M.Sc. in "Advanced Informatics and Computing Systems - Software Development and Artificial Intelligence"

M.Sc. in "Informatics"

# The 17th International Conference on Information, Intelligence, Systems and Applications 6-9 July 2026, University of the Aegean, Rodos, Greece co-located with the 2026 International Joint Conference on Artificial Intelligence-Empowered Software Engineering (AIESE2026)

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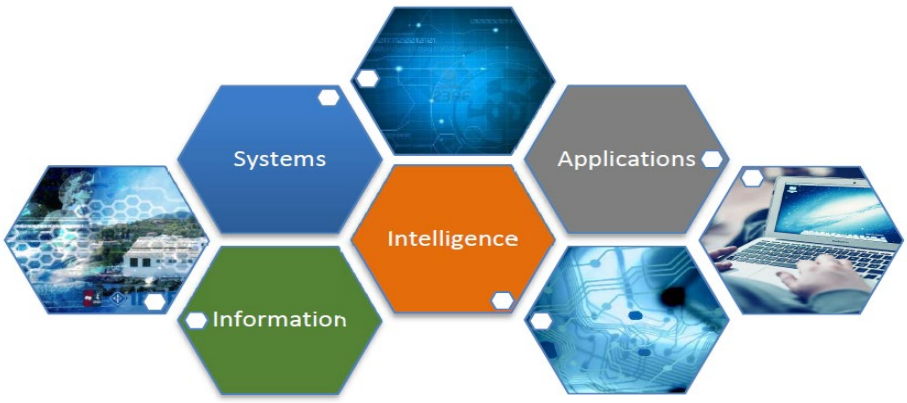


The International Conference on Information, Intelligence, Systems and Applications (IISA) series offers a forum for the constructive interaction and prolific exchange of ideas among scientists and practitioners from different research fields – such as computers, mathematics, physics, biology, medicine, chemistry, experimental psychology, social sciences, linguistics, and engineering – having the goal of developing methodologies and tools for the solution of complex problems in artificial intelligence, biology, neuroscience, security, monitoring, surveillance, healthcare, sustainability in energy sources, governance, education, commerce, automation, robotics, optimization, image, speech and natural languages, and their integration.

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## IISA 2026 Chairs' Message

Welcome to the **Seveneenth International Conference on Information, Intelligence, Systems, and Applications (IISA 2026)**. **Information** is widely available and accessible, but frequently leads to information overload and overexposure, while the effort for coding, storing, hiding, securing, transmitting and retrieving it may be excessive. **Intelligence** is required to manage information and extract knowledge from it, inspired by biological and other paradigms. Information and **Multimedia Systems**, with an increasing level of Intelligence, are being developed that incorporate these advances. As a result, new Technologies, Protocols and **Applications** are emerging. The International Conference on Information, Intelligence, Systems and Applications (IISA) series offers a unique forum for the constructive interaction and prolific exchange of ideas among scientists and practitioners from different research fields – such as computers, mathematics, physics, biology, medicine, chemistry, experimental psychology, social sciences, linguistics, and engineering – having the goal of developing methodologies and tools for the solution of complex problems in artificial intelligence, biology, neuroscience, security, monitoring, surveillance, healthcare, sustainability in energy sources, governance, education, commerce, automation, robotics, optimization, image, speech and natural languages, and their integration.

The IISA conference is held on an annual basis and is intended as an international forum for researchers and professionals in all areas of Information, Intelligence, Systems and Applications. Every year, we invite submission of papers in which high-quality original research and developments is presented. The IISA conference features tutorials, technical paper presentations, workshops, and distinguished keynote speeches.

This year's conference marks the seventeenth IISA. IISA 2026 is organized by the Hellenic Open University (Greece), the University of the Aegean (Greece), Musashi University (Japan), the Open University of Japan, the University of Piraeus (Greece), and the Biological and Artificial Intelligence Foundation (USA). Technical sponsorship is also provided by the Institute of Electrical and Electronics Engineers (IEEE), the IEEE Computer Society and its Technical Community on Multimedia Computing, as well as by the Programs of Graduate Study in "Informatics" and "Advanced Information Systems" of the Department of Informatics, University of Piraeus, Greece. IISA 2026 is a live conference with the University of the Aegean, Rodos, Greece as its venue. IISA 2026 lasts for four days and its technical program consists of twenty-nine (29) technical paper presentation sessions and eight (8) keynote speeches by world-recognized researchers from the USA, Canada, Europe and Australia. IISA2026 also includes a tutorial on "Translating Academic Research to Patentable Applications".

We received 375 high quality submissions authored by authors-researchers from about 25 countries around the world. Out of them, one hundred twenty eight (128) were accepted as full (eight-page) papers, which corresponds to an acceptance rate of 34,13%. An additional thirty seven (37) of the submissions were accepted as short (four-page) papers, which corresponds to 9,87% of the submissions. Moreover, accepted full and short paper authors represented academia, government, industry, and business.

We are thankful to the many people who contributed to the success of IISA 2026. Firstly, thanks are due to the paper authors, including those whose papers were not accepted in the program, for choosing IISA 2026 as the forum for dissemination of the results of their research. We are also thankful to the IISA 2026 program committee members and reviewers for their wonderful work in reviewing and selecting in a timely manner the best among the submitted papers. Thanks are also due to the University of the Aegean, the Hellenic Open University, Musashi University, the Open University of Japan, the University of Piraeus, the Biological and Artificial Intelligence Foundation, IEEE, the IEEE Computer Society and the IEEE Technical Community on Multimedia Computing for their technical co-sponsorship of the conference for technically sponsoring IISA2026.

For their efforts and contributions towards organizing the conference, many thanks are due to:

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Last, but not least, special thanks are due to the **IISA 2026 coordinator, Easy Conferences Ltd., Cyprus**.

On behalf of the **Seventeenth International Conference on Information, Intelligence, Systems, and Applications (IISA2026)**, we invite all of you to join us in Rodos, Greece and enjoy its technical and social programs.

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## IISA 2026 Invited Keynote Speakers in Alphabetical Order

### Petros Drineas, Purdue University, USA

Title: **AI, Machine Learning, and Data Science from a (Randomized) Numerical Linear Algebra Lens**

Abstract:

Numerical Linear Algebra (NLA) has long been a cornerstone of scientific computing, powering advancements in physics, engineering, and beyond. This talk explores how Randomization in NLA (or RandNLA for short) has emerged as a transformative force in data science, machine learning, and artificial intelligence. By leveraging randomness to accelerate computations and reduce dimensionality, these methods address the challenges posed by modern datasets. We will discuss algorithms and software for RandNLA that enable scalable solutions for problems in data science, ML, and AI.

Short Bio:

**Petros Drineas** is a Professor and the Department Head of the Computer Science Department of Purdue University. He earned a PhD in Computer Science from Yale University in 2003 and a BS in Computer Engineering and Informatics from the University of Patras, Greece, in 1997. His work has fundamentally contributed to the development of Randomization in Numerical Linear Algebra (RandNLA). He has also worked on applications of RandNLA to Data Science, with a particular focus on genomic data.

Prof. Drineas was elected a SIAM Fellow in 2023; was named a Purdue University Faculty Scholar in 2022; and is the recipient of an NSF CAREER award and an IBM Academic award. He was a Visiting Professor at the US Sandia National Laboratories during the fall of 2005, a Visiting Fellow at the Institute for Pure and Applied Mathematics at the University of California, Los Angeles in the fall of 2007, and a long-term visitor at the Simons Institute for the Theory of Computing at the University of California Berkeley in the fall of 2013. From October 2010 to December 2011, he served the US National Science Foundation as a Program Director in the Information and Intelligent Systems (IIS) Division and the Computing and Communication Foundations (CCF) Division.

Prof. Drineas has published over 150 papers (cited approximately 15,000 times) in theoretical computer science, applied mathematics, and genetics venues, including the Proceedings of the National Academy of Sciences, PLOS Genetics, Genome Research, the Journal of Medical Genetics, PLoS One, Bioinformatics, etc. He has presented keynote talks and tutorials in major

conferences (e.g., SIAM ALA, KDD, VLDB, SDM, etc.) and over 100 invited colloquia and seminars. He received two fellowships from the European Molecular Biology Organization for his work in genetics and his research has been featured in popular press articles, including SIAM News, LiveScience, ScienceDaily, Scitizen, the National Geographic, Yahoo! News, etc. Prof. Drineas is an associate editor of the SIAM Journal on Matrix Analysis and Applications (SIMAX), the SIAM Journal on Scientific Computing (SISC), the Applied and Computational Harmonic Analysis (ACHA) journal, and PLoS One.

## Jie Lu, University of Technology Sydney, Australia

Title: **Concept Drift Detection, Understanding and Adaptation**

Abstract:

Concept drift is known as an unforeseeable change in underlying streaming data distribution over time. The phenomenon of concept drift has been recognized as the root cause of decreased effectiveness in many decision-related applications. A promising solution for coping with persistent environmental change and avoiding system performance degradation is to build a detection, understanding and adaptive system. This talk will present a set of methods and algorithms that can effectively and accurately detect, understand, and adapt concept drift. The main contents include (1) concept drift detection: competence models to indirectly measure variations in data distribution through changes in competence. By detecting changes in competence, differences in data distribution can be accurately detected and quantified, then further described in unstructured data streams; (2) concept drift understanding: algorithms for determining a drift region to identify when and where a concept drift takes place in a data stream, and a local drift degree measurement that can continuously monitor regional density changes; (3) concept drift adaptation: methods and algorithms for model adaptation as well as solutions for redundancy removal. These techniques can be applied to data-driven real-time prediction and decision support in complex data stream environments.

