

Wednesday, July 5th, 14:30-15:50

Room : MYSTRAS

**"WIRELESS COMMUNICATIONS SYSTEMS: FROM RESEARCH TO
IMPLEMENTATION IN MODERN AND FUTURE NETWORKS"**

INVITED SESSION

Organized by: Prof. H.E. Nistazakis

NATIONAL & KAPODISTRIAN UNIVERSITY OF ATHENS, GREECE

Chairmen: Nistazakis H.-E., Tzanakaki A.

- 14:30-14:50** "Eight Transmitter-Short Range Indoor VLC Systems Using Spatial Modulation Technique of Enhanced SSK with Variable Pulse Width and Correlated Channel Conditions"
Maganaris K.N., Nistazakis H.E., Stassinakis A., Tzanakaki A., Mikrttchian G., Tombras G.
- 14:50-15:10** "An Extended Version of Computational Tool for Performance Estimation of FSO Systems Over Turbulence Channel with Point Errors and Ambient Light Effect"
Katsilieris D.T., Latsas P.G., Nistazakis H.E., Tzanakaki A., Tombras G.S.
- 15:10-15:30** "Synchronization of Hyperchaotic Hyperjerker Circuits with Application in Secure Communication"
Daltzis P., Volos Ch., Nistazakis H.E., Tzanakaki A., Tombras G.S.
- 15:30-15:50** "Study and Simulation on Performance of a Vlc Communication System"
Menounou S., Stassinakis A.N., Nistazakis H.E., Tzanakaki A., Sandalidis H.G., Tombras G.S.

Wednesday, July 5th 14:30-16:10

Room : SPARTI

"ENVIRONMENTAL ENGINEERING"

Chairmen: Panidis Th., Tzivanidis Ch.

- 14:30-14:50** "Experimental Investigation of a Real-Life Microscale Trigeration System Using Adsorption Cooling, Reversible Heat-Pump and a Cogeneration Unit"
Sawant P., Pfafferoth J.
- 14:50-15:10** "Thermal Analysis of a Building in Athens with Phase Change Materials in Roof Using Simulation Program TRNSYS 17"
Plytaria M., Tzivanidis Ch., Bellos E., Antonopoulos K.
- 15:10-15:30** "Analytical Expression for Thermal Efficiency Coefficiency of Parabolic through Collectors"
Bellos E., Tzivanidis Ch., Plytaria M.
- 15:30-15:50** "Development of a Waste Heat Recovery System from Exhaust Gas of a Diesel Genset for a Stirling Engine Heat Input"
Woo Y., Jang I., Chung D.H., Choi J.J.
- 15:50-16:10** "Experiments Study of a Diesel Oil Spray Injecting at High Pressures"
Vouros A., Vouros Al., Souliotis M., Panidis Th.

Wednesday, July 5th 16:20-18:00

Room : MYSTRAS

**“ADVANCES IN AERONAUTICAL INFORMATION TECHNIQUES”
INVITED SESSION**

Organized by : Prof. I. Koukos
HELLENIC NAVAL ACADEMY

Chairmen: Koukos I., Mantzouris G.

- 16:20-16:40** “Tropospheric Propagation Modeling in the Modern Air Defence Environment”
Papastamatis Th, Koukos I.
- 16:40-17:00** “PCL Implemented as a Multistatic Radar Network with Radiobeacons Emitting LPI Signals”
Koukos I., Ioannou K., Tsolis G., Dessalermos S.
- 17:00-17:20** “Metamaterials and Stealth Technology”
Ioannou K., Koukos I.
- 17:20-17:40** “Tactical C² Networks with Real Time Node Transceivers Implemented with Embedded SDR’s”
Koukos I., Pothitos M.
- 17:40-18:00** “The Rapid UAV Evolution: From Simple RC to Haptic to Fully Robotic Autonomous Operation”
Koukos I., Mantzouris G., Karanagnostis K.

Wednesday, July 5th 16:20-18:00

Room : SPARTI

“AERO/HYDRO DYNAMICS”

Chairmen: Boguslawski A., Tromans P.S.

