

Greece Section**Konstantina Nikita, Chair****Section Vitality**

The 2022-2024 ExCom elections procedure has started.

2 Newsletters have been released ([April issue](#), [July issue](#))

The IEEE Greece Section ExCom has published an announcement, encouraging all the eligible IEEE members of the Section to consider applying for elevation to the grade of IEEE Senior Member.

Students

List of Student Branches (16); University of Patras, University of Thessaly (Lamia), Aristotle University of Thessaloniki, National Technical University of Athens, Technical University of Crete, University of Western Macedonia,Kozani, Democritus University of Thrace, University of Western Macedonia (Kastoria), University of Peloponnese, University of West Attica, University of Ioannina, International Hellenic University (Thessaloniki), University of Thessaly (Larissa/Volos), University of Piraeus, International Hellenic University (Serres), Ionian University

Dissolved SBs (5); International Hellenic University, Technological Edu Inst of Ionian Islands, Hellenic Mediterranean University, University of Aegean, University of Peloponnese-Patras.

The HSYF (Hellenic Student and Young Professionals Congress) is a conference that takes place every two years in Greece, Cyprus, Malta, or Israel and refers to students, young graduate engineers, and members of the IEEE. It includes talks and discussions and aims at the exchange of ideas and experiences between the participants, the conclusion of collaborations, the appropriate training, and the supply of the members of the student branches for the organization of their local actions but also the information of the new engineers for the needs of the labor market. The conference will be organized for the sixth time online in November 2021, by the IEEE Greece Section.

On Thursday, 15 April 2021, the IEEE Student Branch of the University of Western Macedonia - Kastoria in cooperation with the IEEE Student Branch of the University of Western Macedonia - Kozani organized a web conference entitled “Future Generation Networks and the Internet of Things”. The agenda included five main talks: “Mobility Management in 5G Networks” by Angelos Michalakis Professor of the Department of Electrical and Computer Engineering of the Polytechnic School of the University of Western Macedonia, Counselor of the IEEE Student Branch of Western Macedonia – Kastoria; “SDN Controller configuration” by Emmanuel Skondras, Postdoctoral Fellow of the University of Piraeus; “Next Generation IoT: Modern Applications” by Panagiotis Sarigiannidis Associate Professor of the Department of Electrical and Computer Engineering of the Polytechnic School of the University of Western Macedonia, Counselor of the IEEE Student Branch of Western Macedonia – Kozani.; “Projects of ITHACA Lab” by Mr. Thanassis Liatifis, Ph.D. Candidate of the Department of Electrical and Computer Engineering of the Polytechnic School of the University of Western Macedonia; “Smart Grid Services Enabled Through the IoT” by Dimitrios I. Vergados, Assistant Professor of the Department of Informatics of the Faculty of Sciences of the University of Western Macedonia. The event was well-attended by students of both Departments as well as students from all over Greece.

On Tuesday, 20 April, at 18:30 an online webinar entitled “Mobile App Marketing” was held, which was organized by the “Game Development” team in collaboration with the IEEE Computer Chapter of the Democritus University of Thrace Student Branch. The webinar focused on the explanation of the marketing flow related to a mobile application, as well as relevant best practices and insights.

On Friday 14 May, at 18:00, an online technical event entitled “Introduction to Notion” was given by Natalia Georgiadou, Project Manager in ATCOM and Notion Ambassador in Greece. The event was organized by the IEEE Women in Engineering Affinity Group of the University of Western Macedonia- Kastoria Student Branch. The Notion is an application that provides items such as notes, databases, Kanban Board, Wiki, calendars, and reminders. Users can connect these items to create their own knowledge management, notes, data management, and project management systems. The speaker presented an introduction to the features of the Notion tool and demonstrated, through a real-life scenario, how Notion can be used for the effective organization of everyday activities.

On 17 and 24 May 2021, at 19:00, the IEEE Robotics and Automation Society (RAS) Chapter and the IEEE Women in Engineering (WiE) Affinity Group of the Democritus University of Thrace Student Branch, in cooperation with the IEEE Robotics and Automation Society (RAS) Chapter of the National Technical University of Athens Student Branch and “Makerlab”, a Research Institute for STEM Education & Robotics, organized a two-part workshop, entitled “Introduction to Webots software”. Webots is an open-source software for 3D robotic behavior simulation and is used in industry, education, and research. The basic concepts of the software were presented in the first session, while a demo application of the software to model robotic systems was presented in the second session of the workshop.

