INES 2018 program

June 21, Thursday

VENUE

Elder Museum

ADDRESS

PARQUE SANTA CATALINA S/N.

35007 LAS PALMAS DE GRAN CANARIA

10:00 – 10:30   **Opening Ceremony**   ROOM A, 2 FLOOR

10:30 – 11:15   **Celebrating Ryszard Klempous on his 70th Birthday**

10:30   VITAE SUMMARY: CONTRIBUTIONS OF PROF. KLEMPOUS

10:45   Zenon Chaczko

10:55

101	Ryszard Klempous and Manuel Berenguel	Control and Optimization of Distributed Solar Collector Fields

11:05

100	J. W. Rozenblit, Ryszard Klempous and Jan Nikodem	Collaborative Activities in Virtually-based Training for Minimally Invasive Surgery between the University of Arizona and Wrocław University of Technology

11:15 – 11:30   Coffee break   TERRACE, 2 FLOOR

11:30 – 12:15   **Plenary Talk I**   ROOM A, 2 FLOOR

Session chair: Imre J. Rudas

97	József Bokor and Zoltán Szabó	State and Loop Equivalence for Linear Parameter Varying Systems

12:15 – 13:40   break

13:40 – 15:20   Parallel sessions

13:40 – 15:20   **[T1a] Session on Web Engineering**   ROOM B, 3 FLOOR

Session chair: Dan Ionescu

86	**Dan Ionescu,** Cristian Gadea and Bogdan Ionescu	A Hybrid FSM Rule-Based Approach for the Real-Time Control of Web-Based Collaborative Platforms
20	Andrea Tick	Research on the Digital Learning and E-learning Behaviour and Habits of the Early Z Generation

95	Zbigniew Wawrzyniak, Grzegorz Borowik, Eliza Szczechla, Paweł Michalak, Radosław Pytlak, Paweł Cichosz, Dobiesław Ircha, Wojciech Olszewski and Emilian Perkowski	Relationships between crime and everyday factors
21	Andrea Tick	IT Security as a Special Awareness at the Analysis of the Digital/E-learning Acceptance Strategies of the Early Z Generation
75	Emil Gatial, Zoltan Balogh and Ladislav Hluchy	Change detection and notification method of the rich Internet application content

13:40 – 15:20   [T1b] Session on Computational Intelligence in Engineering I   ROOM C, MARITIME ROOM, 0 FLOOR

Session chair: Zenon Chaczko

85	**Zenon Chaczko**, Anup Kale, José Juan Santana-Rodríguez and Carmen Paz Suárez-Araujo	Towards an IOT Based System for Detection and Monitoring of Microplastics in Aquatic Environments
9	Adrian Flavius Olariu, Mihaela Frigura-Iliasa, Flaviu Mihai Frigura-Iliasa, Lia Dolga, Hannelore Elfride Filipescu and Madlena Nen	Computational Model for Cable Paper Insulation Behavior Under Cyclic Stress
84	**Ylermi Cabrera-León, Patricio García Báez, Juan Ruiz-Alzola and Carmen Paz Suárez-Araujo**	Classification of Mild Cognitive Impairment stages using Machine Learning Methods
33	Mihaela Frigura-Iliasa, Flaviu Mihai Frigura-Iliasa, **Florin Ionel Balcu, Marius Mirica, Stefan Novaconi and Amalia Corina Macarie**	Simulation of Electric Space Charges in Cavities Located inside Industrial Dielectrics
53	Calin Vinga, Sorin Musuroi, Flaviu Mihai Frigura-Iliasa, Emil Cazacu, Lucian Petrescu and Flavius Dan Surianu	Computational Study about the Active Power and Energy Losses of a 40 MVA 110/6 kV Transformer

15:20 – 15:40   Coffee break   TERRACE, 2 FLOOR

15:40 – 17:20   Parallel sessions

15:40 – 17:20   [T2a] Session on Communications Software and Systems in Engineering   ROOM B, 3 FLOOR

Session chair: Levente Kovács

94	Johnson Agbinya	Spectral Efficiencies of Split-Frequency Diversity Schemes in Wireless Power Transfer and Magnetic Inductance Communication Systems
57	Atsushi Ito, Rina Hayashi, Yuko Hiramatsu, Akira Sasaki, Kazutaka Ueda, Yasunari Harada, Miwa Morishita, Hiroyuki Hatano and Fumihiro Sato	A STUDY OF PSYCHOLOGICAL APPROACH TO DESIGN SIGHTSEEING SUPPORT MOBILE APPLICATION
55	Andrei Vasilateanu and Monica Nastasia Mihailescu	Position-aware home monitoring system
13	Laszlo Bacsardi	Resources for Satellite-based Quantum Communication Networks
90	Jozsef Klespitz and Levente Kovacs	Multivariable control of hemodialysis machines via soft computing method

