

Wednesday, July 6th, 14:30-15:50

Room : NAOUSSA

MINI SYMPOSIUM
Medical Physics and Imaging
Organizer: Medical Radiation Physics Network (University Of Patras)
IMAGE ANALYSIS I

Chairmen: Spyrou G., Karahaliou A.

- 14:30-14:50** “Optical Coherence Tomography – Image Analysis and Processing Methods: A Review”
Tsantis S.
- 14:50-15:10** “Selection of Optimal Parameters for Volumetric CT Lung Image Registration”.
Vlachopoulos G., Korfiatis P., Mariolis I., Kazantzi A. Costaridou L.
- 15:10-15:30** “Quantitative Evaluation of Compressed Mammograms”.
Georgiev V., Arikidis N., Karahaliou A., Skiadopoulos S., Costaridou L.
- 15:30-15:50** “Assessment of a CAD System for Diffuse Disease Patterns in Volumetric CT of the Lung”
Skiadopoulos S., Kazantzi A., Korfiatis P., Karahaliou A., Kalogeropoulou C., Costaridou L.

Wednesday, July 6th 14:30-15:50

Room : EDESSA

OPTIMIZATION METHODOLOGIES

Chairmen: Zu J.W., Tsalhis J.

- 14:30-14:50** “Evolutionary Design of a Genetic Based Self Organizing Neural Network for Wind Speed Prediction”
Pappas S., Chatzarakis G., Moussas V., Pournaras N.
- 14:50-15:10** “A Blocking Model with Bundling Effects Respecting Multiple Od-Matrices”
Voll R., Clausen U.
- 15:10-15:30** “Optimization of Characteristics of 700 V Double Resurf LDMOS Using Charge Density Balance”
Yoo J., Hitek D., Kim J., Byeon J., Jung W.
- 15:30-15:50** “Development of a New Constrained Multiobjective Optimization Algorithm through Integrating Artificial Immune Systems and Stochastic Ranking”
Xiao H., Zu J.W.

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Room : KOZANI

ENVIRONMENTAL & RENEWABLE ENERGIES MECHANICS

Chairmen: Bayeul-Laine A.-C., Stergiopoulos V.

- 14:30-14:50** “Archimedes in Euripos: Towards Innovative Floating Archimedean Kinetic Energy Conversion Systems”
Stergiopoulos V., Stergiopoulou A., Kalkani E., Chronopoulos Ch., Papadopoulou D.
- 14:50-15:10** “Towards a Solution for the ‘GLAS’ Hydrodynamic Effect Problem of the Greek Lakes”
Stergiopoulos V., Stergiopoulou A., Papadopoulou D., Chronopoulos Ch.
- 15:10-15:30** “Numerical Simulation in Vertical Wind Axis Turbine with Pitch Controlled Blades”
Bayeul-Laine A.-C., Dockter A., Bois G., Simonet S.
- 15:30-15:50** “Energy Study of the Flat Plate Solar Thermal Collectors in their Transitory Operation during the Summer Season”
Maraj A., Lamani A., Shtjefni A., Fundo A.

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MINI SYMPOSIUM
Medical Physics and Imaging
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IMMAGING AND THERAPEUTIC MODALITIES 1

Chairmen: Skiadopoulos S., Delis H.

- 16:20-16:40** “Peripheral Dose Measurements in Patients Undergoing Radiotherapy Treatment Using MOSFET Dosimeters”
Vlachopoulou V., Malatara G., Kardamakis D., Delis H., Panayiotakis G.
- 16:40-17:00** “Radiation Dose to the Thyroid of the Patient Using Esophagogram”
Ladia A., Messaris G., Fitousi N., Antzele P., Panayiotakis G.
- 17:00-17:20** “A Simulation Tool for the in Silico Evaluation of Synchrotron Radiation in Breast Imaging”
Fitousi N., Delis H., Spyrou G., Panayiotakis G.
- 17:20-17:40** “A Method for Assessing Radiation Dose During Pediatric MAG3 Renal Scans”
Letsas V., Delis H., Apostolopoulos D., Skouras T., Panayiotakis G.

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Room : EDESSA

ENGINEERING APPLICATIONS – SESSION I

Chairmen: Synylo K., Jeon S.

- 16:20-16:40** “Low-Power High Performance Computing”
Kritikakos P.
- 16:40-17:00** “Modeling and Measurement of Aircraft Engine Emissions inside the Airport Area”
Synylo K.
- 17:00-17:20** “Acoustic Performance of Splitter Silencers for Ventilation Ducts”
Jeon S., Hong C., Jeong W.
- 17:20-17:40** “Seismic Protection of Monuments Using Isolation Bearings”
Kakavas P., Kontoni D.-P., Severin C., Anifantis N.