Short Bio:

Distinguished Professor **Jie Lu** is a world-renowned scientist in the field of computational intelligence, primarily known for her work in concept drift, transfer learning & fuzzy transfer learning, recommender systems, and decision support systems. She is an IEEE Fellow, IFSA Fellow, Australian Computer Society Fellow, Australian Laureate Fellow and Australian Industry Laureate Fellow. Professor Lu is the Director of the Australian Artificial Intelligence Institute (AAII) at University of Technology Sydney, Australia. She has published six research books and over 500 papers in leading journals and conferences; won 10 Australian Research Council (ARC) Discovery Projects and over 30 industry projects as leading chief investigator; and has supervised over 60 PhD students to completion. She serves as Editor-In-Chief for Knowledge-Based Systems. She is a recognized keynote speaker, delivering over 50 keynote speeches at international conferences. She is the recipient of NeurIPS Outstanding Paper Award, three IEEE Transactions on Fuzzy Systems Outstanding Paper Awards, Australasian AI Distinguished Research Contribution Award, Australian NSW Premier's Prize and the Officer of the Order of Australia (AO).

## Peristera (Perry) Paschou, Purdue University, USA

Title: **Data-Driven Insights into Human Genetic Diversity for Health and Disease**

Abstract:

We will present data science approaches for genomic analysis to explore how human genetic diversity shapes health outcomes and disease susceptibility. We will highlight the use of state-of-the-art computational methods alongside the integration of multi-omic and neuroimaging data to unravel the biological basis of complex disorders. Emphasis will be placed on how these integrative strategies contribute to advancing precision medicine. We will explore how genetics, bioinformatics, and data analytics intersect, and how collaborative, interdisciplinary efforts are driving innovation in disease prevention, diagnosis, and therapeutic development.

Short Bio:

**Peristera (Perry) Paschou** is a Professor and Head of the Department of Biological Sciences at Purdue University in the USA. Her research centers on the integration of advanced data analysis techniques to investigate the genetic structure of human populations and the genetic underpinnings of complex diseases, with a special focus on neurodevelopmental disorders. She holds a PhD from the University of Athens, with postgraduate training at the University of Oxford and postdoctoral studies at Yale University in the USA. Certified by the American Board of Medical Genetics in Clinical Molecular Genetics, she has also served as faculty in the Department of Molecular Biology and Genetics at Democritus University of Thrace, as a Visiting Researcher at UCSF, UCLA, and the National Institutes of Health, and as Associate Dean at Purdue University. Dr. Paschou leads international research initiatives leveraging large-scale data integration and computational approaches for the study of Tourette Syndrome and related disorders. In recognition of her contributions to data-driven genetics research she was named Showalter Faculty Scholar.

## Dimitrios Peroulis, Purdue University, USA

Title: **From Awareness to Amalgamation: An AI Pathway for Higher Education**

Abstract:

Artificial intelligence is increasingly transforming higher education. Many institutions have reached an initial phase of awareness: students, faculty, and staff have now become familiar with AI technologies, institutional policies are being developed, and early experimentation is often encouraged. Yet, for many universities, additional improvement is hard to achieve. Moving from experimentation to real campus-wide transformation is often harder than expected. In this talk we will focus on a three-stage pathway for incorporating artificial intelligence in higher education: awareness, activation, and amalgamation. We will discuss how institutions may advance from early explorations to measurable effects in a) research productivity, b) education results, c) institutional operations, and ultimately to a more integrated paradigm of seamless human–AI collaboration.

Short Bio:

**Dimitrios Peroulis** is the Reilly Professor of Electrical and Computer Engineering and the Senior Vice President for Partnerships and Online at Purdue University. In this role, he leads the offices of industry, military (academic), and global partnerships, the office of engagement, and online programs. From 2019-2023 he served as the Michael and Katherine Birck Head of Electrical and Computer Engineering and special adviser to the Dean of Engineering on online learning. His research is in the areas of reconfigurable systems, plasma RF electronics, and RF-assisted lyophilization. He is a pioneer in reconfigurable filter architectures, specifically those leveraging widely tunable, miniaturized cavity resonators to control transfer functions. His laboratory has spun off four startups to license its core technologies, including Jones Microwave, where he serves on the Board, and LyoWave, which he co-founded and serves as a Board Member. He is an IEEE and IET Fellow, has co-authored over 450 journal and conference papers, and the book 'Tunable Evanescent-Mode Filters: Principles, Implementation, and Applications,' Wiley-IEEE Press, 2025. He has received a number of awards including the National Science Foundation CAREER award (2008), the Outstanding Paper Award from the IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society (2012), the Outstanding Young Engineer Award (2014) and the Tatsuo Itoh Award (2019) from the IEEE Microwave Theory and Techniques Society, and the IEEE Rudolph Henning Distinguished Mentoring Award (2024). His students have received numerous awards and scholarships for their research and publications. He has received 11 teaching awards, including the 2010 HKN C. Holmes MacDonald Outstanding Teaching Award and the 2010 Charles B. Murphy Award, Purdue University's highest undergraduate teaching honor.

## Ljiljana Trajkovic, Simon Fraser University, Canada

Title: **Data Mining and Machine Learning for Analysis of Network Traffic**

Abstract:

Collection and analysis of data from deployed networks is essential for understanding communication networks. Hence, data mining and statistical analysis of network data have been employed to determine traffic loads, analyze patterns of users' behavior, predict future network traffic, and detect traffic anomalies. The Internet has historically been prone to failures and attacks that significantly degrade its performance, affect the Internet connectivity, and cause routing disconnections. Frequent cases of various cyber threats have been encountered over the years and, hence, detection of anomalous behavior is a topic of great interest in cybersecurity. In the case studies described, traffic traces collected by various collection sites are used to classify network anomalies. Various anomaly and intrusion detection approaches based on machine learning have been employed to analyze collected data. Deep learning, broad learning, gradient boosted decision trees, and reservoir computing algorithms were used to develop models based on collected datasets that contain Internet worms, viruses, power outages, ransomware events, router misconfigurations, Internet Protocol hijacks, and infrastructure failures in times of conflict. The reported results indicate that while performance of machine learning models greatly depends on the used datasets, they are viable tools for detecting the Internet anomalies.

Short Bio:

**Ljiljana Trajkovic** received the Dipl. Ing. degree from University of Pristina, Yugoslavia, the M.Sc. degrees in electrical engineering and computer engineering from Syracuse University, Syracuse, NY, and the Ph.D. degree in electrical engineering from University of California at Los Angeles. She is currently a professor in the School of Engineering Science, Simon Fraser University, Burnaby, British Columbia, Canada. Her research interests include communication networks and dynamical systems. Dr. Trajkovic served as IEEE Division X Delegate/Director, President of the IEEE Systems, Man, and Cybernetics Society, and President of the IEEE Circuits and Systems Society. She serves as Editor-in-Chief of the IEEE Transactions on Human-Machine Systems. She is a Distinguished Lecturer of the IEEE Systems, Man, and Cybernetics Society and was a Distinguished Lecturer of the IEEE Circuits and System Society. She is a Fellow of the IEEE.

## Maria Virvou, University of Piraeus, Greece

Title: **AI in Education: Which Technologies Matter, How Deep Is Deep, and What Functions will Transform Learning?**

Abstract:

Artificial Intelligence (AI) in education is undergoing a profound transformation, evolving from traditional knowledge-based reasoning toward advanced computational paradigms, including machine learning, deep learning, affective computing, adaptive hypermedia, and large language models (LLMs). As these technologies redefine teaching and learning, a central inquiry emerges: which technologies hold enduring pedagogical significance, how deep are their representational capabilities, and which functional mechanisms are most likely to transform the foundations of education itself?

Intelligent Tutoring Systems (ITSs) have long delivered structured, adaptive, and interpretable instruction through explicit knowledge representation, learner modelling, and personalized pedagogical strategies. Large language models, in contrast, enable open-ended dialogue, generative capacity, and broad accessibility, introducing new possibilities for learner engagement and creativity. However, both paradigms present limitations: while ITSs can be constrained by domain specificity and development complexity, LLMs encounter challenges of reliability, factual coherence, and sustained learner modelling.

Together, these AI technologies offer significant opportunities to enhance personalization, engagement, and skill development. They promote critical thinking, creativity, collaboration, communication, and digital literacy, while depending on these same human capacities in a reciprocal process of design, governance, and pedagogical integration. The continuing evolution of these technologies requires researchers, educators, and designers to ensure that intelligent educational systems operate responsibly, remain grounded in humanistic and pedagogical values, and contribute to a future in which human and artificial intelligence co-evolve to enrich the intellectual foundations of education.

Short Bio:

**Maria Virvou** is the Dean of the School of Informatics and Communication Technologies at the University of Piraeus, Greece, and a Full Professor in the Department of Informatics. She is Co-Founder and Co-Editor-in-Chief of the Springer book series Learning and Analytics in Intelligent Systems and Artificial Intelligence–Enhanced Software and Systems Engineering, as well as Co-Founder of the IEEE Information Intelligent Systems and Applications (IISA).

She previously served as Editor-in-Chief of SpringerPlus and currently serves as Associate Editor of Knowledge-Based Systems (Elsevier). Professor Virvou holds a Ph.D. in Artificial Intelligence from the University of Sussex, funded by a competitive scholarship in Artificial Intelligence from the Greek State Scholarships Foundation (IKY) following national

examinations. She also holds an M.Sc. in Computer Science from University College London (UCL) and a Degree in Mathematics from the National and Kapodistrian University of Athens.

Her scholarly record includes over 400 publications and 8 monographs indexed in Scopus. She ranks 1st worldwide in Intelligent Software and Educational Software and 2nd in User Modeling, according to Scopus and Microsoft Academic Search. Professor Virvou has supervised 15 Ph.D. theses and 10 postdoctoral researchers, and is currently supervising 5 Ph.D. candidates. She has coordinated numerous national and international research projects and has received multiple distinctions, including a UNESCO award for her contributions to computer science. In recognition of her impact, Springer published Advances in Intelligent Healthcare Delivery and Management: Research Papers in Honour of Professor Maria Virvou. She is consistently listed among the top 2% of researchers worldwide in Artificial Intelligence, according to the global academic ranking by Stanford University.