The IEEE Student Branch of the University of Thessaly - Lamia, in collaboration with the Intelligent Systems Laboratory of the Department of Computer Science and Biomedical Informatics of the University of Thessaly, organized an online seminar titled “IT Applications in Healthcare” that was held on Friday, 21 May 2021, at 18:30. The event featured two

invited talks: “eHealth Infrastructures in Greece” by Haralampos Karanikas, Lecturer and member of the Intelligent Systems Laboratory of the University of Thessaly, eHealth Senior Researcher at the University of Athens (Medical School), Secretary-General of the Hellenic Society of eHealth Services & Education, and eHealth Consultant in Athens Medical Society; “Random Projections in Data Mining Applications” by Sotirios Tasoulis, Assistant Professor and member of the Intelligent Systems Laboratory of the University of Thessaly.

Affinity Groups

The IEEE Greece Section Women in Engineering (WiE) Affinity Group successfully organized the 1st Coffee Talk with invited speaker Anna Sachinopoulou on Thursday, 14 January 2021, at 20:00 via Zoom. Anna Sachinopoulou, researcher in Optoelectronics, Digital Health and Digital Transformation at VTT Technical Research Centre of Finland, presented her research interests and challenges that she has faced during her career development and shared with the participants useful advice both career and personal wise as a Greek woman researcher in Finland.

The IEEE Greece Section Women in Engineering Affinity Group in cooperation with the IEEE Turkey Section Women in Engineering Affinity Group organized the first part of a Joint Webinar Series entitled “Cooperative Spectrum Sharing between Radar and Communication Systems”. The event was held on Thursday 8 July at 15:00 (GMT +3) via Zoom and featured an invited talk by Athina P. Petropulu, ECE Distinguished Professor at Rutgers University and President-Elect of the IEEE Signal Processing Society. Professor Petropulu, in her talk, covered recent advances in cooperative spectrum sharing for the coexistence of multiple-input multiple-output (MIMO) radar and wireless communication systems and presented results on dual-functional radar communication systems (DFRC).

Chapters

The IEEE Greece Section has 12 technical chapters (Power and Energy Chapter, Communications Chapter, Control Systems Chapter, Signal Processing Chapter, Computer Chapter, Consumer Electronics Chapter, Engineering in Medicine and Biology Chapter, Computational Intelligence Chapter, Electron Devices/Microwave Theory and Techniques/Antennas and Propagation Joint Chapter, Circuits and Systems/Solid-State Circuits Joint Chapter, Vehicular Technology/Aerospace and Electronic Systems Joint Chapter, Industrial Electronics/Industry Applications/Power Electronics Joint Chapter) and more than 20 technical student chapters.

The IEEE Greece Computer Chapter organized an online event entitled ‘AI and Games: the Co-revolution’ on Friday, 29 January 2021. This talk focused on the wonderful and long-term relationship between games and AI and the impact such a relationship has had on our lives. Games have been a core driving force for the revolution of AI which, in turn, has reframed our culture, and reshaped our society at large. While games have been assisting AI since its birth it is only very recently that we experience a strong inverse relationship: AI nowadays designs exciting games for us to play and for AI to advance further. While games are arguably one of the last frontiers for AI, AI is also the next great leap forward for games.

The IEEE Greece Section, the IEEE Engineering in Medicine and Biology (EMB) Greece Chapter, and the IEEE National Technical University of Athens Student Branch, in collaboration with the NTUA Biomedical Simulations and Imaging (BioSim) Lab, organized an online lecture entitled “Model-based Signal Processing for Improved Neurocritical Care”. The lecture was given by the EMBS Distinguished Lecturer, Dr. Thomas Heldt, Associate Professor at the Department of Electrical Engineering & Computer Science, Massachusetts Institute of Technology, and took place on Tuesday, 9 March 2021.

On Thursday, 22 April 2021, the Vehicular Technology and Aerospace and Electronic Systems Joint Chapter of the IEEE Greece Section organized an interesting online Panel on “Satellite Communications in the 5G Era and Beyond”. The panel was co-organized with IEEE Greece Section, IEEE Greece Student Branch, and the Communications Society Chapter of the National Technical University of Athens Student Branch. A variety of issues on satellite communications systems were covered by the panel of participating experts, as follows: “Satellite Integration into 5G: Use Cases and Testbed Solutions”, presented by Dr. Konstantinos Liolis, SES S.A., Luxembourg; “Optical Communications in Space”, presented by Dr. Pantelis-Daniel Arapoglou, European Space Agency (ESA), The Netherlands; “Artificial Intelligence in Satellite Communications”, presented by Dr. Charilaos Kourgiorgas, Atheras Analytics Ltd, UK; “Satellite Communications in Greece”, presented by Prof. Athanasios D. Panagopoulos, National Technical University of Athens. The presentations were followed by a lively panel discussion; the event was attended by more than 80 participants from academia and industry.