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ENGINEERING APPLICATIONS – SESSION II

Chairmen: Kakavas P., Petrellis N.

- 16:20-16:40** “A Post-Processing Module for Improving the Signal to Noise and Distortion Ration of Pipeline A/D Converters”
Petrellis N. Adam G., Ventzas D.
- 16:40-17:00** “A Novel Nonlinear, Dynamic and Time Varying Model for Arc Furnace”
Sharifi Z., Samet H., Farjah E.
- 17:00-17:20** “Experimental and Simulation Study of Microfine Cement Properties in Comparison to Ordinary Cement”
Kontoleontos F., Kaloidas V., Tsakiridis P., Katsiotis N., Marinos A., Katsioti M.
- 17:20-17:40** “Numerical Simulation of the Favourable and Adverse Effects of Fenestration Characteristics on the Transient Heating Energy Consumption of Buildings”
Tzivanidis C., Antonopoulos K., Gioti F.

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MINI SYMPOSIUM

Medical Physics and Imaging

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MEDICAL DETECTORS

Chairmen: Gaitanis A., Liaparinos P.

- 09:30-09:50** “Investigating the Energy Dependence of Intrinsic Conversion Efficiency of Phosphor Materials through Analytical Models”
Kalyvas N., David S., Michail G., Liaparinos P., Fountos G., Valais I., Kandarakis I.
- 09:50-10:10** “Evaluation of a 4x4 Sipm Array Based on a Symmetric Resistive Voltage Division Readout for PET Probe Applications”
Paipais T., Kefalidis L., David S., Georgiou M., Fysikopoulos E., Kandarakis L., Loudos G.
- 10:10-10:30** “Evaluating and Comparing the Imaging Performance of Direct and Indirect x-ray Converters for Applications in Digital Mammography”
Serdaris A., Liaparinos P., Kandarakis I.
- 10:30-10:50** “Simulating the Imaging Performance of PET Scanner Using the Gate Monte Carlo Toolkit”
Karpetas G., Michail C., Samartzis A., Fountos G., Loudos G., Kandarakis I., Panayiotakis G.

Thursday, July 7th

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Room : EDESSA

MATHEMATICAL MODELLING

Chairmen: Veeraklaew T., Tsigopoulos A.

- 09:30-09:50** “Active Gimbals Control: Case Study on a Two-Points-Boundary-Value Problem”
Veeraklaew T., Jaidee K., Loungthongkam A.
- 09:50-10:10** “Mathematical Modeling and Optimization of Piezoelectric Generator of Nanostructured Piezoceramic”
Lupeiko T., Nasedkin A., Nasedkina A.
- 10:10-10:30** “Bayesian Estimation of the Performance of Gamma Gamma Free Space Optical Channels”
Nistazakis H., Tsigopoulos A., Haniias M., Katsis A., Tombras G.
- 10:30-10:50** “Using a Technique of Identification for Unknown Sinusoidal Disturbances”
Maddi A., Guessoum A., Berkani D.

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Room : KOZANI

AIRCRAFT TRAFFIC MANAGEMENT

Chairmen: Sanchez M., Tsahalidis H.-T.

- 09:30-09:50** “Reliability of Conflict Detection in Self-Separating Air Traffic”
Mejzlik P., Sopata M., Casek P.
- 09:50-10:10** “Validation of RNAV Procedures”
Garcia Saez J.
- 10:10-10:30** “A Flow-Based Hub Location Model with Capacity Levels”
Sender J., Clausen U.
- 10:30-10:50** “Emerging Behaviours and Propagation Patterns in Air Transport Networks”
Sanchez M., Etxebarria I.

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MINI SYMPOSIUM
Medical Physics and Imaging
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RADIATION DOSIMETRY

Chairmen: Fountos G., Kalyvas N.

- 11:20-11:40** ““In-Vivo” Dosimetry in Field Junction Area for Various Radiotherapy Treatments”
Diamantopoulos S., Thalassinou S., Efstathopoulos E., Dilvoi M., Tolia M., Giannopoulou A., Nazos I., Pantelakos P., Koulolias V., Platoni K.
- 11:40-12:00** “Radiation Exposure of the Operator During Cardiac Catheter Ablation Procedures”
Pantos I., Koukorava C., Nigrianaki E., Carinou E., Tzanalaridou E., Efstathopoulos E., Katritsis D.
- 12:00-12:20** “Comparison of Patient Doses between 3D and Conventional Hysterosalpinography”
Charalabatou P., Tsalafoutas I., Kelekis D., Antonakos I., Kelekis A., Efstathopoulos E.
- 12:20-12:40** “Patient Radiation Doses in Multislice ET Examinations and Assessment of Overscan Contribution”
Thalassinou S., Pantos I., Brountzos E., Katritsis D., Spandonis I., Tsalafoutas I., Varsamidis A., Panayiotakis G., Efstathopoulos E.

