects:
  - "SEA.VIEW.NET - REAL TIME MEASUREMENT AND PUBLICATION ON THE WEB OF THE SUBSEA WATER CLARITY IN THE AREAS OF TOURIST INTEREST OF CRETE THROUGH INNOVATIVE DEVICES NETWORK" funded by Region of Crete
  - INSPECT - INteligent SPEctral Camera Technology (Code: T1EDK-02591 - MIS: 5029725) funded by NSRF 2014-2010 Competitiveness, Entrepreneurship & Innovation, Action "RESEARCH - CREATE - INNOVATE" (QCELL)

  - XMMaS-Development of a coherent X-ray multispectral microscopy system (Code: T1EDK-04549 - MIS:5048516), funded by NSRF 2014-2010 Competitiveness, Entrepreneurship & Innovation, Action "RESEARCH - CREATE - INNOVATE"

- Project proposals submitted:

E – Professional service

- Associate Editor duties

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

- Editorial Board member Journal of Applied Sciences

  Editorial Board member Journal of Applied Sciences

- Society Technical Committee duties

- Conference Technical Program Committee service

o program committee of IEEE BIBE-2020 (20th IEEE Conference on Bioinformatics and Bioengineering -2020)

- Conference Organization (specify role)

- Reviewing activities
  - o More than 10 reviews of Journal   papers
  - o Reviewer in ERC EU program

F – Service to the Department and the School

- Departmental responsibilities
  - o Director of the Electronics Lab

- School – level responsibilities
  - o Chairman of TUCs Innovation House

G – Advising

- Active graduate students supervised

  - o Ph.D. and M.Sc. students supervised (advisor, completed)
    - Chatziioannou Anastasios (M.Sc.)
    - Logothetis Fragkoulis (M.Sc.)

  - o Ph.D. and M.Sc. students supervised (advisor, in progress)
    - Boras Charalambos (M.Sc.)
    - Chousos Christos (M.Sc.)
    - Markellos Dimitrios (Ph.D.)
    - Rossos Christos (Ph.D.)
    - Tsapras Athanasios (Ph.D.)
    - Epitropou Giorgos (M.Sc.)

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

  - o Ph.D. and M.Sc. Degrees (committee member)
    - Makris Nikolaos (Ph.D.)
    - Nikolaou Aristides (Ph.D.)
    - Kostopoulos Konstantinos (M.Sc.)
    - Gkouvatsos Nikolaos (M.Sc.)

- ▪ Roumeliotis Michail (M.Sc.)

- Undergraduate students supervised

  - o Diploma theses in progress
    - ▪ Emmanouilidis Konstantinos
    - ▪ Vogiatzis Konstantinos
    - ▪ Nikoloulias Dimitrios-Marios
    - ▪ Tsiaousis Christos
    - ▪ Stefatos Gerasimos
    - ▪ Takas Panagiotis

  - o Diploma theses completed (supervisor)
    - ▪ Pediaditis Dimitrios
    - ▪ Zacharopoulou Iliana
    - ▪ Mavrakis Marios
    - ▪ Spyridaki Styliani

  - o Diploma theses in progress (committee member)
    - ▪ Gegkios Nikolaos
    - ▪ Gompaki Efstathia
    - ▪ Kokkonas Dimitrios
    - ▪ Pappas Nikolaos
    - ▪ Mouzakitis Nikolaos

  - o Diploma theses completed (committee member)
    - ▪ Polychronakis Andreas
    - ▪ Gkouvatsos Nikolaos
    - ▪ Apostolakis Apostolos
    - ▪ Drakos Vissarios

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Matthias Bucher
Rank: Associate Professor
Years in rank: 6
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture
Lab affiliation: Electronics Laboratory

A – Teaching

- Undergraduate courses taught
  - ECE 301 – Electronics II (Fall 2019)
  - ECE 416 – Design of CMOS Analog Integrated Circuits (Spring 2020)

- Graduate courses taught
  - ECE 604 – Special Themes of CMOS Analog Integrated Circuit Design (Spring 2020)

- Labs taught
  - ECE 301 – Electronics II (Fall 2019)
  - ECE 416 – Design of CMOS Analog Integrated Circuits (Spring 2020)

B – Publications

- Publications in refereed journals
  - Submitted:
    - **M. Bucher,** N. Makris, L. Chevas, "Generalized Constant Current Method to Determine MOSFET Threshold Voltage", *IEEE Transactions on Electron Devices*.
    - N. Makris, **M. Bucher,** L. Chevas, F. Jazaeri, J.-M. Sallese, "Free Carrier Mobility, Series Resistance and Threshold Voltage

Extraction in Junction FETs", *IEEE Transactions on Electron Devices*.

o Accepted:

  ▪ **M. Bucher,** N. Makris, L. Chevas, "Generalized Constant Current Method to Determine MOSFET Threshold Voltage", *IEEE Transactions on Electron Devices*.

  ▪ N. Makris, **M. Bucher,** F. Jazaeri, J.-M. Sallese, "CJM: A Compact Model for Double-Gate Junction FETs", *IEEE Journal of the Electron Devices Society.*

o Published:

  ▪ N. Makris, **M. Bucher,** F. Jazaeri, J.-M. Sallese, "CJM: A Compact Model for Double-Gate Junction FETs", *IEEE Journal of the Electron Devices Society*, Vol. 7, pp. 1191-1199, 2019. [doi](doi).

▪ Publications in refereed conferences

  ▪ N. Makris, L. Chevas, **M. Bucher,** "Compact Modeling of Low Frequency Noise and Thermal Noise in Junction Field Effect Transistors", *49th European Solid-State Device Research Conference (ESSDERC)*, pp. 198-201, Cracow, Poland, Sept. 23-26, 2019. [doi](doi)

  ▪ W. Grabinski, M. Pavanello, M. de Souza, D. Tomaszewski, J. Malesinska, G. Głuszko, **M. Bucher,** N. Makris, A. Nikolaou, A. Abo-Elhadid, M. Mierzwinski, L. Lemaitre, M. Brinson, C. Lallement, J.-M. Sallese, S. Yoshitomi, P. Malisse, H. Oguey, S. Cserveny, C. Enz, F. Krummenacher, E. Vittoz, "FOSS EKV2.6 Verilog-A Compact MOSFET Model", *49th European Solid-State Device Research Conference (ESSDERC)*, pp. 190-193, Cracow, Poland, Sept. 23-26, 2019. [doi](doi)

C – Awards & Distinctions

  ▪ *BEST PAPER AWARD,* N. Makris, M. Bucher, F. Jazaeri, J.-M. Sallese, "A compact model for static and dynamic operation of Symmetric Double-Gate Junction FETs", ***48th European Solid-State Device Research Conference (ESSDERC)***, pp. 238 – 241, Dresden, Germany, Sept. 3-6, 2018 (awarded Sept. 25, 2019).

  ▪ Elected Member of the Board of Directors, ***Micro-& Nano Scientific Society***, Athens, Greece. http://micro-nano.gr/

D – Funded Projects

- Current projects:
    - *INNOVATION EL - Crete: "National Infrastructure of Nanotechnology, Innovative Materials and Micro-Nanoelectronics",* code ΟΠΣ (MIS) 5002772. Funding Agency: Operational Programme "Entrepreneurship, Competitiveness and Innovation 2014-2020" co-financed by Greek National Funds and the European Regional Development Fund (ERDF). Coordinator: IESL-FORTH, Heraklion, Greece. Duration: 4/2018 – 10/2021. https://innovation-el.net/

- Project proposals submitted:
    - Erasmus Mundus Joint Master Degree (EMJMD) "Radiation and its Effects on MicroElectronics and Photonics Technologies" (RADMEP), 2-year European Master (120 ECTS), 2020. *Accepted.* ECE-TUC is an Associated Partner of RADMEP. https://master-radmep.org/

- Development of Electronics Laboratory infrastructure:
    - Digital Oscilloscope, Keysight DSOX 1204G, 100 MHz.
    - Europractice annual subscription.
    - Cadence IC & System software.
    - Keysight ADS and IC-CAP software.

E – Professional service

- Conference Technical Programme Committee service
    - *TPC member, 27th Int. Conf. on Mixed Design of Integrated Circuits and Systems (MIXDES 2020).*
    - *TPC member, 9th Int. Conf. on Modern Circuits and Systems Technologies (MOCAST 2020).*
    - *TPC member, Int. Conf. Micro-Nano 2020.*
    - *TPC member, PAnhellenic Conference on Electronics & Telecommunications (PACET 2019).*
- Reviewing activities
    - *IEEE Transactions on Electron Devices*
    - *IEEE Journal of the Electron Device Society*
    - *IEEE Electron Device Letters*

F – Service to the Department and the School

- Departmental responsibilities
    - Member of admission committee of undergraduate students.
    - Deputy Member of admission committee for postgraduate students.

- o TUC Represant to Europractice Integrated Circuits (IC) Service https://europractice-ic.com/.

G – Advising

- Graduate students supervised
  - o Ph.D. theses completed (supervisor):
    -
  - o Ph.D. students supervised (supervisor):
    - Nikolaos Makris. Charge-based modeling of field-effect transistors. Enrollment: Dec. 2015.
  - o Ph.D. students co-supervised:
    -
  - o M.Sc. theses completed (supervisor):
    - Angelos Papadimitriou, Integrated mmWave FEM for 5G Communications, M.Sc. Thesis, School of ECE, Technical University of Crete, Chania, Greece, Jan. 2020.
  - o M.Sc. students supervised (supervisor):
    - Angelos Papadimitriou
    - Loukas Chevas
    - Alexia Papadopoulou
    - Konstantinos Kostopoulos

- Undergraduate students supervised
  - o Diploma theses completed (supervisor):
    - Apostolos Apostolakis, Design of low power operational transconductance amplifers (OTAs) in two generations of bulk CMOS, Diploma Thesis, School of ECE, Technical University of Crete, Chania, Greece, Dec. 2019.
    - Georgios Fousteris, Characterization and Modeling of HV-LDMOSFETs, Diploma Thesis, School of ECE, Technical University of Crete, Chania, Greece, Dec. 2019.
    - Stamatis Stoikotidis, Tool for statistical noise data analysis in CMOS technology, Diploma Thesis, School of ECE, Technical University of Crete, Chania, Greece, Dec. 2019.
    - Christos Diamantis, Characterization of statistical variability of enclosed gate nMOSFETs, Diploma Thesis, School of ECE, Technical University of Crete, Chania, Greece, Dec. 2019.
    - Vissarion (Aris) Drakos, Characterization of statistical variability of enclosed gate pMOSFETs, Diploma Thesis, School of ECE, Technical University of Crete, Chania, Greece, Dec. 2019.
  - o Diploma students (supervisor):
    - Nikolaos Gkouvatsos

- Antonios Antonakakis
- Dimitrios Kokkonas
- Nikolaos Gegkios
- Nikolaos Pappas
  - Diploma theses completed (committee member):

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Apostolos Dollas
Rank: Professor
Years in rank: 19
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 203 :   Advanced Logic Design (mandatory)

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

- Labs taught
    - Supervised the labs of ACE 201
    - Supervised the labs of ACE 203,
    - Administered (including examination and grading) all of the laboratory exercises and projects of ACE 608.

- Curriculum & course development

    - Lecture notes / slides developed
        - Revised most of the SPIM-based laboratory exercises of ACE 201.
        - Revised exercises for hands-on lab experience with Xilinx Spartan FPGA's of ACE 203.
        - Revised the ACE 203 (Advanced Logic Design) class notes which were distributed in preliminary form through the web-based e-learning environment Webcourses.
        - Developed from scratch the laboratory exercises and projects of ACE 608, with completely new exercises and project.

B – Publications

- Publications in refereed journals

  - N. Kyparissas, A. Dollas, Large-scale Cellular Automata on FPGAs: A New Generic Architecture and a Framework, ACM Transactions on Reconfigurable Technology and Systems (TRETS), (accepted, to appear December, 2020).
  - N. Tampouratzis, I. Papaefstathiou, A. Nikitakis, A. Brokalakis, S. Andrianakis, A. Dollas, M. Marcon, E. Plebani, A Novel, Highly Integrated Simulator for Parallel and Distributed Systems, ACM Transactions on Architecture and Code Optimization (TACO), Vol. 17, No. 1, pp. 1-28, Mar./Apr., 2020.

