

3rd International Conference on Engineering Applications - ICEA19
2nd International Conference on Mathematical Applications - ICMA19
Ponta Delgada, 8 - 10 July 2019

Regional Laboratory of Civil Engineering (Laboratório Regional de Engenharia Civil)
PRELIMINARY PROGRAM

MONDAY, 8th of JULY

9:15 - 9:30 Opening Session

9:30 - 10:30 – Keynote Talk

Paraconsistent Logic and its Implication to AI and Technology

Prof. Jair Minoru Abe

Room: Amphitheater

10:30 - 11:00 Coffee Break

11:00 - 12:30 Parallel Sessions

EA1-Artificial Intelligence and Applications

Chair: Dionisio Rodriguez-Esparragon

Room: Amphitheater

A PLATFORM BASED ON HLS TO IMPLEMENT A GENERIC CNN ON AN FPGA, Dario Baptista, Fernando Morgado-Dias and Leonel Sousa

PONOMARENKO EXPERIMENTAL STUDY OF NETWORKS OF ELECTRONIC NEURONLIKE OSCILLATORS, Mikhail Prokhorov, Danil Kulminsky and Vladimir

INVESTIGATING PERCHED AQUIFERS IN VOLCANIC TERRAINS USING TDEM GEOPHYSICAL EXPLORATION TECHNIQUE, A Trota, F.J. Martinez-Moreno, P. Monjardino, F.A. Monteiro Santos, I. Bernardo, P. Raposo, M. Ekstrom, S. Gonçalves and João Cabral

CHLOROPHYLL-A ESTIMATION FROM REMOTE SENSING DATA OF SEA SURFACE TEMPERATURE AND AEROSOL OPTICAL THICKNESS THROUGH A SHALLOW NEURAL NETWORK, Dionisio Rodriguez-Esparragon, Nerea Marrero Betancori, Javier Marcello and Santiago Hernández-León

MA1-Mathematical Theory

Chair: Alexander Fradkov

Room: Amphitheater

ON THE STABILITY OF 1D DISCRETE DYNAMICAL SYSTEMS: APPLICATIONS TO POPULATION DYNAMICS, Rafael Luis

INFORMATION MEASURES AND SYNCHRONIZATION IN COMPLETE NETWORKS, J. Leonel Rocha and S. Carvalho

CONTROL OF INVARIANTS IN QUASI-POLYNOMIAL MODELS, Alexander Fradkov, Irina Pchelkina and Anatolii Tomchin

ON CONTINUOUS DEFORMATIONS OF MONOHEDRAL SPHERICAL TILINGS BY SPHERICAL PENTAGONS, José Manuel Dos Santos Dos Santos and Ana Breda

12:30 - 14:00 Lunch Break

14:00 - 15:40 Parallel Sessions

EA2-Engineering Education

Chair: Anatolijs Zabasta

Room: Amphitheater

LIFE SUPPORT SYSTEMS EDUCATION BASED ON PROJECT-BASED LEARNING, Victor D. N. Santos, J. Cândido Santos and Joaquim Pereira

THE ACCREDITATION OF MASTER PROGRAMS. A STUDY CASE, Dorian Cojocar, Emilia Gogu and Stefan Stanciu

WEBQDA: THE QUEST FOR A PLACE IN THE COMPETITIVE WORLD OF CAQDAS, Carla Azevedo de Almeida, Fábio Freitas, António Pedro Costa and António Moreira

THE USE OF QUALITATIVE DATA ANALYSIS SOFTWARE USE IN EDUCATIONAL PAPERS, Luiz Rafael Andrade, António Pedro Costa, Ronaldo Nunes Linhares and Carla Azevedo De Almeida

DEVELOPMENT OF ENTREPRENEURSHIP SKILLS FOR STUDENTS CREATIVE THINKING SUPPORT IN HIGHER EDUCATION, Nadezhda Kunicina, Ivana Bilic, Anatolijs Zabasta, Jelena Caiko and Leonids Ribickis