- 16:20-16:40** “Wave Loads on Offshore Structures”
Tromans P.S., Vanderschuren L.
- 16:40-17:00** “Simulation and Optimization of Control of Selected Phases of Gyroplane Flight”
Stalewski W.
- 17:00-17:20** “The Influence of Air Jet Velocity on the Effectiveness of Load Control Blowing Devices”
Krzysiak A.
- 17:20-17:40** “Numerical Predictions of Global Oscillations in Round Free Jets”
Boguslawski A., Tyliczszak A., Wawrzak K.
- 17:40-18:00** “Experimental Study on the Interaction between Coaxial Flows with Swirl”
Naxakis A., Perrakis K., Panidis Th.

Thursday, July 6th

09:00-10:20

Room : MYSTRAS

MINI SYMPOSIUM

"HIGH FREQUENCY ELECTRONICS AND APPLICATIONS"

SESSION I – MODELING IN ELECTRONIC EXPERIMENTS AND SIMULATIONS

**Organized by: Assoc. Prof. Evangelia Karagianni
HELLENIC NAVAL ACADEMY**

Chairmen . Karagianni E.A., Vazouras C.N.

- 09:00-09:40** “Pascal Approximation in Passive Filter Design” **INVITED PAPER**
Kasapoglu G.B., Karagianni E.A., Fafalios M.E., Koukos I.A.
- 09:40-10:00** “Profiling of Dielectric-Conductivity Properties of Hayia Sofia Globe by Using Microwave Reflectometry Technique”
Alifragis E.F., Kasapoglu G.B., Karagianni E.A., Vazouras C.N., Fafalios M.E., Uzunoglu N.K.
- 10:00-10:20** “Tropospheric and Underwater Propagation Models at Microwave Frequencies ”
Alvertos K.N., Vardakis K.D., Mitropoulos A.P., Karagianni E.A., Vazouras C.N., Fafalios M.E.

Thursday, July 6th

09:00-10:20

Room : SPARTI

MINI SYMPOSIUM

**“EXPERIMENTAL INVESTIGATION OF STEADY AND UNSTEADY FLOW PHENOMENA”
SESSION I**

**Organized by : Prof. Dimitrios Mathioulakis
NATIONAL TECHNICAL UNIVERSITY OF ATHENS**

Chairmen: Mathioulakis D., Krzysiak A.

- 09:00-09:40** “Experimental Fluid Mechanics Research in the Aerodynamic Laboratory of NTUA. Aerodynamics and Bioengineering Issues” **INVITED PAPER**
Mathioulakis D.
- 09:40-10:00** “Surface Roughness and Hydrophobicity Influence the Fluid Velocity Distribution in the Vicinity of a Stationary and a Moving Body: An Experimental Study“
Gkiolas G., Ellinas K., Mathioulakis D., Tserepi A.
- 10:00-10:20** “Aerodynamic Force Measurements on a Pitching and Plunging NACA64418Wing”
Mouzakis F., Giasemidis D., Gkiolas D., Mathioulakis D.

Thursday, July 6th 11:00-12:20

Room : MYSTRAS

MINI SYMPOSIUM

"HIGH FREQUENCY ELECTRONICS AND APPLICATIONS"

SESSION II - RESEARCH IN MICROWAVE INTEGRATED CIRCUITS DESIGNS

**Organized by: Assoc. Prof. Evangelia Karagianni
HELLENIC NAVAL ACADEMY**

Chairmen: Karagianni E.A., Vazouras C.N.

- 11:00-11:40** "Recent Research in 5G Cellular Communication Systems. A Power Amplifier Example" **INVITED PAPER**
Malainas K.T., Papadopoulos N.D., Karagianni E.A., Vazouras C.N., Fafalios M.E.
- 11:40-12:00** "A Microstrip Square Spiral Antenna at 2.4 GHz for a RFID Tag"
Korfiati T.J., Karagianni E.A., Arapogianni A.A., Vazouras C.N., Fafalios M.E.
- 12:00-12:20** "Design Analysis of a Low Noise Amplifier for Navigation Radars"
Mpountas T.K., Papadopoulos N.D., Karagianni E.A., Kaklamani D.I.

Thursday, July 6th 11:00-12:20

Room : SPARTI

MINI SYMPOSIUM

**"EXPERIMENTAL INVESTIGATION OF STEADY AND UNSTEADY FLOW PHENOMENA"
SESSION II**

**Organized by : Prof. Dimitrios Mathioulakis
NATIONAL TECHNICAL UNIVERSITY OF ATHENS**

Chairmen: Mathioulakis D., Stalewski W.