- Publications in refereed conferences (Published)

  - N. Badogiannis, K. Moirogiorgou, M. Zervakis, A. Dollas, N. Papandroulakis, "Real-Time Embedded System for Hole Detection in Fish Cage Nets", Proceedings of the IEEE International Conference on Imaging Systems and Techniques (IST), Dec. 8-10, Abu Dhabi, UAE, IEEE, 2019.
  - N. Kyparissas, A. Dollas, "An FPGA-Based Architecture to Simulate Cellular Automata with Large Neighborhoods in Real Time", In Proceedings of the 29th International Conference on Field Programmable Logic and Applications (FPL), pp. 95-99, Barcelona, Spain, Sep. 9-13, 2019, IEEE Press.

- Book Chapters

  - A. Dollas, "Meta-Arduino-ing Microcontroller-Based Cyber Physical System Design", Heterogenerous Cyber Physical Systems of Systems (HePSOS), I. Papaefstathiou, A. Hatzopoulos (Eds.), River Publishers, (accepted, to be published in late 2020).

C – Awards & Distinctions

  - Steering Committee member, IEEE/ACM 30th International Symposium on Field Programmable Logic (FPL), Gottenburg, Sweden, Aug. 31st – Sept. 4th (virtual conference due to the pandemic) 2020.
  - Steering Committee member, IEEE/ACM 31th International Symposium on Field Programmable Logic (FPL), Dresden, Germany, Aug. 30-Sept. 3, 2021.

D – Funded Projects

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

- Participation as a Researcher in Projects:
  - Senior Research Associate in the projects EPI_SGA1 and EuroEXA (CARV group, ICS/FORTH)

E – Professional service

- Conference Technical Program Committee service
  - Steering Committee and Program Committee member, IEEE/ACM 30th International Symposium on Field Programmable Logic (FPL), Gottenburg, Sweden, Aug. 31st – Sept. 4th (virtual conference due to the pandemic).
  - Steering Committee and Program Committee member, IEEE/ACM 31th International Symposium on Field Programmable Logic (FPL), Dresden, Germany, Aug. 30-Sept. 3, 2021.
  - Program Committee Member, 2019 International Conference on Field Programmable Technology (FPT, IEEE Sponsored), Tianjin, China, December 9-13, 2019.
  - Invited Speaker at the IEEE sponsored *Heterogeneous Cyber Physical Systems of Systems (HEPSoS) Seasonal School,* November 2019, Thessaloniki, November, 2019.

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

F – Service to the School and the University
- School responsibilities
  - Faculty Advisor to the 1st semester students
  - Member of faculty election boards at:
    - o the Technical University of Crete (multiple positions)
    - o the National and Kapodistrian University of Athens

o the Aristotelian University of Thessaloniki
o the University of Thessaly (multiple positions)
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.
- o Member of the evaluation committee for teaching experience of recent Ph.D. recipients (multiple committees).

- University responsibilities
  - o Member of the Telecommunication Systems Institute's (ITS) Board of Directors

G – Advising
- Active graduate students supervised
  - o Ph.D. and M.Sc. theses completed (supervisor)
    - Ioannou Aggelos (Ph.D.)
    - Giakoumakis Pavlos (M.Sc.)
    - Pekridis Georgios (M.Sc.)

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

  - o Ph.D. and M.Sc. Degrees completed (committee member)
    - Giaourtas Michael (M.Sc. – Computer Science – Univ. of Crete)
    - Linardos Christos (M.Sc. – Mineral Resources Engineering – TUC)
    - Vasilakis Evangelos (Ph.D, Chalmers U. – Sweden)

  - o Ph.D. and M.Sc. Degrees in progress (committee member)
    - Charitopoulos Georgios (Ph.D.)
    - Vatsolakis Charalampos (Ph.D.)
    - Amourgianos-Lorentzos Vasilios (M.Sc.)
    - Tsakaneli Stavroula (M.Sc.)

- Undergraduate students supervised
  - o Diploma theses in progress (supervisor)
    - Ampatzidis Konstantinos
    - Argyriou Maria
    - Bokalidis Anastasios
    - Charokopos Zisis
    - Fleggas Georgios
    - Fotakis Tzanis
    - Galanos Georgios

- Galatianos Georgios
- Iliaki Anastasia
- Kalomiris Ioannis
- Kokkinis Iraklis - Taxiarchis
- Konstantopoulos Konstantinos
- Kordas Sotiris
- Lykos Emmanouil
- Makris Ioannis
- Manolis Nikolaos
- Marinaki Eftihia
- Metai Edritt
- Morianos Ioannis
- Ntafi Eirini
- Palaiologk Chariton
- Poupakis Alexandros
- Robogiannakis Emmanouil-Eleftherios
- Sotiropoulos Antonios
- Skoufis Charalampos
- Spyridakis Christos
- Stavgianoudakis Christos
- Theodoris Charalampos
- Theodoroglaki Ioanna
- Zacheilas Theofilos

o Diploma theses completed (supervisor)
- Badogiannis Nikolaos
- Chatzidaki Eleftheria
- Fotinopoulos Georgios
- Kasfikis Konstantinos
- Katsoudas Panagiotis
- Kyparissas Nikolaos
- Loukas Charisios
- Souflakis Emmanouil

o Diploma theses in progress (committee member)
- Andronikidis Georgios
- Androulakis Dimitrios
- Athanasiou Vasilios
- Delakis Nikolaos
- Demertzis Eleftherios
- Drakoulaki Eleni
- Georgiadis Vasilios
- Iatrakis Georgios

- Iatrakis Petros – Pavlos
- Iggilis Anastasia
- Kampourakis Nomikos
- Katsinelis Konstantinos
- Myrkos Demosthenes
- Panagidis Giannakis
- Pegkos Athanasios
- Pentafragkas Georgios
- Vatsithianos Nikolaos
- Vogiatzis Konstantinos

- Diploma theses completed (committee member)

  - Bantra Konstantina
  - Bolonakis Georgios
  - Iskis Nikolaos

Technical University of Crete
School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Sotiris Ioannidis
Rank: Associate Professor
Years in rank: 1
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture
Lab affiliation: Microprocessor and Hardware Laboratory

A – Teaching

- Undergraduate courses taught

- Graduate courses taught

- Labs taught

- Curriculum & course development
    - HPY414: Security of Systems and Services

B – Publications

- Publications in refereed journals
    - Published:
        - "The Seven Deadly Sins of the HTML5 WebAPI: A Large-scale Study on the Risks of Mobile Sensor-based Attacks" Michalis Diamantaris, Francesco Marcantoni, Sotiris Ioannidis, and Jason Polakis. In ACM Transactions on Privacy and Security (TOPS), August 2020.
        - sdfsdfs"Modern Aspects of Cyber-Security Training and Continuous Adaptation of Programmes to Trainees" George Hatzivasilis, Sotiris Ioannidis, Michali Smyrlis, George Spanoudakis, Fulvio Frati, Ludger Goeke, Torsten Hildebrandt, George Tsakirakis, Fotis Oikonomou, George Leftheriotis, and Hristo Koshutanski. Applied Sciences - Special Issue on Cyber Security of Critical Infrastructures, MDPI Open Access Journal, vol. 10, issue 16, article 5702, pp. 1-26, August 2020.
        - "AI-driven composition and security validation of an IoT ecosystem" George Hatzivasilis, Nikos Papadakis, Ilias Hatzakis, Sotiris Ioannidis, and George Vardakis. In Applied Sciences - Special Issue Smart City and Multi-Agent Systems, MDPI Open Access Journal, vol. 10, issue 14, article 4862, pp. 1-31, August, 2020.

- "Towards Intelligent Metasurfaces: The Progress from Globally-Tunable Meta- surfaces to Software-Defined Metasurfaces with an Embedded Network of Controllers" Odysseas Tsilipakos, Anna C. Tasolamprou, Alexandros Pitilakis, Fu Liu, Xuchen Wang, Mohammad Sajjad Mirmoosa, Dimitrios C. Tzarouchis, Sergi Abadal, Hamidreza Taghvaee, Christos Liaskos, Ageliki Tsioliaridou, Julius Georgiou, Albert Cabellos-Aparicio, Eduard AlarcoÃÅn, Sotiris Ioannidis, Andreas Pitsillides, Ian F. Akyildiz, Nikolaos V. Kantartzis, Eleftherios N. Economou, Costas M. Soukoulis, Maria Kafesaki, and Sergei Tretyakov. In Advanced Optical Materials, Wiley, July, 2020.
- "A Fine-grained Social Network Recommender System" Markos Aivazoglou, Antonios O. Roussos, Dionisis Margaris, Costas Vassilakis, Sotiris Ioannidis, Jason Polakis, and Dimitris Spiliotopoulos. In Social Network Analysis and Mining (SNAM), Springer, 2020.
- "A survey on vulnerability assessment tools and databases for cloud-based web applications" Kyriakos Kritikos, Kostas Magoutis, Manos Papoutsakis, and Sotiris Ioannidis. Array, Elsevier,Volumes 3-4, September - December 2019.

- Publications in refereed conferences

  - Published:
    - "Integration of an online voting solution with the SMESEC security framework" Jordi Cucurull, Christos Tselios, Carolina Rueda, Noemi Folch, Fady Copty, Reda Igbaria, Manos Athanatos, Antonios Krithinakis, Sotiris Ioannidis, Jose Francisco Ruiz, and Pablo Barrientos. In Proceedings of the IEEE International Systems Conference (SysCon), Montreal, Canada, August 2020.
    - "Pythia: Scheduling of Concurrent Network Packet Processing Applications on Heterogeneous Devices" Giannis Giakoumakis, Eva Papadogiannaki, Giorgos Vasiliadis, and Sotiris Ioannidis. In Proceedings of the IEEE Conference on Network Softwarization (NETSOFT), Ghent, Belgium, June-July 2020 (short paper).
    - "Mobility-aware Beam Steering in Metasurface-based Programmable Wireless Environments" Christos Liaskos, Shuai Nie, Ageliki Tsioliaridou, Andreas Pitsillides, Sotiris Ioannidis, and Ian Akyildiz. In Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Barcelona, Spain, May 2020.
    - "TrustAV: Practical and privacy preserving malware analysis in the cloud" Dimitris Deyannis, Eva Papapdogiannaki, George Kalivianakis, Giorgos Vasiliadis, and Sotiris Ioannidis. In Proceedings of the 10th ACM Conference on Data Application Security and Privacy (CODASPY), New Orleans LA, USA, March 2020.

- "Secure Semantic Interoperability for IoT Applications with Linked Data" George Hatzivasilis, Othonas Soultatos, Eftychia Lakka, Sotiris Ioannidis, Darko Anicic, Arne Broring, Konstantinos Fysarakis, George Spanoudakis, Mirko Falchetto, and Lukasz Ciechomski. In Proceedings of the IEEE Global Communications Conference - Communication and Information System Security Symposium (GLOBECOM CISS), Waikoloa, HI, USA, December 2019.
- "Cyber Insurance of Information Systems: Security and Privacy Cyber Insurance Contracts for ICT and Healthcare Organizations" George Hatzivasilis, Panos Chatziadam, Nikos Petroulakis, Sotiris Ioannidis, Matteo Mangini, Christos Kloukinas, Artsiom Yautsiukhin, Michalis Antoniou, Dimitrios G. Katehakis, and Marios Panayiotou. In Proceedings of the IEEE International Conference on Computer-Aided Modeling Analysis and Design of Communication Links and Networks (CAMAD), Limassol, Cyprus, September 2019.
- "Towards Configurable Vulnerability Assessment in the Cloud" Kyriakos Kritikos, Manos Papoutsakis, Sotiris Ioannidis, and Kostas Magoutis. In Proceedings of the IEEE International Conference on Computer-Aided Modeling Analysis and Design of Communication Links and Networks (CAMAD), Limassol, Cyprus, September 2019.
- "Using blockchains to enable Big Data analysis of private information" Kostas Lampropoulos, Giorgios Georgakakos, and Sotiris Ioannidis. In Proceedings of the IEEE International Conference on Computer-Aided Modeling Analysis and Design of Communication Links and Networks (CAMAD), Limassol, Cyprus, September 2019.
- "Pattern-driven Security, Privacy, Dependability and Interoperability management of IoT environments" Othonas Soulatos, Manos Papoutsakis, Konstantinos Fysarakis, George Hatzivasilis, Manolis Michalodimitrakis, George Spanoudakis, and Sotiris Ioannidis. In Proceedings of the IEEE International Conference on Computer-Aided Modeling Analysis and Design of Communication Links and Networks (CAMAD), Limassol, Cyprus, September 2019.
- "ABSense: Sensing Electromagnetic Waves on Metasurfaces via Ambient Compilation of Full Absorption" Christos Liaskos, Georgios G. Pyrialakos, Alexandros Pitilakis, Sergi Abadal, Ageliki Tsioliaridou, Anna Tasolamprou, Odysseas Tsilipakos, Odysseas Tsilipakos, Nikolaos V. Kantartzis, Sotiris Ioannidis, Eduard Alarc√≥n, Albert Cabellos-Aparicio, Maria Kafesaki, Andreas Pitsillides, Kypros Kossifos, Julius Georgiou, and Ian F. Akyildiz. In Proceedings of the 6th ACM International Conference on Nanoscale Computing and Communication (NanoCom), Dublin, Ireland. September 2019.
- "TALON: An Automated Framework for Cross-Device Tracking Detection" Konstantinos Solomos, Panagiotis Ilia, Sotiris Ioannidis, and Nicolas Kourtellis. In Proceedings of the

22nd International Symposium on Research on Attacks, Intrusions, and Defenses (RAID), Beijing, China, September 2019.