ES1-Smart Cities

Chair: Amela Ajanovic

Room: A

SMART STREET LIGHTING ENERGY CONSUMPTION SIMULATION, Cela Arben, Natowicz René and Abidi Sofiene

SMART PARKING SPACE ALLOCATION BASED ON A COOPERATIVE SYSTEM, Abidi Sofiene, Cela Arben and Natowicz René

INTELLIGENCE OF LED TOWARDS INNOVATIVE NANOTECHNOLOGIES IN THE EFFICIENCY OF BUILDING ENVELOPES, *Consiglia Mocerino*

ON CURRENT AND FUTURE ECONOMICS OF ELECTRICITY STORAGE, *Reinhard Haas and Amela Ajanovic*

ON THE ECONOMICS AND THE FUTURE PROSPECTS OF ELECTRIC VEHICLES, *Amela Ajanovic and Reinhard Haas*

15:40 - 16:00 Coffee Break

16:00 - 17:20 Parallel Sessions

EA3-Internet of Things

Chair: *Francisco Martins*

Room: Amphitheater

IOT APPROACH APPLICATION FOR DEVELOPMENT OF AUTONOMOUS BEEKEEPING SYSTEM, *Anatolij Zabasta, Nadezda, Kunicina, K. Kondratjews and Leonids Ribickis*

AIR POLLUTION DETECTION SYSTEM USING EDGE COMPUTING, *Katalina Biondi, Eyhab Al-Masri, Orlando Baiocchi, Suganya Jeyaraman, Eric Pospisil, Graham Boyer and Cleonilson Protasio de Souza*

A ZIGBEE-BASED SYSTEM FOR SIMULATING, TRAINING AND MEASURING VISUAL REACTION TIME IN SHOTGUN SPORT, *Ben Ali Boubaker and Olfa Oueslati*

AN INFRARED-BASED SENSOR TO MEASURE THE FILLING LEVEL OF A WASTE BIN, *Anande Premgi, Francisco Martins and Dulce Domingos*

MA2-Mathematical Applications

Chair: *Krzysztof Ostaszewski*

Room: A

SOFTWARE FOR SIX SIGMA PROJECTS WITH THE USE OF THE PARACONSISTENT LOGIC, *Giovanna Albertini, Jair Minoro Abe, Luiz Antônio de Lima and Kazumi Kazumi Nakamatsu*

APPLICATION OF PARACONSISTENT ANNOTATED LOGIC IN PROTOTYPE OF AUTONOMOUS VEHICLE IN 1:24 SCALE, *Jair Minoro Abe, Henry Costa Ungaro, Fábio Vieira Amaral and Kazumi Nakamatsu*

ROAD MAP FOR BIFURCATIONS OF REAL RATIONAL MAPS, *João Cabral*

A REMARK ON AN ANNUITY PAYMENT STRUCTURE, *Krzysztof Ostaszewski and Alexander Patkowski*

17:30 - 19:00 Welcome Cocktail

Town Hall Honors Room

TUESDAY, 9th of JULY

8:30 – Departure to Lagoa by Bus

9:00 - 10:00 – Workshop

Experimental activity, engineering students' skills, innovation, industry and society

Prof. Teresa Restivo

Room: Lagoa

11:00 - 11:30 Coffee Break

11:00 - 11:30 Poster Sessions

Room: Coffee Break Room

11:30 - 12:50 Session

EA4-Sensors

Chair: *Victor D. N. Santos*

Room: Lagoa

DESIGN AND SIMULATION OF AN INCREMENTAL SIGMA-DELTA CONVERTER FOR IMPROVING THE NOISE FLOOR LEVEL OF CMOS IMAGE SENSORS, *Luis Miguel Carvalho Freitas, Morgado Dias, Guy Meynants and Adi Xhakoni*

AFFORDABLE IOT DEVICE FOR RENEWABLE ENERGY SYSTEMS MONITORING OF THE CIVISA'S MULTIPARAMETER REMOTE STATIONS, *Arturo Garcia and Hélia Guerra*