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Room : EDESSA

ENVIRONMENTAL & ENERGY MANAGEMENT

Chairmen: Huang C.-H., Shan P.-L.

- 11:20-11:40** “Measurement of Energy Efficiency: A New Economic Indicator”
Yang C.-W., Huang C.-H.
- 11:40-12:00** “Air Pollutant Dispersion in an Urban Environment Using CFD”
Papadakis I., Nikolopoulos N., Nikas K.-S.
- 12:00-12:20** “Decomposition of Sectoral CO₂ Emission and its Linkage to Policy Instruments”
Shan P.-L., Huang C.-H.
- 12:20-12:40** “Dividends of Environmental Tax with Endogenized Time and Medical Expenditures”
Chou W.L., Huang C.-H., Wu T.U.

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Room : KOZANI

LIFTING SURFACE MECHANICS

Chairmen: Svacek P., Tsahalis D.

- 11:20-11:40** “Comparative Analysis of the Simp and Level Set Optimization Methods on Example of Reconstruction of the Flying Insect Wing Topology ”
Shevstova V., Shevstova M., Zhilyaev I.
- 11:40-12:00** “On Approximation of an Aeroelastic Problem with Consideration of Nonlinear Effects”
Svacek P.
- 12:00-12:20** “Experimental Investigation of the Flow Field of a Backward Facing Step Under Forced Flow Conditions via PIV and POD Analysis”
Kapiris P., Mathioulakis S.

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MINI SYMPOSIUM
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IMAGING AND THERAPEUTIC MODALITIES 2

Chairmen: Valais I., Efstathopoulos E.

- 14:30-14:50** “Saccadic Movement Identification Using Signal Processing Techniques”
Korda A., Asvestas P., Matsopoulos G., Ventouras E., Cavouras D., Ktonas P., Smyrnis N.
- 14:50-15:10** “Comparison of Two Angiographic Systems of Different Image Capture Technology Utilized for Interventional Cardiology Procedures”
Kordolaimi S., Salvara A., Antonakos I., Tsalafoutas I., Broutzos E., Efstathopoulos E.
- 15:10-15:30** “High Speed Transferred Pixel with a Multi-Pinchoff Photodiode for Wafer-Level X-Ray Sensor”
Byeon J., Kim J., Yoo J., Jung W.-Y.

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Room : EDESSA

FLOW SIMULATION FOR INDUSTRIAL ENGINEERING OPTIMIZATION
Invited Session – Organizer : Prof. Dionysios Margaris

Chairmen: Margaris D., Tsalhalis D.

- 14:30-14:50** “Experimental Investigation of an Air-Lift Pump lab-Scale Installation”
Androulakis D., Vlachos A., Mitkas K., Margaris D.
- 14:50-15:10** “Comparing Analytical and Computational Solutions of Flow and Heat Transfer in a Porous Structure”
Avgerinos N., Margaris D.
- 15:10-15:30** “Computational Study of Two-Phase Separation through T- Junctions (90° & 45°)”
Drosos S., Margaris D.
- 15:30-15:50** “Experimental Study in a Centrifugal Pump with Double-Arc Synthetic Blade Design Method in Cavitating and Non-Cavitating Conditions”
Kyparissis S., Margaris D.

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THE ADOSE (car radar for safety) AND CRESCENDO (virtual aircraft) EC Projects
Organized by: PARAGON S.A.

Chairmen: Tsalhalis J., Tsalhalis H.-T.

- 14:30-14:50** “Improved Automobile Radar Detection and Tracking of Vulnerable Road Users”
Moussas V., Tsalhalis J., Tsalhalis H.-T.
- 14:50-15:10** “Enhanced Object Detection and Classification for Advanced Driver Assistance Systems”
Tsalhalis J., Moussas V., Tsalhalis H.-T.
- 15:10-15:30** “Design of a Human Response Model for Comfort for Aircraft Cabin Design”
Tsalhalis J., Tsalhalis H.-T., Moussas V.
- 15:30-15:50** “Design of a Fault Detection and Prediction Tool for Aircraft Electrical Network Validation and Verification”
Tsalhalis H.-T., Tsalhalis J., Moussas V.

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MINI SYMPOSIUM

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MEDICAL IMAGE ANALYSIS 2

Chairmen: Loudos G., Glotsos D.