Industry

Spring 2021: Dr Peppas gave a presentation on industrial opportunities and engineering growth in ECESCON. ECESCON is a virtual conference for Greek Electrical & Computer Engineering Students with more than 5000 attendees.

Spring 2021: Collaboration of the High Voltage Lab of the Aristotle University of Thessaloniki (Prof. T. Tsovilis) with the company ELEMKO SA (Dr. Nikolaos Kokkinos, CEO), Greece on a research project associated with lightning protection

of cultural heritage monuments in Greece in the context of "Actions for Industry" initiative. Related dissemination material (video) has been sent to Region 8 (<https://drive.google.com/drive/folders/1bWRChWbvO4GsI3w77ilmhxFdOgQMgoR7>).

- Summer 2021: The first internship (Mr. Pitsikalis, student) under the framework of "Actions for Industry" has been completed in Raycap SA. Related dissemination material (video) has been sent to Region 8.

- Autumn 2021: A legal agreement between Raycap SA and Aristotle University has been prepared and it is going to be signed in Winter 2021. The first industrial Ph.D. will eventually start in Summer 2022.

Activities since the last report

The IEEE Greece Section, in cooperation with the Biomedical Simulations and Imaging (BioSim) Laboratory of the School of Electrical and Computer Engineering (ECE) and the IEEE Student Branch of the National Technical University of Athens, organized an online event titled "From NTUA to investing in Discord & Snap in Silicon Valley as a VC a few years later" which took place on Wednesday, 17 March 2021. Niko Bonatsos, managing director at General Catalyst, ECE-NTUA alumnus, talked about how an engineering and research heavy background can lead to a career in startups and venture capital and what skills are required to succeed in Silicon Valley and VC, in particular.

The IEEE Computer Society Chapter of the National Technical University of Athens Student Branch, in collaboration with Open Technologies Alliance (GFOSS), IEEE Greece Section, and IEEE Young Professionals, organized a two-part webinar series, titled "Introduction to XeLaTeX". Dr. Apostolos Syropoulos presented XeLaTeX, a very powerful system of advanced typesetting and production of technical and scientific texts. In the first part of the webinar, an introduction to all relevant technologies was provided, which was followed by a demonstration of how to use XeLaTeX to write scientific papers in the second part.

On Wednesday, 21 April 2021, at 18:00, an online lecture entitled "Mechanical forces govern interactions of host cells with intracellular bacterial pathogens" was given by Dr. Effie Bastounis, Junior Group Leader in the Interfaculty Institute of Microbiology and Infection Medicine at the University of Tübingen, Germany. The event was organized by the IEEE Greece Section in cooperation with the IEEE Engineering in Medicine and Biology (EMB) Greece chapter, the Women in Engineering (WiE) Greece, and the Biomedical Simulations and Imaging (BioSim) Laboratory of the School of Electrical and Computer Engineering, National Technical University of Athens.

The 2021 NTUA Biotech Day was held, for the first time, on the 6th of July 2021! The event was jointly organized by the Biomedical Simulations and Imaging (BioSIM) Laboratory and the Biomedical Systems (BioSys) Laboratory of the National Technical University of Athens (NTUA) and was supported by the IEEE Greece Section. Eleven finalist teams from the School of Electrical and Computer Engineering (SECE) and the School of Mechanical Engineering (SME) came together in a virtual meeting to present their Research and Innovation projects to a panel of distinguished experts. The student teams were mentored within the framework of the undergraduate courses "e-health and m-health technologies" and "Biodesign" of the SECE and SME, respectively. The panel of experts consisted of Dr. Yannis Caloghirou, Professor Emeritus in Economics of Technology and Industrial Strategy at NTUA, Dr. Nikos Chronis, Associate Professor in the Department of Materials Science and Technology at the University of Crete, and Dr. Evangelos Siokas, Coordinator of the Research and Entrepreneurship node EPInoo – NTUA. The panel congratulated the student teams for the creativity and quality of their projects and provided them with valuable feedback. The participants had the opportunity to interact and exchange ideas in an inspiring and fruitful environment. The event was completed with the announcement of the following awards:

