Conference Program

Athens, Greece
December 8-10, 2019

Conference Location:

TITANIA HOTEL
Panepistimiou 52, Athens 10678, Greece
https://www.titania.gr/

Sunday 8th December 2019

17:00-19:00 Conference Registrations

19:00-20:00 Welcoming Drink

Monday 9th December 2019

Conference Room: A
Time: 08:45-09:00
Welcome and opening speech

Conference Room: A
Time: 09:00-09:30
Plenary Lecture:

Recent R&D on Sustainable Energy: New AI Wake Models with vs Full-rotor CFD Predictions
by Professor Ng Yin Kwee
School of Mechanical and Aerospace Engineering,
Nanyang Technological University,
SINGAPORE.

Conference Room: A
Time: 09:30-10:00
Plenary Lecture:

Beyond Fifth Generation 5G Mobile Network Technology Enablers
by Professor Zoran Bojkovic
School of Electrical Engineering,
University of Belgrade,
Belgrade, SERBIA.

Monday 9th December 2019

Conference Room: A
Time: 10:00-10:30
Plenary Lecture:

Basic Principles of the Planning of Cybersecurity Training
by Professor Roumen Ivanov Trifonov
Faculty Computer Systems and Technologies,
Technical University of Sofia,
Sofia, BULGARIA.

10:30-11:00: Group Photos & Coffee Break

Monday 9th December 2019

Conference Room: A
Time: 11:00-13:00
Title: Electronics, Systems, Signal Processing and Applications of Computers
Chair: Zoran Bojkovic, Emmanuel Paspalakis

Comparison of Artificial Neural Network Controller and Pid Controller in on Line of Real Time Industrial Temperature Process Control System	Abdulgani Albagul, Hafed Efheij, Beleid Alsharif
Simulation of Quantum Interference and Non-Markovian Emission Dynamics Induced by Localized Exciton-polaritons	Ioannis Thanopulos, Vasilios Karanikolas, Emmanuel Paspalakis
High Efficiency Video Coding HM-16.20 Vs HM-16.18 Comparison for B Frame Processing	Zoran Milicevic, Zoran Bojkovic
Optical Control of Initialization of a Quantum Dot in the Voigt Geometry near a Graphene Layer	Dionisis Stefanatos, Vasilios Karanikolas, Nikos Iliopoulos, Emmanuel Paspalakis
Quality Management System and Risk Estimate in Automotive Industry	Ioan Enescu
Forensic Science Experimental Investigation over the Victim's Behaviour in Road Events	Crauciuc Daniel, Sifft Michael, Thierheimer Walter Wilhelm, Alexandru Cătălin, Thierheimer Alexandru
Design and Performance Comparison of CNN Accelerators based on the Intel Movidius Myriad2 Soc and FPGA Embedded Prototype	Angelos Kyriakos, Elissaios-Alexios Papatheofanous, Bezaitis Charalampos, Evangelos Petrongonas, Dimitrios Soudris, Dionysios Reisis
5G Mobile Networks: What is Next?	Dragorad Milovanovic, Zoran Bojkovic
The Effectiveness of the Piecewise Monotonic Approximation Method for the Peak Estimation of Noisy Univariate Spectra	Ioannis Demetriou, Ioannis Perdikas
Development of Safety Requirements for Tracking Active Pilot Controls by Signals from an Automatic Flight Control System	Artem Savelev, Evgeny Neretin

Monday 9th December 2019

Conference Room: A
Time: 13:00-15:00
Title: Control and Robotics
Chair: Ivan Ganchev, Jae Hoon Lee

Collision-free Navigation using Laser Scanner and Tablet Computer for an Omni-Directional Mobile Robot System with Active Casters	Jae Hoon Lee, Katsunori Danaka, Shingo Okamoto
A Generic Multi-service Cloud-based IoT Operational Platform EMULSION	Ivan Ganchev, Zhanlin Ji, Mairtin O'Droma
Fluid Flow Sensors Design based on Electromagnetic Drag Effect	Kirill Zeyde, Vadim Sharov
Obstacle Avoidance Navigation using Horizontal Movement for a Drone Flying in Indoor Environment	Shinya Kawabata, Jae Hoon Lee, Shingo Okamoto
Experimental Evaluation of Adhesion Plate and Development of Novel Drone Capable of Adhering to Ceiling and Wall	Kodai Nohara, Jae Hoon Lee, Shingo Okamoto
Mechanical Geometry of a Self-adaptive Prehensor with 2 or more Fingers	Cezar-Ioan Frincu, Ioan Stroe
Development Methodology of Reconfigurable Robotic Systems. Application to BROS Project	Mohamed Oussama Ben Salem Olfa Mosbahi
STE Fitness Function Design for GP Symbolic Regression: Preliminary Study	Radomil Matousek, Tomas Hulka, Ladislav Dobrovsky, Jakub Kudela