- 16:20-16:40** “Wavelet-based De-Noising for Improving the Segmentation Accuracy of the Markov Random Field Model in Microarray Experiments”
Magiati M., Athanassiadis E., Cavouras D.
- 16:40-17:00** “Prediction of Brain Tumours Grade Using Minimum Spanning Trees”
Maneas E., Konstantinou C., Kostopoulos S., Ravazoula P., Cavouras D., Glotsos D.
- 17:00-17:20** “Proteomic Ms-Spectra Analysis for Classification of Cancerous Prostate Cases”
Siderakis D., Kostopoulos S., Glotsos D., Cavouras D.
- 17:20-17:40** “Segmentation and Classification of Histopathology Images for Abetting Diagnosis in Urinary Bladder Cancer”
Siderakis D., Kostopoulos S., Glotsos D., Ravazoula P., Cavouras D.

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NUMERICAL & EXPERIMENTAL FLUID MECHANICS

Chairmen: Zhou Y., Mathioulakis D.

- 16:20-16:40** “Unsteady Minijet-Controlled Jet Flame”
Zhang P., Zhou Y.
- 16:40-17:00** “Simulation of Heavy Rain Flow Over a NACA0012 Airfoil”
Douvi E., Margaris D.
- 17:00-17:20** “Control of Boundary Layer Separation by Injection into the Flow Around a NACA0012 Airfoil”
Kapsalis P.-Ch., Vlachos N.
- 17:20-17:40** “Gas Flow in Micro Channels in the Slip and Early Transition Regimes: Measurements and Comparisons with Kinetic Theory of Gases”
Kaparianos G., Misdanitis S., Mathioulakis D., Valougeorgis D.

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NUMERICAL FLUID MECHANICS – SESSION I

Chairmen: Hatzikonstantinou P., Margaris D.

- 16:20-16:40** “Magnetohydrodynamic Flow of a Liquid Metal between Vertical Isothermal Rotating Cylinders”
Bakalis P., Hatzikonstantinou P., Vafeas P.
- 16:40-17:00** “Swirl Number Effect on the Turbulent Flow Structure in a Cylinder-on-Cone Cylinders”
Wang X.-W., Zhou Y., Wong W.-O.
- 17:00-17:20** “Numerical Investigation of Hydrogen/Air Proton Exchange Membrane (PEM) Fuel Cell”
Mprezas F., Nikas K.-S.
- 17:20-17:40** “Numerical Study of Conjugate Heat Transfer in a Computer Chassis”
Panagiotou A., Nikas K.-S.

Friday, July 8th 09:30-10:30 **Room : NAOUSSA**

NUMERICAL FLUID MECHANICS – SESSION II

Chairmen: Skouras E., Moussas V.

- 09:30-09:50** “Rarefied Transport Phenomena in Digitally Reconstructed Media ”
Michalis V., Kalarakis A., Skouras E. Burganos V.
- 09:50-10:10** “A Fast and Robust Method for Solving the Mass-Balance Equation in Phase Equilibrium Calculations ”
Gaganis V.
- 10:10-10:30** “Nonlinear Modeling of Droplet Detachment in Laser Metal Droplet Generation”
Jeromen A., Govekar E.

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MECHANICS OF COMPOSITE STRUCTURES

Chairmen: Zaoutsos S., Andersons J.

- 09:30-09:50** “Nonlinear Relaxation Behavior of Carbon Epoxy Composites Under Multistep Loading Mode”
Zaoutsos S.
- 09:50-10:10** “Tensile Strength Model of UD Flax Fiber Reinforced Polymer Composites”
Andersons J.
- 10:10-10:30** “Equivalent Finite Element Vibration Analysis of Complex 5-Layered Sandwich Beam with Viscoelastic Layer and Thickness Optimization”
Bae S.-H., Jeong W.-B.

Friday, July 8th 11:00-12:00 **Room : NAOUSSA**

MODELLING AND OPERATIONAL RESEARCH

Chairmen: Tsahalis H.-T., Puntero E.

- 11:00-11:20** “Novel Techniques for Early Operational Concept Validation”
Koolloos M., Sanchez M., Casar R.
- 11:20-11:40** “Operational Concept Validation Model Based on Performance Assessment Allowing Continuous Outcome Monitoring”
Puntero E., Garcia A., Suarez N.
- 11:40-12:00** “Overall Vehicle Simulation for Real World Data”
Knoll G., Reisinger K., Vazquez R., Mathis C., Steinhuber A.

Friday, July 8th 11:00-12:00 **Room : EDESSA**

STRUCTURAL MECHANICS

Chairmen : Ameduri S., Belardo M.

- 11:00-11:20** “In-Flight Loads Evaluation by Means of Strain Measurements: A Numerical Case Study”
Belardo M., Paletta N.
- 11:20-11:40** “Single Slotted Flap SMA-Based Morphing Architecture: Feasibility Study and Preliminary Design”
Ameduri S., Concilio A.
- 11:40-12:00** “Flutter Analysis of Novel Wing Configuration”
Gapunti K.