## IISA 2026 Invited Keynote Speakers on Intelligent Applications (in Alphabetical Order)

### Jean Larson, Arizona State University, USA

Title: **Redesigning Education for the AI Era: A Systems Engineering Imperative**

Abstract:

Artificial intelligence is advancing at an exponential pace, reshaping industries, economies, and the nature of work. Education, however, continues to evolve incrementally, largely within an industrial-age framework defined by standardized curricula, credit hours, and lecture-centered instruction. The widening gap between exponential technological innovation and linear educational reform is increasingly unsustainable. Examining this divergence through a systems engineering lens highlights how educational institutions once adapted to technological transformation and why they must do so again. During the Industrial Revolution, emerging technologies redefined workforce requirements, and the Prussian model of mass education arose as a scalable, standardized response to new societal demands. Education successfully aligned with technological change once before. Today, higher education represents a legacy system operating under constraints misaligned with rapidly evolving AI-driven ecosystems. Education must therefore be reimagined as an adaptive intelligence system: continuous, data-informed, interdisciplinary, and workforce-aligned. A systems approach treats learning as an integrated ecosystem of stakeholders, feedback loops, and co-evolving capabilities. An ecosystem model exemplified by the SenSIP Center integrates NSF-funded Research Experiences for Teachers and Undergraduates, industry collaboration, and authentic research spanning sensors, machine learning, and quantum computing. AI will continue to accelerate. The question is not whether intelligence systems will evolve, but whether our educational systems will evolve with them.

Short Bio:

**Jean Larson**, Ph.D., is a Research Associate Professor in the School of Sustainable Engineering and the Built Environment, and Associate Director of Instructional Effectiveness and Innovation in the Learning and Teaching Hub, both within the Ira A. Fulton Schools of Engineering at Arizona State University. She holds a Ph.D. in Educational Technology and has postgraduate training in Computer Systems Engineering, along with extensive experience in teaching and curriculum development across a range of learning environments. Dr. Larson has taught K-12 students locally and internationally, prepared pre-service teachers and university faculty to integrate technology into their instruction and delivered professional development

for business and industry partners. Her expertise includes instructional design, delivery, and evaluation, with specialization in eLearning technologies for workforce training and development. Her research centers on pedagogical innovation, systems-level curriculum and program design, interdisciplinary collaboration, and strengthening the global engineering workforce through AI- and technology-enabled education. She recently presented her work through the IEEE Education Society Seminar Series.

## Vangelis Marinakis, National Technical University of Athens, Greece

Title: **Building Smart and Sustainable Cities: The Athens Paradigm**

Abstract:

This keynote explores how cities can accelerate their transition toward sustainability and climate resilience, using Athens as a living case study of integrated urban transformation. The presentation highlights how strategic planning, digital tools, energy efficiency policies, renewable energy deployment and climate adaptation measures can be combined into a coherent urban model. Drawing on concrete examples, including smart energy management in municipal buildings, large-scale urban tree planting and micro-climate interventions, energy community initiatives, sustainable mobility actions, and data-informed decision-support platforms, the talk illustrates how Athens is addressing heat stress, energy vulnerability and infrastructure pressures in a dense Mediterranean context.

Beyond technology, the keynote emphasizes governance, institutional coordination and citizen engagement as key drivers of sustainable urban change. It reflects on how local authorities can align climate neutrality, resilience and social equity objectives within a unified strategy, while leveraging European frameworks and partnerships to scale impact. The central message is that smart cities are not defined by digitalization alone, but by their capacity to integrate environmental ambition, policy innovation and human-centered design into a resilient urban ecosystem.

Short Bio:

**Vangelis Marinakis**, Ph.D., is an Associate Professor in the School of Electrical and Computer Engineering (ECE) of the National Technical University of Athens (NTUA), Greece. He is an Electrical and Computer Engineer of NTUA and holds a PhD in the research domain of decision support systems for sustainable energy planning (ECE, NTUA). His research focuses on the design and development of advanced methodologies and decision support systems that leverage cutting-edge information and communication technologies, including IoT, Artificial Intelligence, Big Data, and Data Spaces, to enable intelligent energy management across multiple scales (smart buildings, districts, cities and mico-grids). His work also addresses energy efficiency, renewable energy integration and climate resilience pathways for urban and regional systems. Dr. Marinakis has 20 years of professional experience in these fields and has been involved as Project Coordinator or Project Manager in more than 45 European and nationally funded research and innovation projects. Since January 2024, he has been President of key development organizations of the City of Athens, including DAEM S.A. and Develop Athens S.A. He is Co-Editor-in-Chief of the international journal 'Energy Sources, Part B: Economics, Planning and Policy' and co-author of more than 100 peer-reviewed scientific

publications. His authored several books, including ‘Energy Management and Environmental Policy’ and ‘Artificial Intelligence for Energy Systems: Driving Intelligent, Flexible and Optimal Energy Management’, along with numerous book chapters and conference papers..

## IISA 2026 Tutorial

### Andreas Spanias, SenSIP Center, Arizona State University, USA

Title: **Translating Academic Research to Patentable Applications**

Abstract:

This tutorial discusses strategies for transforming university research into patentable inventions and commercial technologies with societal impact. Drawing on examples from the research activities of Andreas Spanias and the SenSIP Center at Arizona State University, the presentation will highlight the pathway from fundamental research to intellectual property, technology transfer, and startup formation. The seminar will present representative examples from a portfolio of 30 issued U.S. patents and multiple provisional patents spanning machine learning, signal processing, sensor systems, audio and speech technologies, and renewable energy systems. Particular emphasis will be placed on innovations in photovoltaic (PV) monitoring, fault detection and solar energy optimization that resulted in both patents and the formation of a company focused on AI-based PV fault detection and energy management solutions. A central theme of the seminar is the role of student mentorship in innovation. Many of the patents were developed through collaborative efforts involving graduate students and in a few cases undergraduate researchers engaged in the NSF Research Experiences for Undergraduates (REU) program. The presentation will discuss approaches for engaging students in translational research, creating opportunities for co-authorship, invention disclosures, and startup activities. Recent work in quantum machine learning (QML) will also be highlighted, including applications to medical imaging, energy systems, and signal processing. These efforts have produced peer-reviewed publications as well as provisional patent filings involving quantum signal processing methods and other emerging QML technologies. The seminar concludes with lessons learned on building innovation ecosystems that connect research, education, and intellectual property while preparing the next generation of inventors and technology leaders.

Short Bio:

**Andreas Spanias** is Professor in the School of Electrical, Computer, and Energy Engineering at Arizona State University (ASU). He is also the director of the Sensor Signal and Information Processing (SenSIP) center and the founder of the SenSIP industry consortium (also an NSF I/UCRC site). His research interests are in the areas of adaptive signal processing, speech processing, quantum machine learning and sensor systems. He and his student team developed the computer simulation software Java-DSP and its award-winning iPhone/iPad and Android versions. He is author of two textbooks: Audio Processing and Coding by Wiley and DSP; An Interactive Approach (2nd Ed.). He contributed to more than 400 papers, 11 monographs, 30 US patents and 10 provisional patents. He served as Associate Editor of the IEEE Transactions on Signal Processing and as General Co-chair of IEEE ICASSP-99. He also served as the IEEE Signal Processing Vice-President for Conferences. Andreas Spanias is co-recipient of the 2002

IEEE Donald G. Fink paper prize award and was elected Fellow of the IEEE in 2003. He served as Distinguished Lecturer for the IEEE Signal processing society in 2004. He is a series editor for the Springer lecture series on algorithms and software. He co-authored with his students a paper on Quantum Fourier transforms for signal analysis-synthesis at ICASSP 2023 that received a Top 3% rating certificate. He is currently heading four NSF workforce development projects as a PI. He received the 2018 IEEE Phoenix Chapter award with citation: “For significant innovations and patents in signal processing for sensor systems.” He also received the 2018 IEEE Region 6 Outstanding Educator Award (across 12 states) with citation: “For outstanding research and education contributions in signal processing.” He was elected to Senior Member of the National Academy of Inventors (NAI). He was named Fulbright U.S. Research Scholar and conducted research in machine learning for energy and other applications in the Balkans.

## Program at a Glance

| TIME | MONDAY, JULY 6, 2026 | TUESDAY, JULY 7, 2026 MAIN CONFERENCE | WEDNESDAY, JULY 8, 2026 | THURSDAY, JULY 9, 2026 |
|---|---|---|---|---|
| 08:00 - 08:30 | REGISTRATION | ——— | ——— | ——— |
| 08:30 - 09:00 | OPENING SESSION | ——— | ——— | ——— |
| 09:00 - 10:00 | **KEYNOTE – 1 /** ROOM 1 | **KEYNOTE – 3 /** ROOM 1 | **KEYNOTE – 5 /** ROOM 1 | **KEYNOTE – 7 /** ROOM 1 |
| 10:00 - 10:15 | *COFFEE BREAK* | *COFFEE BREAK* | *COFFEE BREAK* | *COFFEE BREAK* |
| 10:15 - 12:15 | **MM-1** / ROOM 1<br>**MM-2** / ROOM 2<br>**MM-3 /** ROOM 3<br>**MM-4** / ROOM 4<br>**MM-5** / ROOM 5 | **TuM-1** / ROOM 1<br>**TuM-2** / ROOM 2<br>**TuM-3 /** ROOM 3<br>**TuM-4** / ROOM 4<br>**TuM-5** / ROOM 5 | **WM-1** / ROOM 1<br>**WM-2** / ROOM 2<br>**WM-3 /** ROOM 3<br>**WM-4** / ROOM 4<br>**WM-5** / ROOM 5 | **ThM-1** / ROOM 1<br>**ThM-2** / ROOM 2<br>**ThM-3 /** ROOM 3<br>**ThM-4** / ROOM 4<br>**ThM-5** / ROOM 5 |
| 12:15 - 13:30 | *LUNCH* | *LUNCH* | *LUNCH* | *LUNCH* |
| 13:30 - 14:30 | **KEYNOTE – 2 /** ROOM 1 | **TuA-1** / ROOM 1 | **KEYNOTE – 6 /** ROOM 1 | **KEYNOTE – 8 /** ROOM 1 |
| 14:30 - 14:45 | *COFFEE BREAK* | *COFFEE BREAK* | *COFFEE BREAK* | *COFFEE BREAK* |
| 14:45 - 16:45 | **MA-1** / ROOM 1<br>**MA-2** / ROOM 2<br>**MA-3 /** ROOM 3<br>**MA-4** / ROOM 4<br>**MA-5** / ROOM 5 | ——— | **WA-1** / ROOM 1 (**14:45-15:45**) + **TUTORIAL /** ROOM 1 (**15:55-16:25**) | **CLOSING SESSION** ROOM 1 (**14:45-15:00**) |
| 20:00-22:00 | ——— | **GALA DINNER AND AWARD CEREMONY** | ——— | ——— |