▪ **"Advanced Physical-layer Security as an App in Programmable Wireless Environments"** Fotios Mathioudakis, Christos Liaskos, Ageliki Tsioliaridou, Shuai Nie, Andreas Pitsillides, Sotiris Ioannidis, and Ian Akyildiz. In Proceedings of the 21st IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC), Atlanta, Georgia, USA, May 2020.

▪ **"An Enclave Assisted Snapshot-based Kernel Integrity Monitor"** Dimitris Deyannis, Dimitris Karnikis, Giorgos Vasiliadis, and Sotiris Ioannidis. In Proceedings of the 3rd International Workshop on Edge Systems, Analytics and Networking (EdgeSys), Heraklion, Greece, April 2020.

▪ **"Towards the Insurance of Healthcare Systems"** George Hatzivasilis, Panos Chatziadam, Andreas I. Miaoudakis, Eftychia Lakka, Sotiris Ioannidis, Alessia Alessio, Michail Smyrlis, George Spanoudakis, Artsiom Yautsiukhin, Michalis Antoniou, and Nikos Stathiakis. In Proceedings of the International Workshop on Information & Operational Technology (IT & OT) security systems (IOSec), Luxembourg City, Luxemburg, September 2019.

▪ **"You Shall Not Register! Detecting Privacy Leaks across Registration Forms"** Manolis Chatzimpyrros, Konstantinos Solomos, and Sotiris Ioannidis. In Proceedings of the International Workshop on Model-driven Simulation and Training Environments for Cybersecurity (MSTEC), Luxembourg City, Luxemburg, September 2019.

- Books and edited book chapters
    - ▪ Proceedings of the 1st International Workshops IOSec, MSTEC, and FINSEC. Apostolos P. Fournaris, Manos Athanatos, Konstantinos Lampropoulos, Sotiris Ioannidis, George Hatzivasilis, Ernesto Damiani, Habtamu Abie, Silvio Ranise, Luca Verderame, Alberto Siena, and Joaquín García-Alfaro (Eds.). Luxembourg City, Luxembourg, September 26-27, 2019. Lecture Notes in Computer Science 11981, Springer 2020, ISBN 978-3-030-42050-5.

- Patents

C – Awards & Distinctions

D – Funded Projects

- Current projects:
    - **"C4IIoT: Cyber security 4.0: protecting the Industrial Internet Of Things"** Funded by the European Commission (SU-ICT-01-2018)

- **"BIO-PHOENIX: Biologically Inspired Complex Software System Reconstruction at Near Extinction States"** Funded by the European Commission (MSCA-RISE-2018)
- **"THREAT-ARREST: Cyber Security Threats and Threat Actors Training - Assurance Driven Multi-layer, end-to-end Simulation and Training"** Funded by the European Commission (DS-07-2017)
- **"IDEAL-CITIES: Intelligence-Driven Urban Internet-of-Things Ecosystems for Trustworthy and Circular Smart Cities"** Funded by the European Commission (MSCA-RISE-2017)
- **"I-BiDaaS: Industrial-Driven Big Data as a Self-Service Solution"** Funded by the European Commission (ICT-16-2017)
- **"CERTCOOP: Trans-European and Greek CERTs collaboration project"** Funded by the European Commission (CEF-2016-3)
- **"CYBERSURE: Cyber Security Insurance - A Framework for Liability-based Trust"** Funded by the European Commission (MSCA-RISE-2016)
- **"PUZZLE: Towards a Sophisticated SIEM Marketplace for Blockchain-based Threat Intelligence and Security-as-a-Service"** Funded by the European Commission (SU-DS03-2019)
- **"AI4HEALTHSEC: A Dynamic and Self-Organized Artificial Swarm Intelligence Solution for Security and Privacy Threats in Healthcare ICT Infrastructures"** Funded by the European Commission (SU-DS05-2019)
- **"HEIR: A secure Healthcare Environment for Informatics Resilience"** Funded by the European Commission (SU-DS05-2019)
- **"ASCAPE: Artificial intelligence Supporting CAncer Patients across Europe"** Funded by the European Commission (SC1-DTH-01-2019)
- **"COLLABS: A COmprehensive cyber-intelligence framework for resilient coLLABorative manufacturing Systems"** Funded by the European Commission (ICT-08-2019
- **"AERAS: A CybEr range tRaining platform for medicAI organisations and systems Security"** Funded by the European Commission (MSCA-RISE-2019)
- **"CYBERSANE: Cyber Security Incident Handling, Warning and Response System for the European Critical Infrastructures"** Funded by the European Commission (SU-ICT-01-2018)
- **"GUARD: A cyber-security framework to GUArantee Reliability and trust for Digital service chains"** Funded by the European Commission (SU-ICT-01-2018)
- **"SPIDER: a cyberSecurity Platform for vIrtualiseD 5G cybEr Range services"** Funded by the European Commission (SU-DS01-2018)
- **"CONCORDIA: Cyber security cOmpeteNce fOr Research anD Innovation"** Funded by the European Commission (SU-ICT-03-2018)
- **"CyberExchange: Cyber Security Threats and Threat Actors Training - Assurance Driven Multi-layer, end-to-end Simulation and Training"** Funded by the European Commission (CEF-2017-3)
- **"RESIST: RESilient transport InfraSTructure to extreme events"** Funded by the European Commission (MG-7-1-2017) (
- **"CE-IoT: A Framework for Pairing Circular Economy and IoT: IoT as an enabler of the Circular Economy circularity-by-design as an**

enabler for the IoT" Funded by the European Commission (MSCA-RISE-2017)

- **"SEMIoTICS: Smart End-to-end Massive IoT Interoperability, Connectivity and Security"** Funded by the European Commission (IOT-03-2017)
- **"EUNITY: Cybersecurity and privacy dialogue between Europe and Japan"** Funded by the European Commission (H2020-DS-2016-2017/DS-05-2016)
- **"SMESEC: Protecting Small and Medium-sized Enterprises digital technology through and innovative cyber-SECurity framework"** Funded by the European Commission (H2020-DS-2016-2017/H2020-DS-SC7-2016)
- **"VISORSURF: A Hardware Platform for Software-driven Functional Metasurfaces"** Funded by the European Commission (H2020-FETOPEN-1-2016-2017)
- **"UNICORN: A Novel Framework for Multi-cloud Services Development, Orchestration and Continuous Management Fostering Cloud Technologies Uptake from Digital SMEs/Startups"** Funded by the European Commission (H2020-ICT-2016-1/ICT-06-2016)
- "**CIPSEC: Enhancing Critical Infrastructure Protection with innovative SECurity framework"** Funded by the European Commission (H2020-DS-2015-1/DS-3-2015)

- Project proposals submitted:

E – Professional service

- Associate Editor duties
  - International Journal of Information Security

- Society Technical Committee duties

- Conference Technical Program Committee service
  - ACM Cloud Computing Security Workshop (CCSW)
  - ACM Symposium on Information, Computer and Communication Security (ASIACCS),
  - IEEE International Conference on Cloud Computing (CLOUD)
  - IEEE International Conference on Communication and Network Security (CNS),
  - International Conference on World Wide Web (WWW)
  - International Workshop on Smart Circular Economy (SmaCE),
  - Usenix Security Conference

- Conference Organization (specify role)
  - European Workshop on System Security (EuroSec), Steering Committee
  - ENISA-FORTH Network and Information Security Summer School (Program Chair)
  - Workshop on Model-driven Simulation and Training Environments for Cybersecurity (Program Chair)

● Reviewing activities

F – Service to the School and the University

- School – level responsibilities

- University responsibilities

G – Advising

- Active graduate students supervised

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

  o Ph.D. and M.Sc. theses in progress (supervisor)
    1. Giorgos Christou, Ph.D
    2. Dimitris Deyannis, Ph.D
    3. Michalis Diamantaris, Ph.D.
    4. Kostas Drakonakis, Ph.D.
    5. Evangelia Papadogiannaki, Ph.D.
    6. Panagiotis-Elias Papadopoulos, Ph.D.
    7. Alexander Shevtsov, Ph.D.
    8. Giorgos Anagnopoulos, M.Sc.
    9. Ioannis Giakoumakis, M.Sc.
    10. Apostolos-Paraschos Karambelas, M.Sc.
    11. Dimitris Karnikis, M.Sc.
    12. Christophoros Leventis, M.Sc.
    13. Serafeim Moustakas, M.Sc.
    14. Alexandros Savvopoulos, M.Sc.
    15. Rafael Tsirbas, M.Sc.

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

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

- Undergraduate students supervised

  o Diploma theses in progress
    -

  o Diploma theses completed (supervisor)
    - Nikolaos Chalkiadakis
    - Manolis Chatzimpyrros
    - Ioannis Tsiakkas

- Diploma theses in progress (committee member)
- Diploma theses completed (committee member)
  -

Technical University of Crete
School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Kostas Kalaitzakis
Rank: Full Professor
Years in rank: 17
Full-time or part-time: Full-time
Division: Electronic and Computer Architecture
Lab affiliation: Circuits, Sensors and Renewable Energy Sources (CSRES) Laboratory (www.elci.tuc.gr)

A – Teaching

- Undergraduate courses taught

    - ACE 202: Electric Circuits Analysis (mandatory)
    - ACE 414 : Electric Measurements and Sensors

- Graduate courses taught

    - ACE 602 : Special Topics on Electric Measurement Systems

- Labs taught

- Curriculum & course development

    - Lecture notes / slides developed

        - Electric Circuits Analysis (ACE 202)
        - Electric Measurements and Sensors (ACE 414)

- Authored textbooks : None

B – Publications

- **Publications in refereed journals**

    - **Published:**

    - Kampelis N., Sifakis N., Kolokotsa D., Gobakis K., Kalaitzakis K., Isidori D., Cristalli C., "HVAC Optimization Genetic Algorithm for Industrial Near-Zero-Energy Building Demand Response", Energies, 12(11), 2177, https://www.mdpi.com/1996-1073/12/11/2177, 2019.

- Mavrigiannaki A., Gobakis K., Kolokotsa D., Kalaitzakis K., Pisello A. L., Piselli C., Gupta R., Gregg M., Laskari M., Saliari M., Assimakopoulos M. N., Synnefa A., "Measurement and Verification of Zero Energy Settlements: Lessons Learned from Four Pilot Cases in Europe", Sustainability, 12(22), 9783, https://doi.org/10.3390/su12229783, 2020.

- **Publications in refereed conferences:**

  - Mavrigiannaki A., Gobakis K., Kolokotsa D., Kalaitzakis K., "An Integrated Design Approach for Planning the Measurement and Verification of Zero Energy Settlements", Proc. Int. Conf. on Innovative Applied Energy (IAPE '19), Oxford, United Kingdom, 14-15 March, 2019.

- **Books and edited book chapters**

  - Kampelis N, Tsekeri E., Kolokotsa D, Kalaitzakis K., Isidori D., Cristalli C., "Demand-Response in Smart Buildings", MDPI, Energies, 2020, ISBN 978-3-03928-266-1 (Pbk), ISBN 978-3-03928-267-8 (PDF), pp. 45-66.

  - Edited by Kolokotsa D. and Kampelis N., "Smart Buildings, Smart Communities and Demand Response", Engineering, Energy and Architecture Set, Vol. 8, Chapters 4 and 5, Wiley, 2020, ISBN 978-1-78630-426-1, pp. 1-191.