15:00-15:30: Coffee Break

Monday 9th December 2019

Conference Room: A
Time: 15:30-17:30
Title: Artificial Intelligence
Chair: Francisco Gallego Lupianez, Ashkan Tashk

Filters in Michálek's Fuzzy Topological Spaces	Francisco Gallego Lupianez
Developing a System Dynamics Model for Creating a Learning Sustainable Mobility Culture	George Papageorgiou, Gregoris Demetriou
Accurate Object Detection System on HoloLens using YOLO Algorithm	Haythem Bahri, David Krcmarık, Jan Koc
Fully Automatic Polyp Detection based on a Novel U-Net Architecture and Morphological Post-process	Ashkan Tashk, Jürgen Herp, Esmaeil Nadimi
A Comparative Study of Machine Learning Approaches on Learning Management System Data	Dijana Oreški, Goran Hajdin
Dynamic Mixture Ratio Model	Marko Ruman, Miroslav Karny
Evaluating Particulate Matter (PM2.5 and PM10) Impact on Human Health in Oman based on a Hybrid Artificial Neural Network and Mathematical Models	Nebras Alattar, Jabar H. Yousif
Variable Complexity Neural Networks Comparison for Pollen Classification	Aysha Kadaikar, Yan Pan, Qiaoxi Zhang, Patricia Conde-Cespedes, Maria Trocan, Frederic Amiel, Benjamin Guinot
Urban Residential Land Price Appraisal via Quantifying Impact Factors based on Deep Belief Networks	Hua Ai, Qiang Liu, Yuxin Jiang, Ran Yang
Application of Bayesian Artificial Neural Networks for Modeling the Dependence of Nickel-based Superalloys Ultimate Tensile Strength on their Chemical Composition	Dmitry Tarasov, Oleg Milder, Andrey Tyagunov
Artificial Intelligence in Audit and Accounting: Development, Current Trends, Opportunities and Threats - Literature Review	Aneta Zemankova
Forecasting Corporate Revenue by using Deep-learning Methodologies	Kostadin Mishev, Ana Gjorgjevikj, Irena Vodenska, Ljubomir Chitkushev, Wataru Souma, Dimitar Trajanov

Monday 9th December 2019

Conference Room: A
Time: 17:30-19:30
Special Session Title: Advanced Image Processing Methods in Smart Cities
Chair: Mátyás Szántó

Improving Positron Emission Tomography with Guided Filtering	Dóra Varnyú, László Szirmay-Kalos
Attention-based Curiosity in Multi-agent Reinforcement Learning Environments	Marton Szemenyei, Patrik Reizinger
Multi-object Detection in Urban Scenes Utilizing 3D Background Maps and Tracking	Örkény Zováthi, Lóránt Kovács, Balázs Nagy, Csaba Benedek
Motion based Masking of a Moving Vehicle's Environment	Tamás Mészégető, Benedek Tass, Mátyás Szántó
Compressing Convolutional Neural Networks by L0 Regularization	András Formanek, Dániel Hadházi
Introducing CrowdMapping: A Novel System for Generating Autonomous Driving Aiding Traffic Network Databases	Mátyás Szántó, László Vajta

20:00: Conference Dinner

Tuesday 10th December 2019

Conference Room: A
Time: 09:00-09:30
Plenary Lecture:

Some Theoretical and Numerical Aspects of the Numerical Simulation of Three-dimensional Free-Surface Flows in Complex Geometries
by Professor Giovanni Cannata
Department of Civil Construction and Environmental Engineering
Sapienza University of Rome
Rome, ITALY.

Conference Room: A
Time: 09:30-10:00
Plenary Lecture:

Study Regarding Irrigations of Lands without Energy Consumption
by Professor Badea Lepadatescu
Faculty of Technological Engineering and Industrial Management,
Transylvania University of Brasov,
Brasov, ROMANIA.

Tuesday 10th December 2019

Conference Room: A
Time: 10:00-10:30
Plenary Lecture:

Infrared (IR) Thermography as a Potential Screening Modality for Carotid Artery Stenosis
by Professor Ng Yin Kwee
School of Mechanical and Aerospace Engineering,
Nanyang Technological University,
SINGAPORE.

Conference Room: A
Time: 10:30-11:00
Plenary Lecture:

Thermomechanical Analysis of Copper-shelled 3-d Printed Electrodes
by Professor John Kechagias
Laboratory for Manufacturing Processes and Machine Tools of the General Department,
University of Thessaly,
GREECE.