| TIME | TUESDAY,<br>JULY 7, 2026<br>SMART ENERGY CLUSTER WORKSHOP /ROOM 5 |
|---|---|
| 08:30 - 09:00 | REGISTRATION |
| 09:00 - 09:15 | WELCOME SPEECH BY ELISSAIOS SARMAS |
| 09:15 - 10:00 | **KEYNOTE SPEECHES**<br>BY MASSIMO BERTONCINI, ALEXANDRE LUCAS, ANTONELLO MONTI |
| 10:00 – 10:15 | *COFFEE BREAK* |
| 10:15- 12:00 | **TuM-5** / ROOM 5<br>**Session 1 — Intelligent Buildings: From Monitoring and Digital Twins to Predictive Control**<br>**Chairs: Massimo Bertoncini, Alexandre Lucas** |
| 12:00 - 12:15 | **KEYNOTE SPEECH – 4**<br>BY VANGELIS MARINAKIS |
| 12:15 – 13:30 | *LUNCH* |
| 13:30 – 14:30 | **Smart Energy Cluster: Advancing Energy Transition with Smart Infrastructure and Engaged Communities** |
| 14:30 - 14:45 | *COFFEE BREAK* |
| 14:45-16:15 | **Session 2 — Smart Grids and Distributed Energy Resources: Analytics, Forecasting and Orchestration**<br>**Chairs: Antonello Monti, Elissaios Sarmas** |
| 16:15-17:00 | **Session 3 — Energy Communities, Sustainable Finance and Social Innovation**<br>**Chairs: Tudor Cioara, Vangelis Marinakis** |
| 17:00 | **WORKSHOP CONCLUDING REMARKS** |
| 20:00 – 22:00 | **GALA DINNER AND AWARD CEREMONY** |

## Detailed Program

# Monday, 6 July 2026

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|---|---|
| 08.30 – 09.00 | Opening Session (ROOM-1)<br>**IISA2026:**<br>Professor V. Verykios, Hellenic Open University, Greece<br>Professor A. Sofos, University of the Aegean, Greece<br>Professor H. Takeuchi, Musashi University, Japan<br>Professor T. Nakatani, Open University of Japan, Japan<br>Professor V. Kourtis-Kazoullis, University of the Aegean, Greece<br>Professor G.A. Tsihrintzis, University of Piraeus, Greece<br>Professor M. Virvou, University of Piraeus, Greece<br>**AIESE2026:**<br>Professor Rihito Yaegashi, Kagawa University, Japan<br>Professor Minami Yoda, Nihon University, Japan<br>Professor Maria Virvou, University of Piraeus, Greece |
| 09.00 – 10.00 | Keynote Speech-1 (ROOM-1)<br>Professor Dimitrios Peroulis<br>From Awareness to Amalgamation: An AI Pathway for Higher Education<br>Chair: G.A. Tsihrintzis |
| 13.30 – 14.30 | Keynote Speech-2 (ROOM-1)<br>Professor Peristera (Perry) Paschou<br>Data-Driven Perspectives on Human Genetic Diversity in Health and Disease<br>Chair: M. Virvou |

| Session MM-1 (ROOM 1) | Artificial Intelligence-empowered Software Engineering-1 |
|---|---|
| Session Chair:<br><br>**Shuichiro Yamamoto** | ❖ ***10:15-10:35*** **A Study on the Asymmetrical Relationship between Non-Functional Requirements and Functional Risks**<br>*Shuichiro Yamamoto*<br><br>❖ ***10:35-10:55*** **A System Integrity Framework by Integrating Quality-Architecture-Process (QAP) Analysis and SPRME for Evidence-Based Design Rationale**<br>*Shuichiro Yamamoto*<br><br>❖ ***10:55-11:15*** **Toward the Development of a Guide for Writing Business Requirements Specifications**<br>*Junko Shirogane, Takako Nakatani, Hiroyuki Nakagawa, Motoshi Saeki, Atsushi Ohnishi*<br><br>❖ ***11:15-11:35*** **A method for generating usability input forms to assist with inputting data into template documents**<br>*Hajime Iwata, Junko Shirogane*<br><br>❖ ***11:35-11:55*** **Generation of Data Dependency Analyzers via LLM-Based Defect-Guided Iterative Regeneration**<br>*Takahiro Kinoshita, Toru Mizuno, Satoshi Igarashi, Daisuke Fukui*<br><br>❖ ***11:55-12:15*** **Towards an Evaluation Methodology for AI Code Assistants**<br>*Dimitrios Koutsomitropoulos, Alexios Lekarakos* |
| Session MM-2 (ROOM 2) | Educational Informatics-1: AI for Education |
| Session Chairs:<br><br>**Maria Virvou**<br><br>**and**<br><br>**Jean Larson** | ❖ ***10:15-10:35*** **From Perceptions to Development: A Longitudinal Study of Students' Confidence, Anxiety, and Understanding in AI-Supported Mathematics**<br>*Dimitrios Zarkadoulas, Maria Virvou*<br><br>❖ ***10:35-10:55*** **Introducing Machine Learning and Internet of Things Through a Smart Home STEM Project**<br>*Panagiota Ismini Matthe, Maria Virvou, Alexios Tsetsonis, Georgios Vlisidis*<br><br>❖ ***10:55-11:15*** **Educator Research Immersion in Sensors and Machine Learning for AI Workforce Development**<br>*Jean Larson, Jennifer Blain Christen, Daniel Gulick, Glen Uehara, Andreas Spanias*<br><br>❖ ***11:15-11:35*** **CG2E: A Graph Generator for Educational and Scientific Purposes**<br>*Gustavo Rafael Paulino, Rafael Frinhani, Carlos Eduardo de Andrade, Rodrigo Duarte Seabra* |

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| | ❖ ***11:35-11:55*** **A Fuzzy Logic-Based Adaptive Mobile Serious Game for Progressive Memory Training**<br>*Michail Tselepatiotis, Aristea Kontogianni, Konstantina Chrysafiadi, Efthimios Alepis*<br><br>❖ ***11:55-12:15*** **Computer-Supported Collaborative Learning in Mathematics: Results from a Primary School Class**<br>*Chrysanthi Karathanasi* |
| Session MM-3 (ROOM 3)<br><br>Session Chairs:<br><br>**Dimitris Apostolou**<br><br>**and**<br><br>**Michail Alexiou** | **Healthcare-1: AI in Diagnostics**<br><br>❖ ***10:15-10:35*** **Quantum Preprocessing of MRI for Use in Brain Cancer Classification**<br>*Andreas Spanias, Carson Wolff, Glen Uehara, Niraj Anil Babar*<br><br>❖ ***10:35-10:55*** **Explainability-Driven Performance Optimization for Lung Cancer Prediction Using Shapley Additive Explanations (SHAP)**<br>*Evgenia Psarra, Dimitris Apostolou*<br><br>❖ ***10:55-11:15*** **Measuring Skin-to-Heart Distance Using A Fuzzy Inference System for Automatically Tuning Multiple Ultrasound Transducers in a Wearable Vest**<br>*Elizabeth Tabernik, Elisavet Kostalia, Garrett Goodman*<br><br>❖ ***11:15-11:35*** **Stress-Testing Parkinson's Disease Screening: A Cross-Modal Robustness Analysis of Drawing and Speech Models**<br>*Rehma Razzak, Michail Alexiou*<br><br>❖ ***11:35-11:55*** **Local Explainability of Ensemble Learning Models for Intracranial Aneurysm Rupture Status Classification**<br>*Epameindonas Ntzanis, Nikolaos Papandrianos, Petros Zampakis, Vassilios Panagiotopoulos, Elpiniki Papageorgiou, Christina Kalogeropoulou, Constantine Koutsogiannis*<br><br>❖ ***11:55-12:15 K-SENSE: A Knowledge-Guided Self-Augmented Encoder for Neuro-Semantic Evaluation of Mental Health Conditions on Social Media***<br>*Vijay Yadav* |
| Session MM-4 (ROOM 4)<br><br>Session Chair:<br><br>**Miltiadis (Miltos) Alamaniotis** | **AI in Forecasting in the Energy Sector**<br><br>❖ ***10:15-10:35*** **Forecast Horizon-Granularity Optimization for SMR-Powered AI-Data Centers**<br>*Makafui Torkornoo, Sara Ahmed, Nikolaos Gatsis, Miltos Alamaniotis*<br><br>❖ ***10:35-10:55*** **Embedded Hardware and Edge ML Algorithms for Real-time PV Fault Detection**<br>*Deep Pujara, Michael Hansen, Niraj Anil Babar, Devarajan Srinivasan, Cihan Tepedelenlioglu, Andreas Spanias*<br><br>❖ ***10:55-11:15*** **Spatio-Temporal Dual-Graph Neural Networks for Multi-Site PV Forecasting**<br>*Georgios Vontzos, Vasileios Laitsos, Dimitrios Bargiotas, Nikolaos Stefanakis, Constantinos Mammassis, Sotiris Christopoulos* |