- **Patents: --**

C – Awards & Distinctions: --

D – Funded Projects

- *Current projects:*

  - "Smart Grids Energy management Staff MSCA-RISE-2014", Marie Skłodowska - Curie, χρηματοδοτούμενο από την ΕΕ στα πλαίσια του "Research and Innovation Staff Exchange" (Horizon RISE), 2015-2019.

  - "Achieving near Zero and Positive Energy Settlements in Europe using Advanced Energy Technology", H2020-EE-2015-1-PPP, χρηματοδοτούμενο από την ΕΕ, 2015-2019.

  - "SAVES2-Students Achieving Valuable Energy Savings 2", Horizon 2020, H2020-EE-2016-2017 Energy Efficiency Call, No. 754203, χρηματοδοτούμενο από την ΕΕ, 2017-2019.

E – Professional service

- Regular Reviewer in high quality international Journals with referees

F – Service to the School and the University

- School – level responsibilities:

  - Member of the Deanery Committee

- University – level responsibilities:

  - Chair of the Ethics and Deontology of Research Committee

G – Advising

- **Active graduate students supervised**

  o Ph.D. students supervised **(advisor**, in progress)

  o M.Sc. students supervised (**advisor**, in progress)

    ▪ Fytraki Evangelia
    ▪ Zorbas Alexandros

  o M.Sc. Degrees (committee member)

  o Ph.D. Degrees (committee member)

- **Undergraduate students supervised**

  o **Diploma theses <u>completed</u> (<u>supervisor</u>):**

    ▪ Ioannou Vasileios
    ▪ Smyrnaios Dimitrios
    ▪ Vratsanos Georgios
    ▪ Ardit Neli
    ▪ Paterakis Emmanouil
    ▪ Kalogridis Stylianos

Technical University of Crete
School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Fotios D. Kanellos
Rank: Associate Professor
Years in rank: 2
Full-time or part-time: Full-time
Division:
Lab affiliation: Electric Energy Systems

A – Teaching

- Undergraduate courses taught
    - ENE 401 : Analysis of Electrical Installations and Electric Energy Systems (mandatory)
    - ENE 412 : Analysis of Electric Power Systems
    - ACE 419 : Power Electronics

- Graduate courses taught
    - ECE 172 : Special Topics on Electric Power Systems

- Labs taught
    - ACE 419 : Power Electronics
    - ENE 412 : Analysis of Electric Power Systems

- Curriculum & course development
    - Labs developed
    - Lecture notes / slides developed

B – Publications

- Publications in refereed journals
    - Published:
        - Kanellos, F.D., "Multiagent-System-Based Operation Scheduling of Large Ports' Power Systems with Emissions Limitation", (2019) IEEE Systems Journal, 13 (2), art. no. 8411546, pp. 1831-1840.
        - Gennitsaris, S.G., Kanellos, F.D., "Emission-Aware and Cost-Effective Distributed Demand Response System for Extensively Electrified Large Ports", (2019) IEEE Transactions on Power Systems, 34 (6), art. no. 8730511, pp. 4341-4351.
        - Kanellos, F.D., Volanis, E.-S.M., Hatziargyriou, N.D., "Power management method for large ports with multi-agent systems", (2019) IEEE Transactions on Smart Grid, 10 (2), art. no. 8064731, pp. 1259-1268.

- Deligianni, P.M., Tsekouras, G.J., Tsirekis, C.D., Kontargyri, V.T., Kanellos, F.D., Kontaxis, P.A. "Techno-economic optimization analysis of an autonomous photovoltaic power system for a shoreline electrode station of HVDC link: Case study of an electrode station on the small Island of Stachtoroi for the Attica-Crete interconnection", (2020) Energies, 13 (21), art. no. 5550.

- Publications in refereed conferences

  - Published:
    - Prousalidis, J., Kanellos, F., Lyridis, D., Dallas, S., Spathis, D., Georgiou, V., Mitrou, P., "Optimizing the operation of port energy systems", (2019) Proceedings - 2019 IEEE International Conference on Environment and Electrical Engineering and 2019 IEEE Industrial and Commercial Power Systems Europe, EEEIC/I and CPS Europe 2019, art. no. 8783476.
    - J. Prousalidis, D. Spathis , V. Papaspilitopoulos , V Georgiou, T. Kourmpelis, F. Kanellos, "Facing safety challenges towards smart ships and ports", MECSS 2019/ EAAW VIII.
    - John Prousalidis , Vassilis Georgiou, Dimosthenis Spathis , Dimitrios Lyridis , Fotios Kanellos, Panos Mitrou , Stefanos Dallas, "Elaborating Sustainable Port services for Greener Shipping", International Conference on Marine Engineering and Technology Oman (ICMET), Oman, 2019.

- Books and edited book chapters

- Patents

C – Awards & Distinctions

D – Funded Projects

- Current projects:
  - e-Power/T2EΔK-01775, "Smart power converter for the provision of integrated services to electric networks and consumers", Telecommunication Systems Research Institute (T.S.I.), TUC, Role: Research Group Member
  - "INVESTIGATION OF THE ELECTRODES CONFIGURATION OF THE ATTICA-CRETE DC HIGH VOLTAGE WIRING SYSTEM", University of West Attica, Department of Electrical and Electronics Engineering. Role: Research Group Member

- Project proposals submitted:

E – Professional service

- Associate Editor duties

- Society Technical Committee duties

- Conference Technical Program Committee service

- Conference Organization (specify role)

- Reviewing activities
    o IEEE Transactions on Power Systems
    o IEEE Transactions on Smart Grid
    o IEEE Systems Journal
    o IEEE Transactions on Sustainable Energy
    o Electric Power Systems Research
    o Journal of Intelligent & Robotic Systems
    o IEEE IAS Publications

F – Service to the School and the University

- School – level responsibilities
    o Director of Electric Energy Systems Laboratory
    o School coordinator for the ERASMUS+ program

- University responsibilities
    o Member of TUC Technical Council

G – Advising

- Active graduate students supervised

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

    o Ph.D. and M.Sc. theses in progress (supervisor)
        - Kalaitzakis Iason-Christos (M.Sc)
        - Dakanalis Michael (M.Sc)
        - Peponakis Emanuel (M.Sc)

    o Ph.D. and M.Sc. Degrees completed (examination committee member)
        - Kampelis Nikolaos (Ph.D.) (School of Chemical and Environmental Engineering)
        - Gianakis George (Ph.D.) (School of Production Engineering and Management)

- Ph.D. and M.Sc. Degrees in progress (committee member)
  - Roditis Ioannis (M.Sc)
  - Bardaksis Ioannis (M.Sc)
  - Konstantinidis George (M.Sc)
  - Tsamoudalis Konstantinos (M.Sc)

- Undergraduate students supervised

  - Diploma theses in progress
    - Delakis Nikolaos
    - Laskaris Andreas
    - Komitopoulos Nikolaos
    - Sartzetakis Antonios
    - Christofolakis Tryfon
    - Pitta Eleni
    - Rampias Sarantis

  - Diploma theses completed (supervisor)
    - Kalaitzakis Iason-Christos
    - Christena Ageliki
    - Dakanalis Michael
    - Moudiri Konstantina
    - Karandinou Ekaterini-Agapi
    - Farinis George
    - Goumagias Konstantinos

  - Diploma theses in progress (committee member)
    - Kontos Stefanos
    - Stefanakis Konstantinos
    - Demerzis Eleftherios
    - Triantafylou Panagiotis
    - Tsaparas Christos
    - Konidari Iro
    - Vardaksis Ioannis
    - Saoulis Lampros
    - Mavrovatis Stylianos
    - Sdoukos Thomas
    - Litsios Sotirios
    - Rousakis Skouloudis
    - Moraitis Ioannis
    - Lagoudakis Marios
    - Saloustros Vassilios

  - Diploma theses completed (committee member)
    - Paterakis Emanuel
    - Koutsaki Eleni
    - Antoninis Ioannis
    - Ioannou Vassilios

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Eftichios Koutroulis
Rank: Associate Professor
Years in rank: 4
Full-time or part-time: Full – Time
Division: Electronics and Computer Architecture
Lab affiliation: Circuits, Sensors and Renewable Energy Sources Laboratory

A – Teaching

- Undergraduate courses taught

    - ACE 101: Logic Design (mandatory)
    - ACE 102: Basic Circuit Theory (mandatory)

- Graduate courses taught

    - ENE 602: Electronic Energy Management Systems

- Curriculum & course development

    - Lecture notes / slides developed
        - ACE 101 - Logic Design: developed new slides
        - ACE 102 - Basic Circuit Theory: updated the existing slides
        - ENE 602 - Electronic Energy Management Systems: updated the existing slides

B – Publications

- Publications in refereed journals
    - Published:

        - C. Kalogerakis, E. Koutroulis and M. G. Lagoudakis, "Global MPPT Based on Machine-Learning for PV Arrays Operating under Partial Shading Conditions", *Applied Sciences*, vol. 10, no. 2, pp. 1-19, 2020.

- A. Malisovas, <u>E. Koutroulis</u>, "Design Optimization of RES-Based Desalination Systems Cooperating With Smart Grids", *IEEE Systems Journal*, vol. 14, no. 4, pp. 4706-4717, 2020.

- Publications in refereed conferences
  - Published:

    - A. Boubaris, N. Rigogiannis, Z. Agorastou, N. Papanikolaou, S. Siskos and <u>E. Koutroulis</u>, "Analysis, Design and Simulation of an On-Chip DC/DC/AC Conversion System for PV Applications," *2019 Panhellenic Conference on Electronics & Telecommunications (PACET)*, 2019, pp. 1-6.

C – Awards & Distinctions

D – Funded Projects

- Current projects:

  - DES^{2}iRES project, ERANETMED "Energy-Water Nexus": Project Coordinator.
  - SmartPV project, "Research - Create - Innovate" call: Project Coordinator.
  - eSOLAR project, "Bilateral and Multilateral Research & Technology Co-operation between Greece and China" GSRT call: Project Coordinator.
  - ePOWER project, "Research - Create - Innovate" call: Project Coordinator.
  - PERPS project, "Research - Create - Innovate" call: Research team member.

- Project proposals approved for funding:

  - AID4PV project, "SOLAR-ERA.NET Cofund 2 Additional Joint Call": Project Coordinator.

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).

- Conference Technical Program Committee service

  - o Program Committee member, "9th International Conference on Modern Circuits and Systems Technologies (MOCAST 2020)".

- Reviewing activities

  - o Performed 30 reviews of journal papers (including revisions) for:

    IEEE Transactions on Power Electronics
    IEEE Journal of Emerging and Selected Topics in Power Electronics
    IEEE Journal of Photovoltaics
    IEEE Transactions on Industrial Electronics
    IET Power Electronics
    Renewable Energy

  - o Reviewed 1 book proposal for Springer.

F – Service to the School and the University

- School responsibilities

  - o Director of the "Circuits, Sensors & Renewable Energy Sources Laboratory"
  - o Dean's Committee member
  - o Member of Board of Directors of the Telecommunication Systems Research Institute
  - o ECE School coordinator of the undergraduate students practical training program
  - o Member of the Technical Council of the Technical University of Crete
  - o Undergraduate studies advisor

G – Advising

- Active graduate students supervised

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

1. Mandourarakis Ioannis (Ph.D.)
2. Malisovas Athanasios (M.Sc.)
3. Antonis Peristeropoulos (M.Sc.)

- Undergraduate students supervised

    o Diploma theses in progress (supervisor)
        1. Stefanakis Costas
        2. Demertzis Eleftherios
        3. Litsios Sotiris
        4. Mikel Ropi
        5. Tsaparas Christos
        6. Mavrommatis Stylianos
        7. Stasinos Apostolos
        8. Constantinidou Andria
        9. Almpantis Anastasios
        10. Sdoukos Thomas
        11. Kosmopoulos Stefanos
        12. Petrakis Emmanuel
        13. Politis Vasilios
        14. Koukouzas Christos

    o Diploma theses completed (supervisor)
        1. Kalogerakis Christos
        2. Iskis Nikolaos
        3. Glykis Theodoros
        4. Papargiriou Athanasios
        5. Vrouvakis Ioannis
        6. Tepelidis Avraam

Technical University of Crete

School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: George S. Stavrakakis
Rank: Full Professor
Years in rank: 25
Full-time or part-time: Full-time
Division: Electronic and Computer Architecture
Lab affiliation: Circuits, Sensors and Renewable Energy Sources (CSRES) Laboratory (www.elci.tuc.gr)

A – Teaching

- Undergraduate courses taught
  - ENE 301: Introduction to Power Systems/Power Systems – I (mandatory)
  - ENE 511: Renewable Energy Sources (optional mandatory)

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

- Labs taught
  - **Introduction to Power Systems /Power Systems I (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 : 6

  - Accepted : 6

○ **Published : 6**
* EMMANOUEL N. ANTONIDAKIS, EMMANOUIL N. MARKOULAKIS, GEORGE S. STAVRAKAKIS   "A Simulated Frequency Based Electric Single Phase Power Consumption Digital Metering Method"   WSEAS Transaction on Power Systems, Vol. 14, pp209-215, 2019.
* KONSTANTINOS FIORENTZIS, ANTONIOS TSIKALAKIS, EMMANUEL KARAPIDAKIS, YIANNIS KATSIGIANNIS, GEORGE STAVRAKAKIS

    "Improving Reliability Indices of the Autonomous Power System of

    Crete Island Utilizing Extended   Photovoltaic Installations", Energies

    2020, 13(1):64, DOI: 10.3390/en13010064.

