PCI 2023

27TH PAN-HELLENIC CONFERENCE ON PROGRESS IN COMPUTING AND INFORMATICS WITH INTERNATIONAL PARTICIPATION

November 24-26, 2023, Lamia, Greece

https://pci2023.uth.gr/

Organization:
Greek Computer Society (GCS/ΕΠΥ)
Dept of Computer Science and Biomedical Informatics, University of Thessaly (UTh)
Dept of Informatics & Computer Engineering, University of West Attica (UniWA)
Dept of Agribusiness and Supply Chain Management, Agricultural University of Athens (AUA)

Program Chairs	General Chairs
Nikitas N. Karanikolas (UniWA) Michael Vassilakopoulos (UTH) Catherine Marinagi (AUA)	Athanasios Kakarountas (UTH) Ioannis Voyiatzis (UniWA)

PCI2023 Program Overview (Sessions)

Room 1 (https://bit.ly/3R4iccx)	Room 2 (https://bit.ly/49L0SAE)
Friday 15:00 - 16:40 *AIMLDM I* Artificial Intelligence / Machine Learning / Data Mining I (4art)	
coffee break	
Friday 17:00 – 18:40 *IS* Information Systems (5art)	
Friday 19:00 – 22:00 *Dinner*	
Saturday 09:00 – 09:45 Plenary Lecture	
Saturday 10:00 – 11:40 *ISLT* Information Systems / Learning Technologies (5art)	Saturday 10:00 – 11:40 *SCT* Smart Cities and Tourism (5art)
coffee break	
Saturday 12:00 – 13:40 *GVMVRHCI* Graphics, Visualization, Multimedia & VR / Human-Computer Interaction (5art)	Saturday 12:00 – 13:40 *HIB* Health Informatics and Bioinformatics (5art)
lunch	
Saturday 15:00 – 16:40 *AIMLDM II* Artificial Intelligence / Machine Learning / Data Mining II (4art)	Saturday 15:00 – 16:40 *HAES* Hardware & Architecture / Embedded Systems (3art)
coffee break	
Saturday 17:00 – 18:40 *SPS* Signal Processing / Security (4art)	
Saturday 20:00 – 22:00 *Banquet*	
Sunday 10:00 – 10:45 Invited Lecture	
Sunday 11:00 – 12:40 *AIMLDM III* Artificial Intelligence / Machine Learning / Data Mining III (4art)	

PCI2023 Accepted Papers Organized per Session

Authors	Title	SESSION
N. Karanikolas, E. Manga, N. Samaridi, E. Tousidou, M. Vassilakopoulos	Large Language Models versus Natural Language Understanding and Generation	Plenary Lecture
Nikos Chrisochoides CRTC/ODU Norfolk, Virginia, USA	Workforce Development in Quantum Information Sciences and Engineering	Invited Lecture
Maria Ioanna Maratsi, Charalampos Alexopoulos and Yannis Charalabidis	Team Radiant or Dire? Comparing the SVM and k-NN Classifiers upon a DotA2 Matches Dataset	AIMLDM I
George Kazazis, Christos Chronis, Christos Diou and Iraklis Varlamis	Development and evaluation of Reinforcement Learning models for the FOSSBot Open-Source educational robot	AIMLDL I
Nikolaos Giarelis, Charalampos Mastrokostas, Ilias Siachos and Nikos Karacapilidis	A Review of Greek NLP Technologies for Chatbot Development	AIMLDL I
Aikaterini Maria Kouti and Ioannis Refanidis	CPU and GPU Parallelism of the A* Algorithm on solving N-Puzzle problems	AIMLDL I
Georgios Giannakas, Maria Sapounaki, Vasileios Tsoukas and Athanasios Kakarountas	Exploring Pytorch's capabilities through autograd exploitation: A Reward Modulated Spiked Timing Depended Plasticity inspired algorithm applied on a MultiLayer Perceptron	AIMLDL II
Eleni Tsalera, Dimitrios Stratogiannis, Andreas Papadakis, Ioannis Voyiatzis and Maria Samarakou	Evaluation and Prediction of Resource Usage for multi-parametric Deep Learning training and inference	AIMLDL II
Petros Brimos, Areti Karamanou, Evangelos Kalampokis, Marios Mamalis and Konstantinos Tarabanis	Explainable Graph Neural Networks on Linked Statistical Data for Predicting Scottish House Prices	AIMLDL II
Marios Mamalis, Evangelos Kalampokis, Areti Karamanou, Petros Brimos and Konstantinos Tarabanis	Can Large Language Models Revolutionalize Open Government Data Portals? A Case of Using ChatGPT in statistics.gov.scot	AIMLDL II
Georgia Sovatzidi, Michael Vasilakakis and Dimitris Iakovidis	Automatic Fuzzy Cognitive Maps for Explainable Image-based Pneumonia Detection	AIMLDL III
Vaios Stergiopoulos, Eleni Tousidou and Antonio Corral	Recommender Systems based on Parallel and Distributed Deep Learning	AIMLDL III
Konstantinos Kelesidis, Nikoletta Fotopoulou and Dimitris Dervos	Correlation as an ARM Interestingness Measure for Numeric Datasets	AIMLDL III
Anastasia-Sotiria Toufa, Ioannis Tsingalis and Constantine Kotropoulos	DualGRETEL+: Exploiting Dual Hypergraphs for Path Inference Applied to Navigation Data	AIMLDL III
Nikolaos Pavlidis, Christos Chrysanthos Nikolaidis, Vasileios Perifanis, Anastasia Papadopoulou, Pavlos Efraimidis and Avi Arampatzis	An Extensive Overview of Feature Representation Techniques for Molecule Classification	HIB