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| | ❖ ***11:15-11:35*** **Data-Driven Non-Intrusive Load Monitoring Using Advanced Deep Learning Approaches**<br>*Vasileios Laitsos, Georgios Vontzos, Eleftherios Kontis, Geogios Loukos, Sotiris Christopoulos, Paschalis Paraschoudis*<br><br>❖ ***11:35-11:55*** **A Comparative Evaluation of Prophet and LSTM Models for Electricity Consumption Forecasting in Smart Meter Time Series**<br>*Gerasimos Vonitsanos, Phivos Mylonas, Andreas Kanavos* |
| Session MM-5 (ROOM 5)<br><br>Session Chairs:<br><br>**Dionisios Sotiropoulos**<br><br>**and**<br><br>**Dimitrios Tsipianitis** | **Machine Learning Methodologies in Sensor-based Applications**<br><br>❖ ***10:15-10:35*** **FORMEX-to-OPA: Deterministic Generation of Provenance-Annotated Rego Compliance Scaffolds from EU Regulatory XML**<br>*Dimitrios Efstathiou, Efthimios Alepis*<br><br>❖ ***10:35-10:55*** **Passive Wi-Fi Distance Inference from Session-Level Trace Representations Under Cross-Sniffer Transfer**<br>*Antonios Sarris, Dionisios Sotiropoulos*<br><br>❖ ***10:55-11:15*** **Deep Reinforcement Learning for the Vehicle Routing Problem with Time Windows: A Study on Scalability and Constraint Satisfaction**<br>*Dionysios Theodosis Papaloukas, Gregory Koronakos, Manolis Kritikos*<br><br>❖ ***11:15-11:35*** **A Multi-node IOT Earthquake Early Warning Prototype using Edge AI**<br>*Dimitris Tsipianitis, Emmanouil Iordanidis*<br><br>❖ ***11:35-11:55*** **Multimodal Cognitive Task Detection Using Physiological and Motion Signals**<br>*Alexia Gazeta, George Krimpas, Maria Rigou, Georgios Thanasas*<br><br>❖ ***11:55-12:15*** **PID Controller for Self-Driving Car Taking into Account Weather Conditions in Smart City**<br>*Igor Astrov, Irina Astrova* |
| Session MA-1 (ROOM 1)<br><br>Session Chair:<br><br>**Bill Kapralos** | **Serious Ganes in Medical Education**<br><br>❖ ***14:45-15:05*** **Escape the Experiment: Iterative Design and Learnability in a Serious Game for Vaping Education**<br>*Bill Kapralos, Quinn Daggett*<br><br>❖ ***15:05-15:25*** **AI-Supported Middle-Ground Adaptive Augmented Reality System for Empathy-Centered Training**<br>*Bill Kapralos, Eva Peisachovich*<br><br>❖ ***15:25-15:45*** **PAT-Sim: An Ethical Serious Game for Experiential Training in Psychedelic-Assisted Psychotherapy**<br>*Tyler Reeds, Ishaan Kishore, Omid Fanaei, Rachel Marinic, Ivan Ho, Argyrios Perivolaris, Bill Kapralos, Allen Kalpin, David Chandross* |

| Session MA-2 (ROOM 2) | AI in Social, Human-centric and Aesthetic Applications |
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| Session Chairs:<br><br>**Dimitrios Karapiperis**<br><br>**and**<br><br>**Dimitrios Panagoulias** | ❖ ***14:45-15:05*** **High-Throughput Semantic Embeddings for Real-Time Threat Campaigns**<br>*Dimitrios Karapiperis, Georgios Feretzakis, Sarandis Mitropoulos*<br><br>❖ ***15:05-15:25*** **Aesthetic Mediation as Epistemic Infrastructure for Intelligent Systems**<br>*Michael Sfakianakis, Maria Elisavet Kampi*<br><br>❖ ***15:25-15:45*** **AI-Supported Client Discovery and Lead Qualification: A Human-AI Decision Support Pipeline for Web Development**<br>*Ana Carolina Malveira Ferreira, Adler Diniz de Souza*<br><br>❖ ***15:45-16:05*** **Artificial Intelligence in Graphic Design for Web Development: A Systematic Literature Review Focused on Customer Success**<br>*Ana Carolina Malveira Ferreira, Adler Diniz de Souza*<br><br>❖ ***16:05-16:25*** **Evidence-grounded Synthetic Population Generation: A Framework for Privacy-Preserving AI Development from Published Statistical Evidence**<br>*Dimitrios Panagoulias, George A. Tsihrintzis* |
| Session MA-3 (ROOM 3) | AI in Recommendation Methodologies |
| Session Chair:<br><br>**Dimitrios Spiliotopoulos** | ❖ ***14:45-15:05*** **Unveiling Structural Distributional Bias in Collaborative Filtering for Ultra-Sparse Datasets**<br>*John Nanos, Dionisis Margaris, Giorgos Mpardis, Konstantinos Roumeliotis, Costas Vassilakis, Dimitris Spiliotopoulos*<br><br>❖ ***15:05-15:25*** **A Multimodal Pipeline for Personalized Recommendations from Greek YouTube Content: Integrating Automatic Speech Recognition and Aspect-Based Sentiment Analysis**<br>*Manvir Singh, Konstantinos Roumeliotis, Costas Vassilakis, Dionisis Margaris, Giorgos Mpardis, Dimitris Spiliotopoulos*<br><br>❖ ***15:25-15:45*** **Optimizing Collaborative Filtering in Very Sparse Datasets: a Confidence-based Approach**<br>*Vassiliki Stouraiti, Giorgos Mpardis, Konstantinos Roumeliotis, Costas Vassilakis, Christos Tryfonopoulos, Dimitris Spiliotopoulos*<br><br>❖ ***15:45-16:05*** **A Comparative Study of Qwen and Gemma Large Language Models for Social Media Slang and Emoji Sentiment Analysis for Business Recommender Systems**<br>*Konstantinos Roumeliotis, Dionisis Margaris, Dimitris Spiliotopoulos, Giorgos Mpardis, Christos Tryfonopoulos, Costas Vassilakis*<br><br>❖ ***16:05-16:25*** **Human-Centered and Comparative Evaluation of LLM-Generated Tourism Recommendations: Evidence from Volos and Pelion, Greece**<br>*Aristea Kontogianni, Efthimios Alepis, Ioannis Davgiotis* |

| Session MA-4 (ROOM 4) | AI in Business Analytics |
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| Session Chairs:<br><br>**Vassilios Verykios**<br><br>**and**<br><br>**Thomas Dasaklis** | ❖ ***14:45-15:05*** **Modelling Employers' Satisfaction with E-Government Services: A Business Analytics Perspective**<br>*Alexandros Liapis, Konstantinos Panitsidis, Konstantinos Spinthiropoulos, Nikos Karousos, Vassilios Verykios*<br><br>❖ ***15:05-15:25*** **An attention mechanism for mitigating the effect of experience imbalance in inventory-related GAN-RL applications**<br>*Panagiotis G. Giannopoulos, Vangelis Malamas, Nikolaos P. Rachaniotis, Vassilios Verykios, Thomas Dasaklis*<br><br>❖ ***15:25-15:45*** **Ontology-Driven Representation of Training Capabilities in CBRN Centers**<br>*Sofia Karma, Angelos Mikelis, Stefanos Palmos, Ariadni Michalitsi - Psarrou, Vagelis Karakolis, Spiros Mouzakitis, Christos Ntanos, Dimitris Askounis*<br><br>❖ ***15:45-16:05*** **G-BPMT: An Interactive Tool for Guided Modeling of Business Processes in BPMN Notation**<br>*Filipe Castro Fernandes, Rafael Frinhani, Fabiano Leal, Rodrigo Duarte Seabra*<br><br>❖ ***16:05-16:25*** **Iterative Lead Time Optimization in Business Processes: Process Mining with Cost and Structural Similarity Constraints**<br>*Hermes Araujo, Edson Scalabrin*<br><br>❖ ***16:25-16:45*** **Corporate Bankruptcy Prediction for Financial Risk Management: A Comparative Evaluation of Baseline and Ensemble Models using Big Data Analytics**<br>*Leonidas Theodorakopoulos, Alexandra Theodoropoulou, Yannis Stamatiou* |
| Session MA-5 (ROOM 5) | AI in Smart Agriculture |
| Session Chair:<br><br>**Dimitrios Apostolou**<br><br>**and**<br><br>**Evgenia Paxinou** | ❖ ***14:45-15:05*** **AGRODIGITAL: Digital Twins for Disease Prediction and Irrigation Management in Mediterranean Apricot Orchards**<br>*Vassilios Verykios, Angelos Patakas, Georgios Feretzakis, Thomas Thomidis, Evgenia Paxinou*<br><br>❖ ***15:05-15:25*** **Blockchain Technology and Digital Product Passports as Enablers of Traceability in Organic and Mineral Fertilizer Supply Chains**<br>*Christoforos-Nikitas Kasimatis, Nikolaos Katsenios, Evangelos Psomakelis, Christos Kyriakou, George Koulovakis, Evgenia Psarra, Dimitrios Apostolou, Aspasia Efthimiadou*<br><br>❖ ***15:25-15:45*** **An Experimental IoT and Remote Sensing-Based Decision Support System for Optimizing Cotton Irrigation**<br>*Dimitrios Leonidakis, Evangelos Psomakelis, Christoforos-Nikitas Kasimatis, Panagiotis Sparangis, Nikolaos Katsenios, Gabriel Mavrellis, Vasilis Papakonstantinou, George Xydis, Aspasia Efthimiadou*<br><br>❖ ***15:45-16:05*** **Embedded AI for Plant Disease Detection in Precision Agriculture using UAVs**<br>*Letícia Tempone de Oliveira, Matheus Martins Batista, Vanessa Cristina Oliveira de Souza, Bruno Guazzelli Batista* |