* TRIANTAFYLLIA   NIKOLAOU,   GEORGE   S.STAVRAKAKIS, KONSTANTINOS TSAMOUDALIS "Modeling and Optimal Dimensioning of a Pumped Hydro Energy Storage System for the   Exploitation of the Rejected Wind Energy in the Non-Interconnected Electrical Power System of the Crete Island, Greece", Energies 2020, 13, 2705; doi:10.3390/en13112705.
* KONSTANTINOS V. BLAZAKIS, THEODOROS N. KAPETANAKIS, GEORGE S. STAVRAKAKIS   "Effective Electricity Theft Detection in Power Distribution Grids Using an Adaptive Neuro Fuzzy Inference System", Energies 2020, 13, 3110; doi:10.3390/en13123110.
* IASON S. MAVROMATAKIS, SOTIRIOS G. LILIOPOULOS, GEORGE S. STAVRAKAKIS "Optimized Intermittent Pharmaceutical Treatment of

    Cancer Using Non-Linear Optimal Control   Techniques", WSEAS

    TRANSACTIONS on BIOLOGY and BIOMEDICINE, Volume 17, 2020, DOI:

    10.37394/23208.2020.17.9.

* SOTIRIOS G. LILIOPOULOS, GEORGE S. STAVRAKAKIS,

    KONSTANTINOS S. DIMAS   «Advanced Non-linear Mathematical

    Model for the Prediction of the Activity of a Putative   Anticancer Agent in

    Human-to-mouse Cancer Xenografts», ANTICANCER RESEARCH 40: 5181-

    5189 ,2020, doi:10.21873/anticanres.14521.

* **Publications in refereed conferences: 1**
    * SOTIRIOS G. LILIOPOULOS and GEORGE S. STAVRAKAKIS
     "Adaptive short term ahead tumor growth inhibition prediction subjected in anticancer
     agents given in combination", IEEE 19th International Conference on Bioinformatics and Bioengineering (BIBE 2019),   Proccedings DOI 10.1109/BIBE.2019.00039 pp 174- 181, 27-30 October 2019, Athens, Greece.

- Publications in conferences on abstract review: **1**
  - TRIANTAFYLLIA NIKOLAOU, KONSTANTINOS TSAMOUDALIS, GEORGE STAVRAKAKIS

    "Modeling and Optimal Design of a Pump–Storage System for the Exploitation of the Rejected Energy in Non – Interconnected Electrical Power Systems. Case - Study in the "Potamon" Dam,   Rethymnon of Crete Island, Greece", 11th ICOLD European Club Symposium, 2 - 4 October 2019, Crete island, Greece.

- **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. (ΟΒΙ2004010045)

  EN:Intelligent methodology and integrated electronic device of information processing ensuring the   indoor comfort with simultaneous energy management in buildings. (ΟΒΙ2004010045)

C – Awards & Distinctions: --

D – Funded Projects

  - *Current projects:*

---"Centre for the study and sustainable exploitation of Marine Biological Resources (CMBR)", GSRT-Greece financing, Started January 2018-Duration until 31Match 2022.Senior Researcher.

---"Energy-aware Factory Analytics for Process Industries (FACTLOG)-code of the Special Account of TUC: 82081, Horizon 2020 (H2020)-Innovation Action. Duration of the contract: 01-01-2020 until 31-12-2020. Senior researcher.

  - Project proposals submitted: 2 (still waiting for the submitted proposals evaluation results)

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

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

- Conference Organization (specify role) : none

  Regular Reviewer in eight high quality international Journals with referees:

- Journal of Intelligent and Robotic Systems.

- IEEE Transactions on Energy Conversion.

- Electric Power Systems Research

- International Journal of Distributed Sensor Networks

- Renewable Energy journal

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

- Neural Computing and Applications

- Applied Sciences

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

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

F – Service to the Department and the School

● Departmental responsibilities: none
● School – level responsibilities: none

G – Advising

● **Active graduate students supervised**

  o Ph.D. students supervised **(advisor**, in progress)

    ▪ Blazakis Constantinos
    ▪ Yotis Thomas

  o M.Sc. students supervised (**advisor**, in progress)

    ▪ Liliopoulos Sotirios
    ▪ Kladou Anastasia
    ▪ Vardaxis Ioannis

  o M.Sc. Degrees (committee member)

    ▪ Fytraki Evangelia (M.Sc.)
        ▪ Peristeropoulos Antonios
        ▪ Polomarkaki Sofia
        ▪ Papanikolaou Marios

- ▪ Argyriou Ioannis (School of Chemical & Environmental Engineering of TUC)

- o Ph.D. Degrees (committee member)

  - ▪ Member of the Intermediate 5 members Examination Committeeand of the 7 members final Examination Committee of ECE School -N.T.U.A. Athens for the PhD supervising and examination of   Mr. Alaa Zaky Hussein.

Undergraduate students supervised

- o **Diploma theses in progress (supervisor)**:
  - ▪ Gioumatzidis Meletios
  - ▪ Sgourou Maria
  - ▪ Chalevidis Dimitrios
  - ▪ Grigoriadis Theodoros
  - ▪ Charalabous Ioulia (Iliana)
  - ▪ Iosifidou Marina

- o **Diploma theses completed (supervisor):**
  - ▪ Kefalas Vasilios
  - ▪ Kalliaras Apostolos
  - ▪ Lagoudakis Marios
  - ▪ Titakis Georgios
  - ▪ Kiriakakis Thomas
  - ▪ Roditis Ioannis
  - ▪ Mavromatakis Iasson
  - ▪ Koutsaki Eleni
  - ▪ Mpardoutsou Artemis
  - ▪ Efstathopoulos Nikolaos

- o Diploma theses in progress & completed (committee member):
  - ▪ Asimakis Giannopoulos
  - ▪ Papargyriou Athanasios
  - ▪ Glikis Theodoros
  - ▪ Mparpagiannis Christos
  - ▪ Kalergis Georgios
  - ▪ Patikos Ioannis
  - ▪ Kormpi Konstantina
  - ▪ Tepelidis Avraam
  - ▪ Papadomanolakis Theodoros
  - ▪ Moydiri Konstantina
  - ▪ Christena Aggeliki
  - ▪ Kalaitzakis Iason-Christos

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Nikolaos Bekiaris-Liberis
Rank: Assistant Professor
Years in rank: 2
Full-time or part-time: Full – Time
Division: Systems
Lab affiliation: Automation Laboratory

A – Teaching

- Undergraduate courses taught

    - SYS 401: Linear Systems (mandatory)
    - SYS 402: Control Theory With Applications (mandatory)

- Graduate courses taught

    - SYS 603: Nonlinear Systems

- Curriculum & course development

    - Lecture notes / homework / exam / lab exercises
        - SYS 401: Linear Systems: Homework and exam development. Update of lab exercises.
        - SYS 402: Control Theory With Applications: Homework and exam development. Update of lab exercises.
        - SYS 603: Nonlinear Systems: Homework and exam development.

B – Publications

- Publications in refereed journals
    - Published:
        - I. Papamichail, N. Bekiaris-Liberis, A. I. Delis, D. Manolis, K.-S. Mountakis, I. K. Nikolos, C. Roncoli, & M. Papageorgiou, "Motorway traffic flow modelling, estimation and control with vehicle automation and communication systems," *Annual Reviews in Control, vol. 48, pp. 325—246, 2019.*

- I. Karafyllis, N. Bekiaris-Liberis, and M. Papageorgiou, "Feedback control of nonlinear hyperbolic PDE systems inspired by traffic flow models," *IEEE Transactions on Automatic Control, vol. 64, pp. 3647—3662, 2019.*
  - Submitted:
    - N. Bekiaris-Liberis and A. Delis, "PDE-based feedback control of freeway traffic flow via time-gap manipulation of ACC-equipped vehicles," *IEEE Transactions on Control Systems Technology.*
    - N. Bekiaris-Liberis, "Hybrid boundary stabilization of linear first-order hyperbolic PDEs despite almost quantized measurements and control input," *Systems and Control Letters.*

- Publications in refereed conferences
  - Published:
    - Y. Zhang, M. Wang, J. Hu, and N. Bekiaris-Liberis, "Semi-constant spacing policy for leader-predecessor-follower platoon control via delayed measurements synchronization," *IFAC World Congress,* 2020.

C – Awards & Distinctions

- Grade A (fully meets the European Research Council's excellence criterion and is recommended for funding if sufficient funds are available) awarded for 2020 ERC Starting Grant proposal INSPIRA, ERC (PE7 panel).

D – Funded Projects

- Submitted proposals:

  - *Secure control of infinite-dimensional systems with application to vehicular traffic.* HORIZON 2020 ERC Starting Grant. Role: PI. (Proposal not funded due to budget limitations.)
  - *Data-driven control of delay systems with application to connected and automated vehicles platoons.* Hellenic Foundation of Research and Innovation; Research Projects to Support Faculty Members & Researchers. Role: PI. (Proposal under review.)

E – Professional service

- Editorial duties

  - Associate Editor member of the Editorial Board of International Federation of Automatic Control (IFAC) journal *Automatica* (publisher: Elsevier).
  - Associate Editor member of the Editorial Board of the *IEEE Transactions on Intelligent Transportation Systems* (publisher: IEEE).

- o   Associate Editor member of the Editorial Board of the *2020 European Control Conference* (publisher: IEEE).

- ● Technical committees member

  - o   Member of the IEEE Control Systems Society Technical Committee on Distributed Parameter Systems.
  - o   Member of the IFAC Technical Committee on Transportation Systems.
  - o   Member of the IFAC Technical Committee on Distributed Parameter Systems.

- • International program committees member

  - o   2019 IFAC Workshop on Time Delay Systems.
  - o   2020 Symposium on Management of Future Motorway and Urban Traffic Systems.

- ● Invited session organization

  - o   Control for Large Scale Traffic Networks, 2019 IEEE Conference on Decision and Control.

- • PhD Committees

  - o   Kallirroi Porfyri, Department of Production Engineering and Management, TUC.

- ● Reviewing activities

  - o   Performed ~ 25 reviews of journal papers (including revisions) for:

    IEEE Transactions on Automatic Control
    IEEE Transactions on Intelligent Transportation Systems
    IEEE Transactions on Control Systems Technology
    IFAC Automatica
    Society of Industrial and Applied Mathematics (SIAM) Journal on Control and Optimization
    Systems and Control Letters (publisher: Elsevier)
    IET Control Theory and Applications (publisher: IEEE)
    International Journal of Control (publisher: Taylor and Francis)
    The Canadian Journal of Chemical Engineering (publisher: Wiley)
    Journal of Optimization Theory and Applications (publisher: Springer)
    Physica A (publisher: Elsevier)
    Transportation Research Part B (publisher: Elsevier)
    Transportation Research Part C (publisher: Elsevier)

F – Service to the School and the University

- School responsibilities

  - Member of undergraduate diploma theses examining committees.
  - Undergraduate studies student advisor.

- University responsibilities

  - Member of equipment supply and delivery committees.