- 11:00-11:20** "Vortex Detection Through Phase Locked PIV Measurements in the Wake of a Cylinder"
Kapiris P., Ganelos D., Gkiolas D., Mathioulakis D.
- 11:20-11:40** "Wind Tunnel Aerodynamic Interference Testing of a Road Vehicle Models"
Karademetriou E., Mathioulakis D.
- 11:40-12:00** "Experimental Flow Study over a Delta Wing in a Subsonic Free Stream"
Sfondylis V., Mathioulakis D.
- 12:00-12:20** "Flow Generation Mechanism of a Closed Loop Valveless Pump"
Manopoulos Ch., Mathioulakis D., Tsangaris S.

Thursday, July 6th

14:30-15:50

Room : MYSTRAS

MINI SYMPOSIUM

**“ADVANCES IN CIVIL ENGINEERING SIMULATION”
SESSION I**

**Organized by: Assoc. Prof. Dr. D.-P.N. Kontoni
TECHNOLOGICAL EDUCATIONAL INSTITUTE OF WESTERN GREECE**

Chairmen: Kontoni D.-P.N, Naveen B.P.

- 14:30-14:50** “Earthquake-Induced Double Pounding between Adjacent Unequal Buildings Considering Soil-Structure Interaction”
Kontoni D.-P.N., Farghaly A.A.
- 14:50-15:10** “Contribution of Reinforced Concrete Structural Elements on the Earthquake Resistance of Tall Buildings”
Kontoni D.-P.N., Farghaly A.A.
- 15:10-15:30** “Nonlinear Response of a Riverine Platform Subjected to Wind, Wave and Current Loads Considering Soil-Pile Interaction”
Kontoni D.-P.N., Farghaly A.A.
- 15:30-15:50** “A Redevelopment Proposal for the Old Port of Patras”
Martinis S.P., Kontoni D.-P.N.

Thursday, July 6th

14:30-16:10

Room : SPARTI

MINI SYMPOSIUM

**“MULTIPHASE FLOW MODELING AND SIMULATION IN INDUSTRIAL APPLICATIONS”
SESSION I**

**Organized by: Prof. Dionissios Margaris
UNIVERSITY OF PATRAS**

Chairmen: Margaris D.P., Tsahalis H.T.

- 14:30-15:10** “Flow Modeling as a Tool for Optimizing Industrial Applications”
INVITED PAPER
Margaris D.P.
- 15:10-15:30** “Aerodynamic Optimization and Design of a Small Scale Horizontal Axis Wind Turbine, based on the Blade Element Momentum Theory”
Douvi E., Douvi D., Margaris D.P.
- 15:30-15:50** “Hydrodynamic Analysis of a Horizontal Axis Tidal Turbine, based on the blade Element Moment Theory”
Douvi E., Margaris D.P.
- 15:50-16:10** “Construction of a Low Power Horizontal Axis”
Douvi D., Dimopoulos P., Margaris D.P.

Thursday, July 6th

16:20-18:00

Room : MYSTRAS

MINI SYMPOSIUM

**“ADVANCES IN CIVIL ENGINEERING SIMULATION”
SESSION II**

**Organized by: Assoc. Prof. Dr. D.-P.N. Kontoni
TECHNOLOGICAL EDUCATIONAL INSTITUTE OF WESTERN GREECE**

Chairmen: Kontoni D.-P.N., Lycourghiotis S.A.

- 16:20-16:40** “Geotechnical Properties of Fresh Municipal Solid Waste Landfill in India”
Naveen B.P., Kontoni D.-P.N.
- 16:40-17:00** “Digital Engineering in Quality Assurance for Civil Infrastructure Projects”
Krystallis I., Kontoni D.-P.N.
- 17:00-17:20** “Developing a GNSS-on-Boat Based Technique to Determine the Shape of the Sea Surface”
Lycourghiotis S.A.
- 17:20-17:40** “Sea Surface Topography Determination. Comparing Two Alternative Methods at the Gulf of Corinth”
Lycourghiotis S.A.
- 17:40-18:00** “Improvements of GNSS-on Boat Methodology Using a Catamaran Platform: Application at the Gulf of Patras”
Lycourghiotis S.A.

Thursday, July 6th

16:20-17:40

Room : SPARTI

MINI SYMPOSIUM

**“MULTIPHASE FLOW MODELING AND SIMULATION IN INDUSTRIAL APPLICATIONS”
SESSION II**

**Organized by Prof. Dionissios Margaris
UNIVERSITY OF PATRAS**

Chairmen: Margaris D.P., Tsahalis J.