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| | ❖ ***16:05-16:25*** **Explainable Artificial Intelligence for Quality Classification of Fresh-Cut Zucchini with Edible Coatings**<br>*Persefoni Giannouli, Konstantinos Papageorgiou, Theodosios Theodosiou, Apostolis Valiakos, Elpiniki Papageorgiou, Anastasia Bari, Eleni Manola*<br><br>❖ ***16:25-16:45*** **Deep Semantic Segmentation for Agricultural Mapping: A Meta-Analytic Review**<br>*Matheus M. Batista, Bruno Batista, Vanessa C. O. de Souza, Adler D. de Souza, Margarete M. L. Volpato, Helena M. R. Alves* |

# Tuesday, 7 July 2026

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| 09.00 – 10.00 | **Keynote Speech-3 (ROOM-1)**<br>**Professor Ljiliana Trajkovic**<br>**Data Mining and Machine Learning for Analysis of Network Traffic**<br>**Chair: M. Virvou** |

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| 12.00 – 12.15 | **5th International Workshop on Data Analytics in the Energy Sector**<br>**Keynote Speech-4 (ROOM-5)**<br>**Professor Vangelis Marinakis**<br>**Building Smart and Sustainable Cities: The Athens Paradigm**<br>**Chairs: G. Tsihrintzis and E. Sarmas** |

| Session TuM-1 (ROOM 1) | Artificial Intelligence-empowered Software Engineering-2 |
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| Session Chair:<br><br>**Minami Yoda** | ❖ ***10:15-10:35*** **A Battery-Aware Multi-Agent UAV System for Disaster Evacuation Support: An Overview**<br>*Shohei Taga, Munehiro Takimoto, Tomofumi Matsuzawa, Tsutomu Kumazawa, Yasushi Kambayashi*<br><br>❖ ***10:35-10:55*** **LLM-Driven Taint Analysis for Detecting Bad Partitioning Issues in Trusted Applications**<br>*Tatsuya Yoshinaga, Minami Yoda, Yutaka Matsuno*<br><br>❖ ***10:55-11:15*** **Serverless Per-Test Execution for Scalable Parallel UI Testing in Continuous Integration**<br>*Kuniaki Kudo, Ravirajsinh Solanki, Sherine Devi, Simona Vasilache*<br><br>❖ ***11:15-11:35*** **A Knowledge Engineering Framework for AI-Driven Software Development: Harness, Guardrail, and AI-Native Knowledge DevOps**<br>*Kentaro Watanabe, Hideto Ogawa, Satoshi Ito, Takanori Nakazawa, Kazuto Tsuru*<br><br>❖ ***11:35-11:55*** **On the Effects of Parameter Optimization in Cross-Project Vulnerability Detection: A Preliminary Replication Study of CPDP**<br>*Pattara Leelaprute, Sousuke Amasaki, Hirohisa Aman, Tomoyuki Yokogawa*<br><br>❖ ***11:55-12:15*** **Characterizing Reverse DNS Deployment for SPF-indicated Sender IP Addresses**<br>*Hibiki Tokuno, Minami Yoda, Shuji Sakuraba, Yutaka Matsuno* |
| Session TuM-2 (ROOM 2) | Educational Informatics-2: Educational Data Analytics |
| Session Chairs:<br><br>**Symeon Papavassiliou**<br><br>**and**<br><br>**Paraskevi Theodorou** | ❖ ***10:15-10:35*** **A Data-Driven Social Network Analysis Framework for Peer Mediation Planning in Special Education**<br>*Rozita Tsoni, Konstantinos Delavias, Athanasios Kranas, Katerina Drosopanagioti, Evgenia Paxinou, Vassilios S. Verykios*<br><br>❖ ***10:35-10:55*** **VFGP: A Vulnerable-First Pedagogically-Constrained Algorithm for Group Partition in SEL Programs**<br>*Eleni Fotopoulou, Evgenia Papoulia, Anastasios Zafeiropoulos, Symeon Papavassiliou*<br><br>❖ ***10:55-11:15*** **A Big Data Analytics and AI-Driven Framework for Improving Management Efficiency in Educational Environments**<br>*Leonidas Theodorakopoulos, Alexandra Theodoropoulou, Christos Pierrakeas, Yannis Stamatiou*<br><br>❖ ***11:15-11:35*** **Interaction Fragmentation and Cognitive Load in Multi-System Assistive Technologies: A Comparative Study in Educational Environments**<br>*Paraskevi Theodorou, Apostolos Meliones* |

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| | ❖ ***11:35-11:55*** **Digital Literacy in Prison: An Empirical Study on the Transition from External Incentives to Intrinsic Motivation**<br>*Ioannis Davgiotis, Efthimios Alepis, Aristea Kontogianni*<br><br>❖ ***11:55-12:15*** **On the Structural Necessity of Temporal Memory: A Causal Analysis of Scaffolding in Intelligent Tutoring**<br>*Markos Stathopoulos, Efthimios Alepis* |
| Session TuM-3 (ROOM 3)<br><br>Session Chair:<br><br>**Geoffrey Solano** | **Healthcare-2: Disease Prediction and Staging with AI**<br><br>❖ ***10:15-10:35*** **An Overview of Myocardial Infarction Risk Prediction Using Fuzzy Cognitive Maps**<br>*Anastasia Kapnia, Peter Groumpos*<br><br>❖ ***10:35-10:55*** **Comparative Machine Learning Analysis of Antimicrobial Resistance Prediction Across Antibiotics Using AMR Genes, Integrons, and Plasmid-Associated Features of Bacterial Isolates**<br>*Gervin Montiel, Lance Kerwin Regala, Alyza Gabby Valdez, Geoffrey Solano*<br><br>❖ ***10:55-11:15*** **Decoding SLE: Pathway-Grouped Explainable Machine Learning Applied to Single-Nucleotide Polymorphisms for Systemic Lupus Erythematosus Risk Prediction**<br>*Marc Jacob Doria, Mikhail Madarang, Deshny Sahagon, Geoffrey Solano*<br><br>❖ ***11:15-11:35*** **Interpretable AI for Fall Risk Stratification in Parkinson's Disease**<br>*Nouha Ed-Daoui, Younes Jabrane, Matthieu Bereau, Amir Hajjam EL Hassani, Maxime Desmarets*<br><br>❖ ***11:35-11:55*** **Explainable Prediction and Diagnosis of Dementia Based on Biomedical Markers: A Case Study**<br>*Kalliopi Klelia Lykothanasi, Anastasios Giannaros, Dimitrios Tsoukalos, Dimitrios Koutsomitropoulos, Dimitrios Tsolis*<br><br>❖ ***11:55-12:15*** **Efficient Estimation of Three-Way Partial Volume Under the ROC Surface for Multi-Class Disease Staging**<br>*Vijay Yadav* |
| Session TuM-4 (ROOM 4)<br><br>Session Chairs:<br><br>**Maria Virvou**<br><br>**and**<br><br>**George A. Tsihrintzis** | **Rapidly Growing Artificial Intelligence Development and Applications**<br><br>❖ ***10:15-10:35*** **Extending the Gulfs of Execution and Evaluation with a Trust Gulf for Human–LLM Interaction**<br>*Maria Virvou, George Tsihrintzis*<br><br>❖ ***10:35-10:55*** **Explainable Federated Reinforcement Learning for UAV Swarm Decision-Making**<br>*Nikolaos Almalis, Nikolaos Armenakis, George Tsihrintzis*<br><br>❖ ***10:55-11:15*** **Automated Theorem Proving in Lean 4 with Large Language Models**<br>*Dionisios Sotiropoulos, Vyron Tzimas* |

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| | ❖ ***11:15-11:35*** **Toward Medical Image Standardization for Robotics Applications in Clinical Workflows**<br>*Dimitrios Panagoulias, Evangelia-Aikaterini Tsichrintzi, Konstantina Chrysafiadi*<br><br>❖ ***11:35-11:55*** **Predicting Environmental ESG Scores with Neural, Boosting, and Symbolic Regression Models**<br>*Dionisios Sotiropoulos, Spyridon Solanakis*<br><br>❖ ***11:55-12:15*** **An LLM-Based RAG Framework for ESG Report Generation and Metric-Driven Scoring**<br>*Dionisios Sotiropoulos, Spyridon Solanakis* |
| Session TuA-1 (ROOM 1)<br><br>Session Chairs:<br><br>**Marina Elia**<br><br>**and**<br><br>**Geoffrey Solano** | **Healthcare–3: Machine Learning for High-Dimensional Biomedical Data**<br><br>❖ ***13:30-13:50*** **Boosting and Shrinking: Learning in High Dimensions with Few Samples**<br>*Marina Elia*<br><br>❖ ***13:50-14:10*** **Evaluating the Influence of Chrominance Resolution on Convolutional Neural Network Performance for Poultry Disease Detection**<br>*Yaovi Hoetowou, Sid Lamprous, Nadjime Pindra, Amir Hajjam El Hassani*<br><br>❖ ***14:10-14:30*** **Machine Learning for Cancer Classification and Biomarker Discovery Using High-Dimensional Omics Data**<br>*Gian Miguel Marcelo, Jason Racca, Joseph Yeshua Sigarra, Geoffrey Solano* |