G – Advising

- Graduate students supervised

  - PhD (as distant co-advisor)
    1. Y. Zhang (Tongji University, China)

- Undergraduate students supervised

  - Diploma theses in progress (supervisor)
    1. Stavros Katsaras
    2. Nikos Intas
    3. Triantafyllia Sampani

  - Diploma theses completed (supervisor)
    1. Manolis Proestakis

Technical University of Crete

School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Aggelos Bletsas
Rank: Full Professor
Years in rank: 1.5
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 + mandatory midterm + 10 problem sets)

    - TEL513 Satellite Communications
      (elective, 13 theory lectures + 4 labs taught by instructor)

- Graduate courses taught
    - TEL606 Introduction to Probabilistic Graphical Models & Inference Algorithms
      (24 lectures + 8 problem sets)

B – Publications

- Publications in refereed journals
    1. Submitted:
        - M. Ouroutzoglou, G. Vougioukas, G. N. Karystinos and **A. Bletsas**, "Multistatic Noncoherent Linear Complexity Miller Sequence Detection For Gen2 RFID/IoT", IEEE Transactions on Wireless Communications (TWC).

- Publications in refereed conferences

    1. Published:
        - S. Siachalou, S. Megalou, A. Tzitzis, E. Tsardoulias, **A. Bletsas**, J.N. Sahalos, T. Yioultsis and A.G. Dimitriou, "Robotic Inventorying and Localization of RFID Tags, Exploiting Phase-

Fingerprinting", *IEEE International Conference on RFID-Technology and Applications (RFID-TA)*, Sept. 2019, Pisa, Italy.

- M. Ouroutzoglou, G. Vougioukas, P.N. Alevizos, A.G. Dimitriou and **A. Bletsas**, "Multistatic Gen2 RFID over Ethernet with Commodity SDRs", IEEE International Conference on RFID-Technology and Applications (RFID-TA), Sept. 2019, Pisa, Italy. Selected in the list of best papers / candidate for best paper award 🏆

C – Awards & Distinctions

- **Sept. 2019:** M. Ouroutzoglou, G. Vougioukas, P.N. Alevizos, A.G. Dimitriou and **A. Bletsas**, "Multistatic Gen2 RFID over Ethernet with Commodity SDRs", IEEE International Conference on RFID-Technology and Applications (RFID-TA), Sept. 2019, Pisa, Italy. **Selected in the list of best papers / candidate for best paper award** 🏆

D – Funded Projects

- Current projects:

  - 1 Project funded through Action "Research-Create-Innovate", *Operational Program Competitiveness, Entrepreneurship and Innovation, under the call RESEARCH - CREATE - INNOVATE (project code: T1EDK-03032).*
    Role: TUC Principal Investigator.

  - 1 Project through Hellenic Foundation of Research & Innovation (HFRI), *First Call for H.F.R.I. Research Projects to support Faculty members and Researchers and the Procurement of High-cost research equipment" (Project #: 2846).* Role: Project Coordinator.

E – Professional service

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

- Conference Technical Program Committee (TPC) service
  - IEEE International Conference on Communications (ICC) 2020 (Ad-hoc & Sensor Networks Track).
  - IEEE International Conference on Communications (ICC) 2020 (Mobile Wireless Networks Track).
  - IEEE International Conference on Communications (ICC) 2020 (Cognitive Radio & Networks Track).

- o IEEE Global Communications Conference (Globecom) 2020 (Communications Theory Track).
- o IEEE Global Communications Conference (Globecom) 2020 (Ad-hoc & Sensor Networks Track).
- o IEEE Global Communications Conference (Globecom) 2020 (Mobile Wireless Networks Track).

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

F – Service to the School and the University

- School responsibilities
  - o Member of TUC Research Committee Objections Evaluation Committee.
  - o Substitute Member of the School of ECE Graduate Studies Committee.
  - o Member of the TUC Library Committee.
  - o Member of various procurement committees.

G – Advising

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

  - o Completed Diploma theses supervisor for
    1. Georgios Apostolakis
    2. Iosif Vardakis
    3. Orestis Konstantinos Giannakopoulos
    4. Panagiotis Bellonias
    5. Roza Chatzigeorgiou
    6. Emmanouil Andrianakis

- **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, 2019 to Aug. 31, 2020

Name: George Karystinos
Rank: Professor
Years in rank: 2
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Telecommunications Laboratory

A – Teaching

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

- Labs taught

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

B – Publications

- Publications in refereed journals

  - Submitted:
    - H. Kamrani, A. Zolghadr Asli, P. P. Markopoulos, M. Langberg, D. A. Pados, and **G. N. Karystinos**, "Reduced-rank L1-norm principal-component analysis with performance guarantees," *IEEE Transactions on Signal Processing*, submitted Sept. 2019.

  - Accepted:

  - Published:

- Publications in refereed conferences

- o Submitted:

- o Accepted:

- o Published:

- Books and edited book chapters

- Patents

C – Awards & Distinctions

D – Funded Projects

- Current projects:
  - o *"Plasma Antenna Technologies,"* Funding Source: European Commission, Horizon 2020 Program, Budget: € 153.000,00, Duration: Jan. 1, 2017 – Mar. 31, 2022.

- Project proposals submitted:

E – Professional service

- Associate Editor duties

- Society Technical Committee duties
  - o Programme Committee Expert, European Research Council (ERC), Future and Emerging Technologies (FET), and Marie Skłodowska-Curie Actions (MSCA) Programme Committee, European Commission's Horizon2020 Framework Programme, 2019 - present.

- Conference Technical Program Committee service

- Conference Organization (specify role)

- Reviewing activities

F – Service to the School and the University

- School – level responsibilities

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

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)
        - Fountzoulas Ioannis (Ph.D.)
        - Grypiotis Ioannis (Ph.D.)
        - Koupatsiaris Dimitrios (Ph.D.)

    o Ph.D. and M.Sc. Degrees completed (committee member)
        - Karakasis Paris (M.Sc.)
        - Logothetis Fragkoulis (M.Sc.)
        - Vougioukas Georgios (Ph.D.)

    o Ph.D. and M.Sc. Degrees in progress (committee member)
        - Giannelos Evangelos (Ph.D.)
        - Karatarakis Evangelos (M.Sc.)
        - Kolomvakis Christos (M.Sc.)
        - Papagiannakos Ioannis-Marios (M.Sc.)
        - Siaminou Ioanna (M.Sc.)
        - Skyvalakis Konstantinos (M.Sc.)

- Undergraduate students supervised

    o Diploma theses in progress
        - Dafoulis Nikolaos
        - Nasoulis Nikolaos
        - Theofilou Eleni

    o Diploma theses completed (supervisor)
        - Vasilopoulos Alkiviadis

    o Diploma theses in progress (committee member)
        - Algiannaki Maria
        - Giakoumais Pavlos-Paris
        - Iliadis Stylianos
        - Paktitis Spyridon
        - Paschalidou Christina
        - Polyzos Christos
        - Psychountaki Margarita-Antonia

    o Diploma theses completed (committee member)
        - Boras Charalampos

- Chatzigeorgiou Roza
- Dovrou Aikaterini
- Giannakopoulos Konstantinos-Orestis
- Kolomvakis Christos
- Papagiannakos Ioannis-Marios
- Tsekos Nikolaos
- Vardakis Iosif

Technical University of Crete
School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Liavas Athanasios
Rank: Professor
Years in rank: Ten (10)
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Telecommunications Laboratory

A – Teaching

- Undergraduate courses taught

    - TEL 301 Telecommunications Systems I (mandatory)
    - PLH 421 Randomized Algorithms (X-listed)

- Graduate courses taugh

    - Advanced Topics in Convex Optimization
    - Randomized Algorithms (X-listed)

- Labs taught

- Curriculum & course development

    - New exercises-lab in Advanced Topics in Convex Optimization
    - Lecture notes in Randomized Algorithms (updated)

B – Publications

- Publications in refereed journals
    - Published:

- Publications in refereed conferences

    - Published:

        - Paris A. Karakasis, Athanasios P. Liavas, Nicholas D. Sidiropoulos, Panagiotis G. Simos, and Efrosyni Papadaki "Multi-subject Task-related fMRI Data Analysis via Generalized Canonical Correlation Analysis," *42nd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society,* Montreal, July 2020.

- Paris A. Karakasis, Athanasios P. Liavas, Nicholas D. Sidiropoulos, Panagiotis G. Simos, and Efrosyni Papadaki "Multi-subject Resting-State fMRI Data Analysis via Generalized Canonical Correlation Analysis," *EUSIPCO 2020,* Amsterdam, 24-28 August, 2020.

● Books and edited book chapters

● Patents

C – Awards & Distinctions

D – Funded Projects

● Current projects:

  ○ PARTENSOR: parallel algorithms for very large tensor processing (T1EΔK-03366) (Duration: 2018-2021).

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, ICASSP 2021, EUSIPCO 2020.

F – Service to the School and the University

• School – level responsibilities

  ○ Dean, School ECE

• University responsibilities

  ○ Member of the Senate of the Technical University of Crete

G – Advising

- Active graduate students supervised

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

    - Paris Karakasis (MSc)

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

    - Aleksandros Georgogiannis (PhD Student)
    - Ioanna Siaminou (MSc Student)
    - Christos Kolomvakis (MSc Student)
    - Ioannis-Maris Papagiannakos (MSc Student)

- Undergraduate students supervised

  - Diploma theses in progress

    - Christos Polyzos
    - Margarita-Antonia Psychountaki

  - Diploma theses completed (supervisor)

    - Ioanna Siaminou
    - Ioannis-Marios Papagiannakos
    - Christos Kolomvakis

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Michael Paterakis
Rank: Professor
Years in rank: 21
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Information and Computer Networks Laboratory

A – Teaching

- Undergraduate courses taught

  - TEL 202: Probability and Random Signals (Mandatory)
  - TEL 401: Computer Networks I (Mandatory)

- Graduate courses taught

  - TEL 601: Probability Theory and Stochastic Processes

B – Publications

C – Awards & Distinctions

D – Funded Projects

- Current projects:

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

E – Professional Service

F – Service to the School and the University

- School responsibilities

    o 2013 - 2021, Member, Graduate Committee, ECE School, Technical University of Crete.

    o 2017 - 2021, Member of the Deanery, ECE School, Technical University of Crete.

    o 2019 – 2022, Director, Information and Computer Networks Laboratory, ECE School, Technical University of Crete.

- University responsibilities

    o June 2013 – December 2021, Director and Chairman of the Board, Telecommunication Systems Research Institute (T.S.I.), Technical University of Crete.
    o 2013 - 2017, Member of the Quality Assurance Unit for Higher Education, Technical University of Crete.

    o 2017 - 2021, Deputy Member of the University Senate.

G – Advising

- Active graduate students supervised

    o Ph.D. and M.Sc. Degrees in progress (supervisor)

        ▪ Sofikitis Emmanuel (M.Sc.)

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

        ▪ Skyvalakis Konstantinos

- Undergraduate students supervised

    o Diploma theses completed (supervisor)
        ▪ Motos Michail

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Michalis Zervakis
Rank: Professor
Years in rank: 20
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 311: Machine Learning and Pattern recognition

- Graduate courses taught

- Labs taught

- Curriculum & course development
    - New courses / labs developed

    - Lecture notes / slides developed
        - TEL 311: Machine Learning and Pattern recognition

    - Authored textbooks

B – Publications

- Publications in refereed journals

    - Submitted:

o   Published:
o

[1]   G Kallergi, V Tsintari, S Sfakianakis, E Bei, E Lagoudaki, A Koutsopoulos, N. Zacharopoulou, S. Alkahtani, S. Alarifi, C. Stournaras, M. Zervakis, V. Georgoulias, "The prognostic value of JUNB-positive CTCs in metastatic breast cancer: from bioinformatics to phenotypic characterization", Breast Cancer Research 21 (1), 86, Dec 2019

[2]   M Antonakakis, SI Dimitriadis, M Zervakis, AC Papanicolaou, G Zouridakis, "Aberrant Whole-Brain Transitions and Dynamics of Spontaneous Network Microstates in Mild Traumatic Brain Injury", Frontiers in Computational Neuroscience 13, 90, 2020

[3]   A Lytos, T Lagkas, P Sarigiannidis, M Zervakis, G Livanos, "Towards Smart Farming: Systems, Frameworks and Exploitation of Multiple Sources", Computer Networks, 172, pp. 107-147, 2020

[4]   Dimakopoulos, V; Antonakakis, M; Wolters, CH; Zervakis, M, "P69 Combined EEG & MEG Source Analysis coupled with a Two-Phase Spike Clustering Approach: A multifocal epilepsy case", Clinical Neurophysiology, 131, 4, 2020,Elsevier