First Award: "A smart serious game for stroke rehabilitation", Panagiotou F., Papadopoulos K., Terzoglou A. (SECE)

Second Award: "Empowerment of visually impaired through AI", Georgaras E., Mprili D.-D., Tsilivaki S. (SECE)

Third Award: "Bibots – Blood sample collection device for thyroid assessment", Anastasiou D., Konstantopoulos G., Paspalidis P., Tsiopani N. (SME) Attendees' Choice Award: "A smart serious game for stroke rehabilitation", Panagiotou F., Papadopoulos K., Terzoglou A. (SECE)

Below you can find the Conferences supported by the IEEE Greece Section that took place in June and November 2021:

7th International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS) | 15-18 June 2021

International Conference on Unmanned Aircraft Systems (ICUAS) | 15-18 June 2021

IEEE Emerging Technology Reliability Roundtable (ETR-RT) | 28-30 June 2021

10th International Conference on Modern Circuits and Systems Technologies (MOCASST) | 5 - 7 July 2021

IEEE International Mediterranean Conference on Communications and Networking (MeditCom) | 5 - 8 July 2021

12th International Conference on Information, Intelligence, Systems & Applications (IISA) | 14 - 16 July 2021

12th International Conference on Mechanical and Aerospace Engineering (ICMAE) | 16 - 19 July 2021

International Conference on Computer Communications and Networks (ICCCN) | 19 - 22 July 2021

IEEE International Conference on Cyber Security and Resilience (CSR) | 26 - 28 July 2021

IEEE International Mediterranean Conference on Communications and Networking (MeditCom) | 7 - 10 September 2021

International Conference on Computing, Networking, Telecommunications & Engineering Sciences Applications (CoNTESA) | 23 - 25 September 2021

6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM) | 24 - 26 September 2021

54th Annual IEEE/ACM International Symposium on Microarchitecture (MICRO) | 16 - 20 October 2021

16th International Workshop on Semantic and Social Media Adaptation & Personalization (SMAP) | 4 - 5 November 2021

Planned activities

On Wednesday 3 November at 5 pm, the IEEE Greece Section in collaboration with the IEEE Engineering in Medicine and Biology Greek Chapter and the Computational Intelligence Chapter organises an event entitled ‘Beyond breast density: AI-driven breast cancer risk assessment from mammographic images’. Breast cancer risk assessment has become increasingly important for forming tailored breast cancer screening and prevention strategies. An emerging approach to evaluate breast cancer risk more accurately and help better guide personalized patient care is the incorporation of computational imaging phenotypes. In this talk, I will discuss recent results from my research on novel computational approaches that leverage artificial intelligence in breast cancer risk estimation from digital mammograms and tomosynthesis images. First, I will describe computational approaches to breast density estimation. I will then present a novel computational framework which allows breast anatomy to drive localized imaging phenotyping of breast cancer risk. Third, I will discuss the use of cutting-edge deep learning methods to better capture breast parenchymal complexity patterns which are associated with breast cancer risk.

The IEEE Life Members AG Greece Section organizes on Wednesday, November 3, 2021 at 6 pm (Athens time) the internet webinar with subject "5G Era of Invention: Edge Computing, Creating new Experiences, new Industries and Enriching Lives". The speaker is: Mr. Fotis Karonis, Executive Vice President of Capgemini. After the 4G revolution which generated a plethora of new services and business models for mobile Consumers in the past decade, 5G and edge computing is the Game Changer for Intelligent Industries!!! The combined innovation industries such as Telecommunications, semiconductors and software are now creating a new DNA across All the industry verticals, creating groundbreaking use cases for production efficiencies and new connected products and services across automotive, manufacturing, life sciences, environment, logistics, energy, public safety, smart cities and more. 5G together with Edge cloud computing power enables 'quasi zero' latency of enabling data processing at the edge, and avoiding unnecessary access back and forth from the public cloud. 5G and Edge and together with AI, IoT and different connected device form factors, unlock a panorama of amazing innovations and applications as vehicles to X, AR/VR, factory automation on the shop floor, remote medical diagnostics or using drones for search and rescue missions. Today we are only scratching the surfaces for what new business models can achieve in this new exciting decade of innovation for better quality of life, a greener economy and a sustainable environment. The telecommunications industry itself is going through a massive software transformation as it moves to cloud. Orchestration and Automation is so important to unlock the potential of the Networks of the future to become 'as a Service' for both the citizens and for Enterprise Services!

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