# Wednesday, 8 July 2025

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| 09.00 – 10.00 | **Keynote Speech-5 (ROOM-1)**<br>**Distinguished Professor Jie Lu *AO***<br>**Concept Drift Detection, Understanding and Adaptation**<br>**Chair: M. Virvou** |
| 13.30 – 14.30 | **Keynote Speech-6 (ROOM-1)**<br>**Professor Maria Virvou**<br>**AI in Education: Which Technologies Matter, How Deep Is Deep, and What Functions will Transform Learning?**<br>**Chairs: E. Alepis, E. Sakkopoulos and D.N. Sotiropoulos** |
| 15:55 – 16.25 | **Tutorial Session (ROOM-1)**<br>**Professor Andreas Spanias**<br>**Translating Academic Research to Patentable Applications**<br>**Chair: Professor G.A. Tsihrintzis** |

| Session WM-1 (ROOM 1) | Artificial Intelligence-empowered Software Engineering-3 |
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| Session Chair:<br><br>**Minami Yoda** | ❖ ***10:15-10:35*** **Trial of Using Generative AI in Personal Software Process Education**<br>*Shigeru Kusakabe*<br><br>❖ ***10:35-10:55*** **A SECI-Based Multi-Agent Framework for Transforming Generative-AI Interaction Logs into Collective Intelligence**<br>*Shoma Hino, Masahide Nakamura, Takuya Nakata*<br><br>❖ ***10:55-11:15*** **Toward Language-Independent Arithmetic Pictograms for Elementary Learners**<br>*Noriaki Tanaka*<br><br>❖ ***11:15-11:35*** **PyExplore 2.0 Online: Towards Online SQL Query Recommendations**<br>*Apostolos Glenis*<br><br>❖ ***11:35-11:55*** **Towards an AI Transformation Pattern Language Grounded in MA-ATRIX Assessments**<br>*Kyoko Yoshimura, Hideyuki Kanuka, Hideto Ogawa, Ryota Mibe, Daisuke Fukui, Takayuki Kaku, Kota Okada, Kentaro Yoshimura*<br><br>❖ ***11:55-12:15*** **Holistic Fashion Classification via Structured LLM Semantics and 2D YIN/YANG Theory**<br>*Minami Yoda, Jialong Li, Yasuyuki Tahara, Yuichi Sei, Yutaka Matsuno* |
| Session WM-2 (ROOM 2) | Educational Informatics-3: Advances in AI in Education |
| Session Chairs:<br><br>**Corina Ilinca**<br><br>**and**<br><br>**Efthimios Alepis** | ❖ ***10:15-10:35*** **Dual-LLM Verification of AI-Generated Educational Content: A Generator–Evaluator Framework for Item Quality Assessment**<br>*Michail Tselepatiotis, Efthimios Alepis*<br><br>❖ ***10:35-10:55*** **Prioritizing Student Support in Higher Education. An AHP–TOPSIS and Machine Learning Decision-Support Framework Using Big Data Analytics**<br>*Leonidas Theodorakopoulos, Alexandra Theodoropoulou, Christos Pierrakeas, Yannis Stamatiou*<br><br>❖ ***10:55-11:15*** **Accessing AI Readiness and the Digital Divide in European University Administration: A Comparative Framework of Digital Competence and ICT Capacity**<br>*Sotiria Panagiota Souli, Christos Pierrakeas*<br><br>❖ ***11:15-11:35*** **Digital Educational Escape Rooms and Metacognitive Awareness: Exploring their Role in Interactive Learning Environments**<br>*Eleftheria Drongiti, Gerasimos Kalogeratos* |

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| | ❖ ***11:35-11:55*** **AI-Powered Digital Escape Rooms for Educational Leadership & Management: A PRISMA Review**<br>*Eleftheria Drongiti, Gerasimos Kalogeratos*<br><br>❖ ***11:55-12:15*** **Improving Neural Networks Performance Through Theoretical Subgroups Data Partitioning: Evidence from an Educational Informatics Application**<br>*Corina Ilinca* |
| Session WM-3 (ROOM 3)<br><br>Session Chair:<br><br>**Afroditi Tsalgatidou**<br><br>**and**<br><br>**Efthimios Alepis** | **Multimedia and Intelligent Methods**<br><br>❖ ***10:15-10:35*** **Digital Community Dynamics: A Telegram Case Study**<br>*Tanjima Nasreen Jenia, Eleni Stroulia*<br><br>❖ ***10:35-10:55*** **Automated Anonymization via NER and Template-Based Reduction: a Case Study of Greek Structured PDF Documents**<br>*Nikos Karousos, George Vorvilas, Vassilios Verykios*<br><br>❖ ***10:55-11:15*** **Trust-Aware Activation of Lurkers in Micro-Communities**<br>*Maria Anastasia Katikaridi, Aphrodite Tsalgatidou, Eleni Koutrouli*<br><br>❖ ***11:15-11:35*** **Towards Adaptive and Process-Aware Information Systems for AR Glasses: An Architectural Vision**<br>*Lidia Roszko, Karsten Wendt*<br><br>❖ ***11:35-11:55*** **Empathic Deontology in Serious Moral Games: A Conceptual Design Framework Illustrated Through Commercial Game Case Studies**<br>*Iason Dimitrios Ntokouzis, Efthimios Alepis*<br><br>❖ ***11:55-12:15*** **Accuracy–Efficiency Trade-Offs of Lightweight Transfer Learning Models for Small-Dataset Image Classification**<br>*Michail Tselepatiotis, Efthimios Alepis* |

| Session WM-4 (ROOM 4) | Rapidly Growing Artificial Intelligence Development and Applications in Education |
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| Session Chair:<br><br>**Maria Virvou**<br><br>**and**<br><br>**George A. Tsihrintzis** | ❖ ***10:15-10:35*** **The High-Usability Paradox of Educational LLMs: Overtrust, Critical Thinking, and the Risk of Hallucinations**<br>*Maria Virvou, George Tsihrintzis*<br><br>❖ ***10:35-10:55*** **LLMs in Discourse Analysis and Production: A Systematic Review through the Lens of Appraisal Theory**<br>*Diamanto Tzanoulinou, Loukas Triantafyllopoulos, George Vorvilas, Evgenia Paxinou, Dimitris Kalles, Vassilios S. Verykios*<br><br>❖ ***10:55-11:15*** **A Lifecycle Perspective on Ethical Agentic AI in Social and Emotional Learning**<br>*Eleni Fotopoulou, Evgenia Papoulia, Anastasios Zafeiropoulos, Symeon Papavassiliou*<br><br>❖ ***11:15-11:35*** **An AI-powered Accessibility Ecosystem Architecture for Seamless Support of Students with Visually Impairments in Higher Education**<br>*Paraskevi Theodorou, Kleomenis Tsiligkos, Apostolos Meliones, Michael Sfakianakis*<br><br>❖ ***11:35-11:55*** **LLM-Based Conversational Bots for Support and Question Answering in Higher Education: A Systematic Literature Review**<br>*Luis Ricardo Albano Santos, Adler Diniz de Souza, Bruno Guazzelli Batista*<br><br>❖ ***11:55-12:15*** **A Systematic Review of Language Models in Virtual Learning Environments Impacts on Personalization, Engagement, and Performance**<br>*Gustavo Almeida, Adler Souza, Isabela Drummond* |

| Session WM-5 (ROOM 5) | Machine Learning Methodologies and Applications |
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| Session Chair:<br><br>**Miltiadis (Miltos) Alamaniotis** | ❖ ***10:15-10:35*** **Application of Rvachev Functions for Source Characterization in Nuclear Security**<br>*Jack Crawford, Miltiadis Alamaniotis*<br><br>❖ ***10:35-10:55*** **Evaluating cross-series pooling protocols in intermittent demand forecasting: A factorial study**<br>*Ioannis Tsantilis, Panagiotis G. Giannopoulos, Thomas Dasaklis, Constantinos Patsakis*<br><br>❖ ***10:55-11:15*** **Robust Deep Reinforcement Learning under Imperfect Execution**<br>*Oren Fivel, Matan Rudman, Yaniv Cohen, Kobi Cohen*<br><br>❖ ***11:15-11:35*** **Hybrid Variational Quantum Circuits for Multivariate Regression and High-Dimensional Data Reconstruction**<br>*Koffi Ognandon Ayena, Frédéric Holweck, Serge Iovleff, Amah Séna D'Almeida*<br><br>❖ ***11:35-11:55*** **Federated Learning via Combinatorial Markovian Bandits: Latency-Aware Client Selection Under Uncertainty**<br>*Adar Zohar Melamud, Kobi Cohen, Qing Zhao, Lang Tong*<br><br>❖ ***11:55-12:15*** **ALEV: Acoustic Localization of Emergency Vehicles at Extreme SNR via Attention U-Net Denoising and Particle-Filtered DOA Estimation**<br>*Tarlan Ahadli* |
| Session WA-1 (ROOM 1) | Healthcare-4: Advances in AI Infusion |
| Session Chair:<br><br>**Dimitrios Tsipianitis** | ❖ ***14:45-15:05*** **A Low-Cost Tele-Rehabilitation Glove Prototype with Embedded Sensor Multiplexing and Cloud-Assisted Remote Monitoring**<br>*Dimitris Tsipianitis, Aristotelis Vallianatos*<br><br>❖ ***15:05-15:25*** **Design and Evaluation of a BPMN-Based Artifact for Standardizing Clinical Data Workflows in Maternity Care**<br>*Amanda Klein, Bárbara Pimenta Caetano, Melise de Paula*<br><br>❖ ***15:25-15:45*** **Multidimensional Cervical Spine Assessment: A Systematic Review with Quantitative Evidence Synthesis and Meta-Analysis of Conventional, Sensor-Based, and Artificial Intelligence-Driven**<br>*Vijay Yadav* |