- 16:20-16:40** “Numerical Study of the Interaction of Bubbles Rising In-Line in Viscous Liquid”
Avgerinos N., Margaris D.P.
- 16:40-17:00** “Hydrate Formation in DIFIS System”
Giannoulis D.-P., Margaris D.P.
- 17:00-17:20** “Numerical Investigation of Air-Water Partial Separation Using Modified Flap-Driven Cavity Separators”
Panopoulos N., Margaris D.P.
- 17:20-17:40** “Numerical Investigation of Efficiency Separation of Air-Water Upward Flow in Vertical Pipe”
Gkoulionis G., Kokotinis G., Panopoulos N. Margaris D.P.

Friday, July 7th 10:00-11:20 **Room : MYSTRAS**

“ENGINEERING PROBLEMS I”

Chairmen: Sheorey T., Mykoniatis G.

- 10:00-10:20** “Sensor based Front End Collision Avoidance System for Highways”
Sheorey T., Shrivas N.-V.
- 10:20-10:40** “An Adaptive Multi-Agent Model of Delays Propagation in the Air-Traffic System”
Mykoniatis G., Vidosavljevic A.
- 10:40-11:00** “ISM – Band Repeater for Industrial and Commercial Applications”
Knoll G., Fluhr H., Hormann R., Gruber M.
- 11:00-11:20** “Evaluation of Failure Stresses in a Femur under Progression of a Successful Squat with Different Body Weights: A Position Analysis Study”
Saxena A., Multi R.S.

Friday, July 7th 10:00-11:40 **Room : SPARTI**

“OPTIMIZATION”

Chairmen: Belbas S., Li H.

- 10:00-10:20** “Optimal Control and Game Theory for Generalized Volterra-Wiener Series”
Belbas S.
- 10:20-10:40** “Traders’ Behavioral Coupling and Market Phase Transition”
Ma R., Zhang Y., Li H.
- 10:40-11:00** “Travelling Salesman Problem with Perishable On-Demand Logistic Service”
Hong J.S., Chung T., Lee H.C.
- 11:00-11:20** “An On-Demand Logistics Optimization Based Heterogeneous Vehicle Routing Problem with Time Window”
Lee M.Y., Cheong T., Lee H.C.
- 11:20-11:40** “Optimization of Central Pattern Generators for Defining Human Locomotion”
Elbori A., Turan M., Arikan K.

Friday, July 7th 12:00-13:20 **Room : MYSTRAS**

“ENGINEERING PROBLEMS II”

Chairmen: Mohammadpour M., Dossis M.

- 12:00-12:20** “Processes and Mechanisms of Refractory Borides Activated Sintering at UHTCs Production”
Grigoriev O., Neshpor I., Mazur P., Silvestroni L., Vynokurov V.B., Melakh L.M., Bystrenko O.V., Mey T.L.
- 12:20-12:40** “A Multi-Physics, Multi-Scale Investigation of the Piston Ring Pack”
Bewsher S.R., Mohammadpour M., Rahnejat H., Offner G.
- 12:40-13:00** “Using Artificial Intelligence to Synthesize Hardware from Programs”
Dossis M.F.
- 13:00-13:20** “The Research on Citation Distance and the Scientists’ Development Pattern Based on Analyzing the Paper Abstracts via LDA”
Xu H.Z., Gu W.W., Chen Q., Zhang J., Wu C.

Friday, July 7th

12:00-13:40

Room : SPARTI

**“RENEWABLE TECHNOLOGIES, SUSTAINABLE DEVELOPMENT AND ENVIRONMENT”
INVITED SESSION**

**Organized by : Dr. Abdeen Mustafa Omer
Energy Research Institute (ERI)**

Chairmen: Omer A.-M., Ewedafe S.U.

- 12:00-12:40** “Goexhanger System for Building Heating and Cooling” **INVITED PAPER**
Omer A.-M.
- 12:40-13:00** “Heat Exchangers Technology and Application in Heat Exchanger Engineering”
Omer A.-M.
- 13:00-13:20** “Some Aspects of Solar and Wind Energy Resources”
Omer A.-M.
- 13:20-13:40** “Parallel Solution for 2-D Active Thermal Control Process (2D-ATCP) with
Alternating Direction Implicit Scheme on PVM”
Ewedafe S.U.