11:00-11:30: Coffee Break

Tuesday 10th December 2019

Conference Room: A
Time: 11:30-13:30
Title: Fluid Dynamics in Energy and Environment
Chair: Ng Yin Kwee, Badea Lepadatescu

Computational Fluid Dynamics: A Technique to Solve Complex Biomedical Engineering Problems - A Review	Mohamed Yacin Sikkandar, Natteri M. Sudharsan, S. Sabarunisha Begum, E. Y. K. Ng
Increased Market Transparency in Germany's Gasoline Market: What about Rockets and Feathers	Manuel Frondel, Marco Horvath, Colin Vance, Alexander Kihm
Studies Regarding Developing an Energy Saving Program	Ioan Ghimbaseanu
Capabilities of Four Microorganisms for Bioremediation of Lead Contaminated Soil	Edobor Kingsley Osaigie
An Unsteady Stall-delay Methodology for Floating Offshore Wind Turbines	Abdulqadir Aziz Singapore Wala, Eddie Y. K. Ng, Anand Bahuguni, Narasimalu Srikanth
Studies Regarding the Deficiencies of Bearings in the Field of Limited Speeds	Bolfa Traian Eugen

Tuesday 10th December 2019

Conference Room: A
Time: 13:30-15:30
Title: Fluid Mechanics and Heat Transfer
Chair: Giovanni Cannata, Francesco Gallerano

Nanostructure of Fluids and Diagram of Fluctuation Transitions in Supercritical Heterogeneous Non-gibbsian Phases	Rogankov V. B., Rogankov O. V., Shvets M. V.
Transfer Phenomena in Non-Darcy Bidisperse Porous Media	Teodor Grosan, Ioan Pop, Flavius O. Patrulescu
A 3D Numerical Model for Turbidity Currents	Giovanni Cannata, Luca Barsi, Marco Tamburrino
Supercritical Heterogeneous Nanostructure of Fluids Its Potential Impact on Creation of Coupled Stirlings with Intermediate Regeneration of Heat	Rogankov V. B., Rogankov O. V., Shvets M. V.
Numerical Simulation of the Sea Bottom Modifications behind a T-head Groin	Marco Tamburrino, Francesco Gallerano
Numerical Simulation of MHD Natural Convection Flow in a Wavy Cavity Filled by a Hybrid Cu–Al_2O_3/Water Nanofluid with Discrete Heating	Cornelia Revnic, Radu Trîmbiţaş
Boundary Conditions for the Simulation of Wave Breaking	Benedetta Iele, Federica Palleschi, Francesco Gallerano

15:30-16:00: Coffee Break

Tuesday 10th December 2019

Conference Room: A
Time: 16:00-18:00
Title: Techniques of Optimazation and Neural Networks
Chair: Karlheinz Spindler, John D. Kechagias

Explicit Calculation of Reachable Sets to Illustrate Concepts in Optimal Control	Lilija Naiwert, Karlheinz Spindler
On Modeling of Surface Roughness Parameters during Poly-Jet 3D Printing	Kyriaki-Evagelia Aslani, Foteini Vakouftsi, John D. Kechagias
On Soundness of Various Inference Rules for Vague Functional Dependencies	Dzenan Gusic, Sanela Nesimovic, Zenan Sabanac
Klir-Yuan Fuzzy Implication in Fuzzy Relations	Sanela Nesimovic, Dzenan Gusic
Finding the Shortest Paths in Izmir Map by using Slime Molds Images	Tayfun Topuzoglu, Gulden Kokturk, Didem Akyol Altun, Aylin Sendemir, Ozge Andic Cakır, Ayca Tokuc, Feyzal Avcı Ozkaban
Discrete Gradation Surfaces Computation in Electrophotography	Dmitry Tarasov, Oleg Milder
On Certain Properties of Vague Relational Databases	Dzenan Gusic, Sanela Nesimovic, Zenan Sabanac
Bioportal Ontologies Integration with SNOMED CT, RxNORM & GO Datasets	Artemis Chaleplioglou, Sozon Papavlasopoulos, Marios Poulos
Discrete Gradation Trajectories Computation in Electrophotography	Dmitry Tarasov, Oleg Milder
Multi-attribute Group Decision Making Method based on Possibility Degree of Trapezoidal Interval Type-2 Intuitionistic Fuzzy Number	Sukhveer Singh
Fuzzynet: Context Encoding and Spatial Fuzzy Refinement Network in Semantic Segmentation	Ariyo Oluwasanmi, Ebere Eziefuna, Favour Ekong, Edward Baagyere, Zhiguang Qin