# Thursday, 9 July 2025

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| 09.00 – 10.00 | Keynote Speech-7 (ROOM-1)<br>Professor Petros Drineas<br>AI, Machine Learning, and Data Science from a (Randomized) Numerical Linear Algebra lens<br>Chairs: E. Alepis, E. Sakkopoulos and D.N. Sotiropoulos |
| 13.30 – 14.30 | Keynote Speech-8 (ROOM-1)<br>Professor Jean Larson<br>Redesigning Education for the AI Era: A Systems Engineering Imperative<br>Chairs: D. Sotiropoulos |
| 14:30 – 14.45 | Closing Session (ROOM-1)<br>**IISA2026:**<br>Professor George A. Tsihrintzis, University of Piraeus, Greece<br>Professor Maria Virvou, University of Piraeus, Greece<br>Professor V. Verykios, Hellenic Open University, Greece<br>Professor A. Sofos, University of the Aegean, Greece<br>Professor H. Takeuchi, Musashi University, Japan<br>Professor T. Nakatani, Open University of Japan, Japan<br>Professor V. Kourtis-Kazoullis, University of the Aegean, Greece<br>**AIESE2026:**<br>Professor Rihito Yaegashi, Kagawa University, Japan<br>Professor Minami Yoda, Nihon University, Japan<br>Professor M. Virvou, University of Piraeus, Greece |

| Session ThM-1 (ROOM 1) | Artificial Intelligence-empowered Software Engineering-4 |
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| Session Chairs:<br><br>**Rihito Yaegashi**<br><br>**and**<br><br>**George A. Tsihrintzis** | ❖ ***10:15-10:35*** **Beyond Algorithmic Bias: A Design-Decision and Architectural Framework for Addressing Bias in AI-Enabled Personalized Software Systems**<br>*Maria Virvou, George Tsihrintzis*<br><br>❖ ***10:35-10:55*** **Evaluation of the Performance Limits of Agentic AI Using Cognitive Stress Tests**<br>*Toyohiko Jimma, Hiroki Asakimori, Satoru Yamada, Yusuke Kometani, Rihito Yaegashi*<br><br>❖ ***10:55-11:15*** **Comparing Instructor's Intent of Programming Courses through Morphological Similarity**<br>*Toshifusa Sekizawa, Hiroto Yamakawa*<br><br>❖ ***11:15-11:35*** **Execution Control Harness for Governed LLM-Based Code Generation**<br>*Masaki Takeda, Yusuke Funaya, Harriet Ocharo, Ryota Mibe, Hideyuki Kanuka*<br><br>❖ ***11:35-11:55*** **A Layered Analysis of Design Decisions in In-House Developed University Information Systems**<br>*Hiroki Asakimori, Toyohiko Jimma, Satoru Yamada, Yusuke Kometani, Rihito Yaegashi*<br><br>❖ ***11:55-12:15*** **A Layered Architecture for Secure and Scalable Metaverse Ecosystems: Design Principles, Technologies, and Challenges**<br>*Ioannis Karamitsos, Markos Koltsidas, Christoforos Ntantogian, Andreas Kanavos* |
| Session ThM-2 (ROOM 2) | AI in Cybersecurity |
| Session Chairs:<br><br>**Evangelos Sakkopoulos**<br><br>**and**<br><br>**Dionisios Sotiropoulos** | ❖ ***10:15-10:35*** **Architecting Trust and Security with the EUDI Wallet: Privacy-Preserving Identity and Access Management in Enterprises**<br>*Anna Zafeiropoulou, Evangelos Sakkopoulos*<br><br>❖ ***10:35-10:55*** **Decentralized Governance for Sovereign Clinical AI with Blockchain Attestation and Verifiable Data Lineage**<br>*Andrei Ionut Damian, Dimitrios Panagoulias, Cosmin Stamate, Evangelia-Aikaterini Tsichrintzi, Vitalii Toderian, Evangelos Sakkopoulos*<br><br>❖ ***10:55-11:15*** **Strength in Simplicity: Evaluating Adversarial Transferability in Quantized Lightweight CNNs**<br>*Landon Mata-Fraire, Yashwant Pallapolu, Tabitha Washington, Sumit Chakravarty, Michail Alexiou*<br><br>❖ ***11:15-11:35*** **Open Network Port Reconnaissance Through Exploitation of Neural Network Intrusion Detection Systems**<br>*Dimitrios Akrivousis, Nikos Nikolaidis, Anastasios Tefas, Nikolaos Passalis* |

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| | ❖ ***11:35-11:55*** **Enhancing GraIL with Textual Semantics for Inductive Link Prediction in Cybersecurity Knowledge Graphs**<br>*Charalampos Symeonidis, Eleftherios Tzavellas, Nikos Nikolaidis*<br><br>❖ ***11:55-12:15*** **Prevention of Cyber-attacks on Maritime Autonomous Surface Ships Based on Model Reference Controller**<br>*Igor Astrov, Irina Astrova* |
| Session ThM-3 (ROOM 3)<br><br>Session Chair:<br><br>**Dimitrios Tsolis**<br><br>**and**<br><br>**Aparna Varde** | **Intelligence in Digital Humanities**<br><br>❖ ***10:15-10:35*** **Lightweight OCR in North Sami Heritage Digitization for Smart Learning**<br>*Jan Musiol, Aparna Varde, Juan Heredia*<br><br>❖ ***10:35-10:55*** **Enhancing Hotel Recommendations with AI: LLM-Based Review Summarization and Query-Driven Insights**<br>*Nikolaos Belibasakis, Anastasios Giannaros, Ioanna Giannoukou, Spyros Sioutas, Dimitrios Tsolis*<br><br>❖ ***10:55-11:15*** **A Human-Centric and Trustworthy Agentic Architecture for Intelligent Carnival Ecosystem Management and Intangible Heritage Preservation**<br>*Zois Koukopoulos, Dimitrios Koukopoulos*<br><br>❖ ***11:15-11:35*** **An Educational Blockchain Smart Contract Framework for Potato Supply Chain Traceability**<br>*Lidia Roszko, Karsten Wendt, Effrosyni Bitakou, Maria Ntaliani, Konstantinos Demestichas, Constantina Costopoulou, Caterina Constantinou, Panagiotis Panopoulos, Eugenia Karamouzi, Nikola Kopilović, Assala Bourafai, Angeliki Milioti, Nikola Santrac, Nenad Magazin, Dimitrios Tsolis, Koen Uyttenhove, Vasiliki Ioannou*<br><br>❖ ***11:35-11:55*** **A Digital Traceability Technology Framework for Organic Freeze-Dried Fruit Natural Resource Management**<br>*Aglaia Liopa Tsakalidi, Athanasios Giannadakis, Alexandros Romaios, Marios Bailos, Anastasios Giannaros, Gerasimos Karantinos, Nikoleta Serakioti*<br><br>❖ ***11:55-12:15*** **The Impact of Social Media on Women's Empowerment: Opportunities, Challenges, and Implications for Digital Society**<br>*Livingston Antony Panakkal Augustin, Meritta Chowalloor Paul, Larry Liston, Mary Linda Panakal Augustine* |

| Session ThM-4 (ROOM 4) | Optimization and Planning |
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| Session Chair:<br><br>**Konstantinos Liagkouras** | ❖ ***10:15-10:35*** **Wikidata-Enhanced Collaborative Travel Planning for Point-of-Interest Discovery and Itinerary Management**<br>*Aristea Kontogianni, Efthimios Alepis, Angelos Sakellariou*<br><br>❖ ***10:35-10:55*** **Logistics Efficiency Through TSP-Driven Route Planning: Computational Strategies**<br>*Konstantinos Liagkouras, Kostas Metaxiotis*<br><br>❖ ***10:55-11:15*** **Dynamic Traffic Signal Management: A Hybrid Vision-Based and Industrial Control Architecture**<br>*Dimitris Tsipianitis, Vasileios Karatrantos*<br><br>❖ ***11:15-11:35*** **Application and Evaluation of Multiple Optimization Algorithms for the Fire Station Relocation Problem**<br>*Shota Fukuda, Takuya Nakata, Sinan Chen, Sachio Saiki, Masahide Nakamura*<br><br>❖ ***11:35-11:55*** **The Enhancement of Passenger Ground Transfer Management by the BPMN modeling and Real-Time Flight Data**<br>*Giorgos Mpardis, Dionisis Margaris, Konstantinos Roumeliotis, Costas Vassilakis, Dimitris Spiliotopoulos*<br><br>❖ ***11:55-12:15*** **Investigating the Effectiveness of Meta-Heuristic Algorithms in Multi-Objective Scheduling on the Cloud Environment**<br>*Balqees Mohammad* |
| Session ThM-5 (ROOM 5) | Machine Learning-based Assessment and Forecasting in Applications |
| Session Chairs:<br><br>**Andreas Spanias**<br><br>**and**<br><br>**Dionisios Sotiropoulos** | ❖ ***10:15-10:35*** **Transformer-Based Long-Term Forecasting of Temperature Time Series**<br>*Georgios Stavropoulos, Dionisios Sotiropoulos, Dimitra Dimitra*<br><br>❖ ***10:35-10:55*** **Quantum Machine Learning Algorithms for Credit Card Fraud Detection**<br>*Tanay Patel, Todd Hodges, Glen Uehara, Sutapa Samanta, Dagen Wang, Andras Ferenczi, Andreas Spanias*<br><br>❖ ***10:55-11:15*** **Quantum Machine Learning for Diagnosing Dysarthria from Speech Patterns**<br>*Nora Shaipi, Tanay Patel, Prad Kadambi, Glen Uehara, Visar Berisha, Andreas Spanias*<br><br>❖ ***11:15-11:35*** **Ground Water Quality Assessment using Quantum Machine Learning**<br>*Mohit Malu, Qinyuan Dai, Xurxo Rigueira, Minhazul Islam, Tianfang Xu, Paul Westerhoff, Andreas Spanias*<br><br>❖ ***11:35-11:55*** **Active Learning for Failure Classification**<br>*Gregory Davrazos, Nikos Fazakis, Sotiris Kotsiantis, Yiannis Dimakopoulos*<br><br>❖ ***11:55-12:15*** **SC-Mamba: Causal Disentanglement of Driver Intent and Style for Autonomous Driving Motion Forecasting**<br>*Emin Bayramov, Zoltán Istenes* |

## Conference Venue

IISA 2026 is a live conference with the University of the Aegean, Rodos, Greece as its venue.

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