[5]   Kallergi G; Hoffmann O; Bittner A-K; Papadimitriou L; Katsarou S; Zacharopoulou N; Zervakis M; Sfakianakis S; Stournaras, C; Georgoulias V, "CXCR4 and JUNB double-positive disseminated tumor cells are detected frequently in breast cancer patients at primary diagnosis", Therapeutic Advances in Medical Oncology, 12, 2020, SAGE Publications UK

[6]   Klados, M; Konstantinidi, P; Dacosta-Aguayo, R; Kostaridou, V; Vinciarelli, A; Zervakis, M; "Automatic Recognition of Personality Profiles Using EEG Functional Connectivity During Emotional Processing", Brain sciences, 10, 5, p.278, 2020

[7]   Panayides, A; Amini, A; Filipovic, N; Sharma, A; Tsaftaris, S; Young, A; Foran, D; Do, N; Golemati, S; Kurc, T; Huang, K; Nikita, K; Veasey, B; Zervakis M; Saltz, J; Pattichis C; "Ai in medical imaging informatics: Current challenges and future directions", IEEE Journal of Biomedical and Health Informatics, 24, 7, pp. 1837-1857, 2020

[8]   Paspalakis, S; Moirogiorgou, K; Papandroulakis, N; Giakos, G; Zervakis, M; "Automated fish cage net inspection using image processing techniques", IET Image Processing, 14, 10, pp. 2028-2034, 2020

- Submited:

[1]   Antonakakis, M; Schrader, S; Aydin, Ü; Khan, A; Gross, J; Zervakis, M; Rampp, S; Wolters, C; "Inter-subject variability of skull conductivity and thickness in calibrated realistic head models", Neuroimage,

[2]   de Lastic, H-X; Liampa, I; Georgakilas, A; Zervakis, M; Chatziioannou, A; "Entropic Ranks: A Methodology for Enhanced, Threshold-Free, Information-Rich Data Partition and Interpretation", Applied Sciences,

[3] Giannakaki, K; Giannakakis, G; Vorgia, P; Zervakis, M; "Absence seizure detection classifying matching pursuit features of EEG signals", EAI Trans. on Bioengineering and Bioinformatics,

- Publications in refereed conferences

    - Published:
    -
    [1] GA Klados, M Zervakis, R Dacosta-Aguayo, A Fratini, MA Klados, "Towards a Novel Way to Predict Deficits After a Brain Lesion: A Stroke Example", 2019 IEEE 19th International Conference on Bioinformatics and Bioengineering (BiBe2019), Oct 28-30, Athens, Greece
    [2] K Giannakaki, G Giannakakis, P Vorgia, M Klados, M Zervakis, "Automatic absence seizure detection evaluating matching pursuit features of EEG signals", 2019 IEEE 19th International Conference on Bioinformatics and Bioengineering (BiBe2019), Oct 28-30, Athens, Greece
    [3] G Giannakakis, K Michalopoulos, N Tsekos, P Vorgia, K Giannakaki, M. Zervakis, "Seizure detection using common spatial patterns and classification techniques", 2019 IEEE 19th International Conference on Bioinformatics and Bioengineering (BiBe2019), Oct 28-30, Athens, Greece
    [4] VS Dimakopoulos, M Antonakakis, G Moeddel, J Wellmer, S Rampp, M Zervakis, C Wolters, "Combined EEG/MEG Source Reconstruction of Epileptic Activity using a Two-Phase Spike Clustering Approach", 2019 IEEE 19th International Conference on Bioinformatics and Bioengineering (BiBe2019), Oct 28-30, Athens, Greece
    [5] K Politof, M Antonakakis, A Wollbrink, M Zervakis, CH Wolters "Effective Connectivity in the Primary Somatosensory Network using Combined EEG and MEG", 2019 IEEE 19th International Conference on Bioinformatics and Bioengineering (BiBe2019), Oct 28-30, Athens, Greece
    [6] Kakamoukas, G; Sariciannidis, P; Livanos, Georgios; Zervakis, M; Ramnalis, D; Polychronos, V; Karamitsou, T; Folinas, A; Tsitsiokas, N; "A Multi-collective, IoT-enabled, Adaptive Smart Farming Architecture", 2019 IEEE International Conference on Imaging Systems and Techniques (IST), 8-10 Dec. 2019, Abu Dhabi, UAE
    [7] N Badogiannis, K Moirogiorgou, M Zervakis, A Dollas, N Papandroulakis, "Real-Time Embedded System for Hole Detection in Fish Cage Nets", 2019 IEEE International Conference on Imaging Systems and Techniques (IST), 8-10 Dec. 2019, Abu Dhabi, UAE
    [8] Papadogiorgaki, M; Mezaris, V; Grammalidis, Grigoriadis, K; Bei, E; Livanos, G; Zervakis, M; "Quality of life support system for people with intellectual disability", Proceedings of the 13th ACM International Conference on PErvasive Technologies Related to Assistive Environments, PETRA 2020
    [9] Livanos, G; Ramnalis, D; Polychronos, V; Balomenou, P;

Sarigiannidis, P; Kakamoukas, G; Karamitsou, T; Angelidis, P; Zervakis, M; "Extraction of Reflectance Maps for Smart Farming Applications Using Unmanned Aerial Vehicles", IEEE 12th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP), 2020

[10] Torakis, I; Bei, E; Sfakianakis, S; Pateras, I; Zervakis, M; "Pancreatic Cancer and Its Correlation with Embryogenesis: Identification of Biomolecular Markers Using Machine Learning Methods", European Medical and Biological Engineering Conference, pp. 952-961, 2020, Springer

- Books and edited book chapters

- Patents

D – Funded Projects

- Current projects:
  - *Automatic detection and localization of High frequency Oscillation in Paediatric Epilepsy (HOPE) ; Leader of ECE team for TUC, Funding Agency: H2020- Marie Skłodowska-Curie Actions Research and Innovation Staff Exchange (RISE)*
  - *ΥΠΟΥΡΓΕΙΟ ΑΓΡΟΤΙΚΗΣ ΑΝΑΠΤΥΞΗΣ ΚΑΙ ΤΡΟΦΙΜΩΝ, "ΚΑΙΝΟΤΟΜΙΑ ΣΤΗΝ ΥΔΑΤΟΚΑΛΛΙΕΡΓΕΙΑ", «Εφαρμογή έξυπνων συστημάτων για τη βελτίωση της διαχείρισης και της ευζωίας των ψαριών σε συνθήκες καλλιέργειας σε κλωβούς (iFish)»*
  - *ΥΠΕΠΘ, ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ, «ΠΡΟΤΥΠΕΣ ΥΠΗΡΕΣΙΕΣ ΙΑΤΡΙΚΗΣ ΑΞΙΟΛΟΓΗΣΗΣ, ΠΡΟΛΗΨΗΣ ΚΑΙ ΔΙΑΣΤΡΩΜΑΤΩΣΗΣ ΣΤΡΑΤΕΥΣΙΜΩΝ ΚΑΙ ΕΚΤΙΜΗΣΗ ΔΕΙΚΤΩΝ ΥΓΕΙΑΣ (e-Mass)»*
  - *ΥΠΕΠΘ, ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ, «Προηγμένο Σύστημα Πρόληψης Επικίνδυνων Καταστάσεων για Βρέφη - x (επι) ΒΛΕΨΙΣ)»*
  - *ΥΠΕΠΘ, ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ, «Αυτόνομο ρομποτικό σύστημα για ανακύκλωση αστικών απορριμμάτων (ΑΝΑΣΑ)»*
  - *ΥΠΕΠΘ, ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ, «Έξυπνη Γεωργία με την χρήση Drones - (MARS)»*
  - *Αυτοματοποιημένη εποπτεία εναέριας λήψης του Ελληνικού Δικτύου γραμμών μεταφοράς ρεύματος - AdVISEr' @ Τ2ΕΔΚ*
  - *'Σύστημα Υποστήριξης Ποιότητας Ζωής για Άτομα με Νοητική Αναπηρία – QuaLiSID' @ Τ2ΕΔΚ*

- Project proposals submitted:
-
- 2020-2023 Horizon 2020; BES-2-2019 BorderUAS - Semi-autonomous border surveillance platform combining next generation unmanned aerial

vehicles with ultra-high-resolution multi-sensor surveillance payload; Leader of ECE team for TUC

- 2020- ICT-AgriFood, "ICT-based monitoring system for precision viticulture"
- ΕΛΙΔΕΚ ΔΕΠ στην κατηγορία μας (ΕΠ.2: Επιστήμες Μηχανικού και Τεχνολογίας, Κατηγορία II): Integrated Modular Building Facilities Management Services, Proposal Number: 03241
- LIFE20-ENV, "Furniture-4-Life", Proposal number LIFE20-ENV_CY_000023
- PRIMA S2 2020, "Smart tablE vitiCUlture faRming in a changing Environment"
- European Pattent Office EPO Project - Sword Group and TUC collaboration, "RfO VM-454 2.1.3.1 Computer Vision"

E – Professional service

- Associate Editor duties
  - ***Associate Editor***, since 1/1/2017, Journal of Biomedical Signal Processing and Control, https://ees.elsevier.com/bspc
  - ***Associate Editor***, since 1/1/2017, IEEE Journal of Biomedical and Health Informatics, http://jbhi.embs.org/editorial-board/associate-editors/

- Society Technical Committee duties
  - Technical Committee co-chair, IEEE Instrumentation and Measurement Society, TC-19 Imaging Measurements and Systems, since 20/1/2017

- Conference Technical Program Committee service
  - Honorary Chair, Steering Committee member, International Technical Committee member, 2019 IEEE Intl Conference on Imaging Systems and Techniques, Dec. 8-10, Abu-Dhabi, UAE, https://ist2019.ieee-ims.org/
  - Guest Editor, Journal Multimedia Tools and Applications, Special Issue on "Multimedia Systems for Critical Engineering Applications", 2018 http://static.springer.com/sgw/documents/1597858/application/pdf/Full+Call+Special+Issue+of+MTAP.pdf

- Conference Organization (specify role)
  - o

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

F – Service to the School and the University

- School responsibilities
  - o Vice-Rector of Research and Life-long Learning, TUC
  - o Digital Image and Signal Processing Laboratory, Director
  - o Automation Laboratory, Director

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

G – Advising

Undergraduate students supervised
- Active graduate students supervised

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

    - Ph.D. and M.Sc. theses in progress (supervisor)
        - Liaba Irini (Ph.D.)
        - Livanos Georgios (Ph.D.)
        - Moirogiorgou Constantia (Ph.D.)
        - Tsakaneli Stavroula (M.Sc.)
        - Klados Georgios (M.Sc.)
        - Politof Konstantinos (M.Sc.)
        - Tsellou Aikaterini (M.Sc.)
        - Ζορμπάς Αλέξανδρος (M.SC.)

    - Ph.D. και M.Sc. φοιτητές που ολοκλήρωσαν (μέλος επιτροπής)
        - ΡΕΞΑΚΗΣ ΙΩΑΝΝΗΣ (PH.D.)
        - ΓΙΑΚΟΥΜΑΚΗΣ ΠΑΥΛΟΣ (M.SC.)
        - ΛΙΛΙΟΠΟΥΛΟΣ ΣΩΤΗΡΙΟΣ (M.SC.)
        - Θάλεια Ντινιάκου (M.SC.)
        - ΧΛΕΙΑΟΥΤΑΚΗΣ ΑΓΓΕΛΟΣ (PH.D.)

    - Ph.D. και M.Sc. φοιτητές με διατριβή σε εξέλιξη (μέλος επιτροπής)
        - ΚΑΛΑΝΤΖΑΚΗ ΚΑΛΛΙΟΠΗ (PH.D.)
        - ΟΙΚΟΝΟΜΙΔΗΣ ΔΗΜΗΤΡΙΟΣ (PH.D.)
        - ΤΣΑΠΡΑΣ ΑΘΑΝΑΣΙΟΣ (PH.D.)