Vaia Maragkou, Maria Rangoussi and Errikos-Chaim Ventouras	On the use of Event-Related Potentials as evaluation tools for the results of Speech-Language Therapy in patients with post-stroke aphasia: literature review	HIB
Dimitrios Markopoulos, Anastasios Tsolakidis, Nikitas Karanikolas, Aikaterini Marinagi and Christos Skourlas	Applying Soft System Methodology for a clearer understanding of the future Intensive Care Units	HIB
Stefanos Balaskas and Maria Rigou	The effects of emotional appeals on visual behavior in the context of green advertisements: An exploratory eye-tracking study	HIB
Fotios Panagiotopoulos, Leonidas Fragidis and Vassilios Chatzis	A Nurse Reallocation method for successful change management during Electronic Health Record systems implementations	HIB
Konstantinos Velenis, Maximos Kaliakatsos-Papakostas, Leandros Pasias and Emilios Cambouropoulos	Visualisations of Jazz Standards Derived from Transformer-based Multi-task Learning	GVMVRCCI
Stavroula Dritsa, Andreas Mallas and Michalis Xenos	Screen Reading Regions in Social Media Comments: An Eye-Tracking Analysis of Visual Attention on Smartphones	GVMVRCCI
Christos Katsanos, Georgios Melissourgos and Nikolaos Tselios	GR-UMUX and GR-UMUX-LITE: A First Step Towards Standardization of the Usability Metric for User Experience and its LITE Version in Greek	GVMVRCCI
Areti Tsolakidou, George E. Raptis, Christina Katsini and Christos Katsanos	Exploring the Impact of Cognitive Styles on the Visualization of Privacy Policies	GVMVRCCI
Elisavet Ampatzidou, Evmorfia Elpida Dasyra, Rafail Promikyridis and Efthimios Tambouris	Accessible Dialog System for Public Service Information Provision: The Case of Transportation Card for the Disabled	GVMVRCCI
Vasileios Periklis Psychogyios and Vassilis Kapsalis	Mobile Network of Air Quality Monitoring Sensors	HAES
Dimitra Doropoulou, Vasileios Angelopoulos, Petros Amanatidis, Thomas Lagkas and Dimitris Karampatzakis	Teaching Embedded Systems and IoT at the University using MicroPython and Pi Pico	HAES
Sokratis Kokkinos, Christos Mourgelas, Evangelia Micha, Emmanouil Chatzistavrakis and Ioannis Voyiatzis	Design and Implementation of Drones Charging Station	HAES
Stilianos Karagiannakis, Ioannis Theodoropoulos, Apostolos Anagnostopoulos and Basilis Mamalis	Smart Waste Management Using Microservices and Container-based Virtualization	IS
Michael Kalochristianakis, Eirilena Tsiaoussi, John Koliarakis and John Tsiaoussis	Online tours for a Museum of Medicine	IS
Yorghos Voutos, Stergios Palamas and Phivos Mylonas	Implementing a Modular Integrated System for Biodiversity Conservation and Promotion Using Web Technologies	IS
Anastasia Gasidou, Dimitrios Kotsifakos and Christos Douligeris	Specific modeling issues for designing the transformation of a smart city	IS