MICROWAVE MINIATURE COAXIAL REACTORS FOR ON-DEMAND MATERIAL SYNTHESIS, *Guennadi Kouzaev and Sergey Kapranov*

NOVEL RSSI-BASED LOCALIZATION SYSTEM FOR CATTLE AND ANIMAL TRACKING, *Victor D. N. Santos, Bernadino Neves and Nuno M Fonseca Ferreira*

12:50 - 14:20 Lunch Break - Lunch "on your own"

14:20 - 19:00 Social Event – Island Tour

19:00 – Conference Dinner

Jose-Antonio Ruiz-Jara, Martín Naya-Varela, Francisco Bellas-Bouza and Esteban Arias-Méndez

SOLVING THE REGENERATOR LOCATION PROBLEM USING SWARM INTELLIGENCE ALGORITHMS, Pedro Ferreira, Rodrigo Pessoa, Anabela Moreira Bernardino, Eugénia Moreira Bernardino, Beatriz Piedade and Alexandrino Gonçalves

INTEGRATING DIGITAL LEADERSHIP IN EDUCATIONAL SUPERVISION CONTEXT: A CRITICAL APPRAISAL, Hussain Aldawood, Marwa Alabadi, Olayan Alharbi, Anwar Alhejaili and Geoffrey Skinner

AN EXERGAME WITH SAR BIKE: A FIRST PROTOTYPE, Hélia Guerra, Luis Mendes Gomes and Lázaro Raposo

WEDNESDAY, 10th of JULY

9:00 - 10:00 – Keynote Talk
Heading towards sustainable and democratic electricity systems
Prof. Reinhard Haas,
Room: Amphitheater

10:00 - 10:30 Coffee Break

10:30 - 12:10 Parallel Sessions

EA5-Healthcare

Chair: José Machado
Room: Amphitheater

INTELLIGENT NUTRITION IN HEALTHCARE AND CONTINUOUS CARE, Rui Miranda, Diana Ferreira, António Abelha and José Machado

PREDICTION OF MORTALITY AND OCCURRENCE OF COMPLICATIONS FOR GASTRIC CANCER PATIENTS, Maria Ana Brito, Cristiana Neto, António Abelha and José Machado

CYCLIC ALTERNATING PATTERN ESTIMATION FROM ONE EEG MONOPOLAR DERIVATION USING A LONG SHORT-TERM MEMORY, Fábio Mendonça, Sheikh Shanawaz Mostafa, Morgado Dias and Antonio Ravelo-Garcia

A CONTEMPORARY REVIEW OF RAISING HEALTH AWARENESS USING ICT FOR APPLICATION IN THE CYBER SECURITY DOMAIN, Hussain Aldawood, Marwa Alabadi, Olayan Alharbi and Geoffrey Skinner

A COMPARATIVE STUDY OF OPTICAL CHARACTER RECOGNITION IN HEALTH INFORMATION SYSTEM, Mário Ribeiro, Júlio Duarte, Vasco Abelha, António Abelha and José Machado

EA6-Robotics and Applications

Chair: Luís Mendes Gomes
Room: Amphitheater

WEARABLE GLOVE INTERACTION WITH ROBOTS, N. M. Fonseca Ferreira, Marco Silva, Victor Santos, Frederico M. Santos, Cândido Santos, João P. Ferreira and Fernando D. Moita

CONTROL LIBRARY MODIFICATION TO IMPROVE ROBOT INTERACTION WITH ITS ENVIRONMENT,

12:00 - 13:00 Awards and Closing Ceremony

15:00 - 16:00 – Public Session

Chair: Morgado Dias, University of Madeira and Interactive Tecnologies Institute/Larsys

Debating Energy and Sustainability for Small Developing Economies

Prof. Reinhard Haas, Vienna University of Technology
Prof. João Cabral, University of the Azores
Prof. Francisco Martins, University of the Azores
Prof. António Trota, University of the Azores

Room: Pós-graduação - Faculdade de Ciências