- Ενεργοί προπτυχιακοί φοιτητές

    - Ολοκληρωμένη διατριβή (επιβλέπων)
        - ΖΟΡΜΠΑΣ ΑΛΕΞΑΝΔΡΟΣ
        - Δόβρου Αικατερίνη
        - Τσέλλου Αικατερίνη
        - Καδίτης Εμμανουήλ
        - Παπαδομανωλάκης Θεόδωρος
        - Πατίκος Ιωάννης
        - Μπάντρα Κωνσταντίνα
        - Γιακουμάκης Παύλος
        - Τζανάκης Σάββας
        - Πασπαλάκης Σταύρος

- Ζουριδάκης Στυλιανός-Νεκτάριος
- Δημακόπουλος Βασίλειος
- Καλέργης Γιώργος
- Κορμπή Κωνσταντίνα

- Διατριβή σε εξέλιξη (επιβλέπων)
  - Σίμος Νικόλαος
  - Ζαφείρης Στυλιανός
  - Σδουκοπούλου Γλυκερία
  - ΠΑΣΧΑΛΙΔΟΥ ΧΡΙΣΤΙΝΑ
  - ΤΣΕΚΟΣ ΝΙΚΟΛΑΟΣ
  - Αντωνιάδης Θεόδωρος
  - Μαλεφιουδάκης Βανιαμίν
  - +5 περίπου

- Ολοκληρωμένη διατριβή (μέλος επιτροπής)
  - Καβρουλάκης Δημήτριος
  - Σουφλάκης Εμμανουήλ
  - Ζαχαροπούλου Ηλιάνα
  - Κυριακάκης Θωμάς
  - Μαυρωματάκης Ιάσων
  - Μαργώνη Ιωάννα
  - Ναρδάκης Ιωσήφ
  - Μιχαήλ Μάριος
  - Παντελιδάκης Μηνάς
  - Κυπαισσάς Νίκος
  - Λυτρίδης Νίκος
  - Μανώλης Νικόλαος
  - Γιαννακόπουλος Παναγιώτης
  - Χατζηγεωργίου Ρόζα
  - Λούκας Χαρίσιος
  - Φεωργακοπούλου ¨αρτεμις
  - Τίγκς Αργύριος
  - Τιτάκης Γεώργιος
  - Χατζηδάκη Ελευθερία
  - Μπρέλλας Ιωάννης
  - Χασαπάς Κωνσταντίνος
  - Φανουριάδης Μιχαήλ

- Διατριβή σε εξέλιξη (μέλος επιτροπής)
  - Μπαρδούτσου Άρτεμις
  - Κεφάλας Βασίλειος
  - +10 περίπου

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Dimitris Angelakis
Rank: Associate Professor
Years in rank: 3
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)

- Labs taught

- Curriculum & course development

  1. New courses / labs developed

  2. Lecture notes / slides developed
     - Updated "An introduction to quantum computing for FYS 411 and FYS 602"
     - Updated "Lectures slides for Physics 102"

  3. Authored textbooks

B – Publications

- Publications in refereed journals

- Accepted
1. D. Leykam, D. G. **Angelakis*** **"P**hotonic band structure design using persistent homology"

- Quantum supremacy with analog quantum processors for material science and machine learning
  J. Tangpanitanon, S. Thanasilp, M. A. Lemonde, D. G. **Angelakis***
  arxiv.org/1906.03860

Published

1. J. Marc-Antoine Lemonde, Vittorio Peano, Peter Rabl, **Dimitris G. Angelakis***
   " Quantum state transfer via acoustic edge states in a 2D optomechanical array"
   New J. Phys. 21 (11), 113030 (2020)

2. Expressibility and trainability of parameterized analog quantum systems for machine learning applications J. Tangpanitanon, S. Thanasilp, M. A. Lemonde, N. Dangiam, D. G. **Angelakis***Phys. Rev. Research 2, 043364 2020

3. The Dirac equation in 2+1 dimensional gravity with classical electromagnetic background, the gravitational Aharonov-Bohm effect and coupled waveguide arrays C. Koke, C. Noh, **D. G. Angelakis*** Phys. Rev. A 102, 013514 (2020), arxiv.org/1909.12543

4. I. D'Amico, **D. G. Angelakis**, et al., "Nanoscale Quantum Optics", Riv. Nuovo Cimento 42, 153 (2019)

- Publications in refereed conferences

1. "Characterizing Photonic Band Structures Using Topological Data Analysis", CLEO/Europe (online), June 2021

2. "Quantum supremacy with driven many-body systems", CQT Webinars Series on Quantum Computation and Quantum Simulation, NUS, Singapore, June 2020

3. "Quantum Technologies in the noisy intermediate-scale quantum (NISQ) era", guest speaker for a physics undergraduate course at Chulalongkorn university, April 2020.

- Invited talks and colloquia

4. "Qubit-efficient encoding schemes for binary optimisation problems", CQT Webinars Series on Quantum Computation and Quantum Simulation, NUS, Singapore, June 2020 .

C – Awards & Distinctions

- Invited Research Professor Centre at Quantum Technologies, National University of Singapore September 2019 to January 2020
- Member of **EU Quantum Network Governing Board** for the European Flagship in Quantum Technologies, representing Greece (one scientist per EU country).

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

E – Professional service

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

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

- Conference Technical Program Committee service

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

Invited and Keynote talks in international conferences and advanced schools

"Quantum advantage in analog quantum processors for material science and machine learning, The New Trends in Contemporary Optics Conference, Hanoi, Vietnam, September 2019.

F – Service to the School and the University

- School responsibilities
  - Member of the ECE School Executive Committee

- University responsibilities
  - Participation in TUC Open Day
  - Participation in Science Day for primary school students

G – Advising

- Active graduate students supervised

  - Ph.D. and M.Sc. students completed (supervisor)
1. Jirawat Tangapatinanon, PhD, 2014- 2019 NUS. "Towards quantum simulations with strongly interacting photons". Part of the work was published in Science Dec. 2017. Now CEO QTFT Thailand

2. Tian Feng See (PhD), started August 2014, graduate of DAMTP, Cambridge UK, defended 2019. "Scattering and multiphoton transport in many-body photonic systems:" Now working at semiconductors industry

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

3. Supanut Thanasilp, PhD "Quantum simulation and computation with near term quantum devices", NUS
4. Benjamin Tan, PhD, "Quantum computation and quantum optimization", NUS
5. Beng Yee Tan, PhD, "Quantum machine learning with photonic devices and applications", NUS
6. Chee Chong Hian Tan, PhD,. "Variational quantum algorithms and applications in quantum chemistry and machine learning", NUS
7. Shetakis Nikolaos "Quantum simulations in light matter systems" (Ph.D.), TUC

  - Ph.D. and M.Sc. Degrees completed (committee member)
    - Konstantakis Christos (Ph.D.) TUC
    - Tan Senmao, (PhD) TUC

  - Ph.D. and M.Sc. Degrees in progress (committee member)
    - Mr Tan Senmao, NUS
    - Mr Yu Xianquan NUS
    - Yap Han How NUS
- Undergraduate students supervised

  - Diploma theses ongoing

Alexandros Politis TUC, "Variational hybrid quantum-classical algorithms and photonic implementations", ongoing

Ioannis Leonidas, ECE, TUC, "Quantum optimization with NISQ processors", ongoing,

- o Diploma theses completed (supervisor)

Themistoklis Skordias, TUC, "Quantum machine learning and applications",

- o Diploma theses in progress (committee member)

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

Technical University of Crete
School of Electrical & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Daphne Manoussaki
Rank: Assistant Professor
Years in rank: 14
Full-time or part-time: Full
Division:
Lab affiliation: None

A – Teaching

Undergraduate courses Technical University of Crete (E.C.E.)
- MATH 101: Mathematics I (mandatory)
- MATH 203: Differential Equations
- MATH 411: Mathematical Biology

University of Crete (Medical School)
o Mathematical Biology

- Graduate courses taught

B – Publications

- Publications in refereed journals
- Submitted:

C – Awards & Distinctions

D – Funded Projects
"Pressure measurements in the endolymphatic sac"
Beneficiary of a $56.000 equipment donation from the National Institutes of Health to
Fo.R.T.H., Heraklion

E – Professional service
F – Service to the School and the University

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)

- o Ph.D. and M.Sc. Degrees in progress (committee member)
  1) Alexandros Dimitriadis

- Undergraduate students supervised

o Diploma theses in progress (supervisor)

o Diploma theses in progress (committee member)

o Diploma theses completed (committee member)

Technical University of Crete
School of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

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

A – Teaching

- Undergraduate courses taught
- MATH 104 : Elements of Mathematics (mandatory)
- MATH 511 : Elements of Mathematical Analysis

- Graduate courses taught
  Σειρες Fourier και Μιγαδικη Ανάλυση

  Εφαρμοσμένη Συναρτησιακή Ανάλυση Curriculum & course development

- New courses / labs developed

- Lecture notes / slides developed

  - Authored textbooks

B – Publications

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

  - Accepted:

- Published:

- Publications in refereed conferences
- Published:

- Patents

- *GRANTED*

C – Awards & Distinctions

D – Funded Projects

- Current projects:

- Project proposals submitted:

E – Professional service

- Associate Editor duties

- Society Technical Committee duties

- Conference Technical Program Committee service

- Conference Organization (specify role)

- Reviewing activities
  Reviews στο
  zentralblatt-math

F – Service to the School and the University

- School – level 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)
- Undergraduate students supervised

- Diploma theses in progress
- 5

- Diploma theses completed (supervisor)

- Diploma theses in progress (committee member)

  - Diploma theses completed (committee member)

Annual Activity Report

For the period: Sep. 1, 2019 to Aug. 31, 2020

Name: Christodoulakis Stavros
Rank: Emeritus professor
Years in rank:
Full-time or part-time:
Division:
Lab affiliation:

A – Teaching

B – Publications

- Moumoutzis, N., Paneva-Marinova, D., Xanthaki, C., Arapi, P., Pappas, N., Christodoulakis, S.: "Using the PerFECt Framework to Establish an Onlife Community for Theatre in Mathematics to Teach Principles of Computing." In 2020 IEEE 44th Annual Computers, Software, and Applications Conference (COMPSAC 2020). 13-17 July 2020. Virtual Event.

- Moumoutzis, N., Koukis, A., Christoulakis, M., Maragkoudakis, I., Christodoulakis, S., Paneva-Marinova, D. PerFECt: "A Performative Framework to Establish and Sustain Onlife Communities and its Use to Design a Mobile App to Extend a Digital Storytelling Platform with New Capabilities." In Special Session: "Designing and Developing Mobile Serious Games for Augmenting Arts and STEM competencies, capabilities and skills (DG-STEAM)" of the IMCL2019 - International Conference on Interactive Mobile Communication Technologies and Learning, Thessaloniki, Greece, 31 October – 1 November 2019.

- Moumoutzis, N., Sifakis, Y., Christodoulakis, S., & Paneva-Marinova, D. : "A Reference Framework to Establish and Sustain Onlife Communities and Its Use. Rich Learning Experiences in History with ViSTPro." In DiPP 2019 Conference on Digital Presentation and Preservation of Cultural and Scientific

Heritage. Conference Proceedings. Sofia, Bulgaria: Institute of Mathematics and Informatics – BAS, 2019.

C – Awards & Distinctions

D – Funded Projects

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

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

- **[STSP]** «Ψηφιακή Πλατφόρμα Χωροχρονικής Διαμεσικής Αφήγησης Ιστορικών και Πολιτιστικών Γεγονότων για την Προώθηση Προϊόντων και Υπηρεσιών ΜμΕ»
  Budget: € 220.700 €
  Duration: 23/4/2020 - 22/4/2023   Project Type: ΕΣΠΑ

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

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

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

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

- **[TI4]** «Technology for industry 4 for teachers and trainers of vocational education»
  Budget: € 42.100
  Duration: 1/10/2019 - 31/12/2021
  Project Type: ERASMUS+

ΠΡΟΤΑΣΕΙΣ ΠΟΥ ΚΑΤΑΤΕΘΗΚΑΝ ΚΑΙ ΕΓΚΡΊΘΗΚΑΝ

- Erasmus+ KA201 – Strategic partnerships for school education
  Maker schools: Enhancing Student Creativity and STEM Engagement by Integrating 3D Design and Programming into Secondary School Learning
  Coordinator: Technical University – Gabrovo, BULGARIA
  ΗΜΕΡΟΜΗΝΙΑ ΕΝΑΡΞΗΣ: 1/12/2020.
- Erasmus+ KA202 – Strategic partnerships for vocational education and training
  Gamified interactive training to prepare disadvantaged learners for international VET mobility in the tourism and hospitality sector
  Coordinator: Sdruzhenie "Dobrudzhansko agrarno i biznes uchilishte" DABS, BULGARIA
  ΗΜΕΡΟΜΗΝΙΑ ΕΝΑΡΞΗΣ: 1/12/2020.

E – Professional service

F – Service to the School and the University

G – Advising