Georgia Kapitsaki and Maria Papoutsoglou	A privacy policies dataset in Greek in the GDPR era	IS
Theocharis Tavantzis, Rafail Promikyridis and Efthimios Tambouris	Towards exploiting BPMN and DMN in public service modeling	ISLT
Viktor Potapov and Gushanskiy Sergey	Development and Research of a Control Model Based on Noise-Immune Quantum Computing, Suppression and Correction of Errors in Quantum Computing	ISLT
Anastasia Terzi, Eleni Akritidou and Matina Bibi	Enhancing User Experience: Virtual Assistants in Greek University Helpdesk Service	ISLT
George Meletiou, Konstantinos Chytas, Nikos Lazaridis, Anastasios Tsolakidis, Catherine Marinagi and Christos Skourlas	Students' perceptions of distance examination in Higher Education	ISLT
Manos Garefalakis and Spyros Panagiotakis	Integration of a Remote Lab with a Learning System for training on Microcontroller programming	ISLT
Yannis Stamatiou, Constantinos Halkiopoulos and Hera Antonopoulou	A Generic, Flexible Smart City Platform focused on Citizen Security and Privacy	SPS
Fotios Roumpies and Athanasios Kakarountas	A Review of Homomorphic Encryption and its Contribution to the Sector of Health Services	SPS
Georgios Gerontakis, Panayiotis Yannakopoulos and Ioannis Voyiatzis	Evaluating Cybersecurity Certifications: A Framework for Extracting Educational Scenarios in Defense Training	SPS
Christos Korgialas and Constantine Kotropoulos	ON ROBUST ELECTRIC NETWORK FREQUENCY DETECTION USING HUBER REGRESSION	SPS
Ioanna Chatzopoulou, Paraskevi Tsoutsa and Panos Fitsilis	How Metaverse is Affecting Smart Cities Economy	SCT
Theodoros Karachalios, Panagiotis Moschos, Anastasios Fanariotis and Theofanis Orphanoudakis	EVALUATION OF CONTEMPORARY UAV-BASED MEASUREMENT TECHNIQUES FOR GAS EMISSIONS MONITORING	SCT
Stamatia Drampalou, Nikolaos Miridakis and Panagiotis Karkazis	Simulation of optimal methodologies for channel estimation in a MISO RIS-aided system	SCT
Loukas Xagoraris, Dimitrios Kogias and Panagiotis Karkazis	A Review of Zero Trust Security Framework (ZTF) for Sustainable and Resilient Smart Cities	SCT
Dimosthenis Margaritis, Dimitrios G. Kogias and Helen Leligou	An Indoor Mapping Scheme for BLE Beacon Based Navigation	SCT

Version 22-11-2023

Invited Lecture

Workforce Development in Quantum Information Sciences and Engineering

Nikos Chrisochoides
Center for Real-Time Computing (CRTC)
Old Dominion University (ODU)
Norfolk, Virginia, USA

Abstract: Identifying use cases with quantum advantage and training or upskilling the workforce is as challenging as building the hardware/software stack for quantum computing. This talk aims to initiate a dialogue for workforce development in Quantum Information Sciences and Engineering (QISE). The objective is to identify use cases with possible quantum advantage –in areas where CRTC can contribute–and develop project-driven learning activities for graduate students. In addition, to help build a steady pipeline of skilled students, create learning-by-doing activities for undergraduates inside and outside the classroom. The vision of the QISE workforce development initiative at ODU is to create an environment for students to choose a degree that gives them a solid basis in their discipline while providing options in QISE. Examples of project-driven learning activities for graduate and undergraduate students will be described in the context of ongoing research projects at CRTC and students' interests.

Short Bio: Nikos Chrisochoides is the Richard T. Cheng Endowed Chair Professor of Computer Science and Eminent Scholar at Old Dominion University. In addition, he is a John Simon Guggenheim Fellow in Medicine & Health in the US and Canada, and he was elected a Nuclear Femtography Fellow in the US and Distinguished Visiting Fellow in the Royal Academy of Engineering in the UK. Nikos received his Ph.D. in 1992 from Computer Science at Purdue University. From 1992 to 1997, he worked in Upstate NY, where he was the inaugural Alex Nason Fellow at Northeast Parallel Architectures Center in Syracuse and a Research Scientist at the Advanced Computing Research Institute at Cornell University. In 1997, he joined the Computer Science & Engineering Dept. at Notre Dame, where he received his NSF CAREER Award. In 2000, he joined the College of William and Mary, where he was awarded the Alumni Memorial Professorship. He has held visiting positions at MIT, Harvard Medical School, and Brown University. He participated as PI, Co-I, and Senior Personnel on projects with more than $16 million (with more than $10M as a PI) in high-performance scientific and medical image computing, and he has about 250 publications.