15:40 – 17:20 [T2b] Session on Computational Intelligence in Engineering II ROOM C, MARITIME ROOM, 0 FLOOR

Session chair: István Nagy

47	Mohammad Erfan Mowlaei, **Mohammad Saniee Abadeh** and Hamidreza Keshavarz-Mohammadian	A Lexicon Generation Method For Aspect-Based Opinion Mining
22	Ernő Horváth, Claudiu Pozna and Áron Ballagi	Evaluation of Neural Network-based Sensing and Perception in Experimental Vehicles
32	Ján Mojžiš, Peter Krammer, Marcel Kvassay, Ivana Budinská, Ladislav Hluchý and Marek Jurkovič	Crawling and Analysis of Online Discussions in Major Slovak National Newspapers
11	Edit Tóth-Laufer and István Nagy	Effect of Different Membership Function Fitting Methods in Personalized Risk Calculation
69	Mohammad Erfan Mowlaei, Mohammad Saniee Abadeh and Hamidreza Keshavarz-Mohammadian	Lexicon Generation Using Genetic Algorithm For Aspect-Based Sentiment Analysis

15:40 – 17:20 [TP] Poster session 0 FLOOR

Session chair: **Ján Perháč**

TERRA

65	**Matúš Uchnár**, Liberios Vokorokos and Eva Chovancova	DataGrid module for Nette framework
4	**Monika Telišková, Jozef Török, Marek Kočiško, Martin Pollák and Lukáš Blaško**	Non-destructive diagnostics of hard-to-access locations through the application of spatial dimension
68	**Andrea Peterková, Martin Nemeth and Allan Bohm**	Computing missing values using neural networks in medical field

73	**Martin Nemeth and Andrea Peterková**	Proposal of data acquisition method for industrial processes in automotive industry for data analysis according to Industry 4.0
83	**Jozef Dobránsky, Tomáš Stejskal and Jozef Svetlík**	Analysis of Mean Reversal Value of on Axis of Linear Guide Depending on the Load
56	**Ján Perháč, Daniel Mihalyi and Lukáš Reľovský**	Linux Security Enhancement through Log Files Distribution Specified by Epistemic Linear Logic
3	**Marek Kočiško, Anna Galdunová, Monika Telišková and Petr Baron**	Redefining of Shop Floor Documentation for the purposes of NC machining in the NX system

18:00   **Welcome reception**   ~~TERRACE, 2 FLOOR~~   GROUND FLOOR

June 22, Friday

9:30 – 10:15   **Plenary Talk II**   ROOM A, 2 FLOOR

Session chair: Ryszard Klempous

46	Manuel Maynar, Verónica Crisostomo and Miguel Angel Rodriguez-Florido	Engineering and health, two ways to reach a new social space

10:15 – 11:00   **Plenary Talk III**   ROOM A, 2 FLOOR

Session chair: Levente Kovács

96	Péter Galambos	Disruptive Robotics and Cyber-Physical Control

11:00 – 11:20   Coffee break   TERRACE, 2 FLOOR

11:20 – 12:40   Parallel sessions

11:20 – 12:40   **[F1a] Session on Intelligent Transportation Systems**   ROOM B, 3 FLOOR

Session chair: Tamás Haidegger

16	Árpád Takács, Dániel András Drexler, Péter Galambos, **Imre Rudas** and **Tamás Haidegger**	Assessment and standardization of autonomous vehicles
51	Mădălin-Dorin Pop, Octavian Proștean and Gabriela Proștean	Prediction of Route Choosing Behavior based on Genetic Algorithm Approach

74	Johannes Ziegmann, Michael Schmid and Christian Endisch	Sensitivity Analysis for Driver Energy Prediction with Environmental Features and Naturalistic driven Data
76	Arefeh Yavary and Hedieh Sajedi	Solving Dynamic Vehicle Routing Problem with Pickup and Delivery using a CLARITY method

11:20 – 12:40   [F1b] Session on Systems Engineering I   ROOM C, MARITIME ROOM, 0 FLOOR

Session chair: **Manuel Berenguel**

48	Mario Lopez-Alonso, Jose Domingo Alvarez, Jose Luis Guzman and **Manuel Berenguel**	Nonlinear control of a fan-coil operation
23	Werner Herfs, Jerome Flender, Simon Storms and Martin Witte	Data-Consistent Toolchain for a requirements-based Specification with the Interdisciplinary Modeling Language (IML)
31	Koni Németh, Vendel Bence Czinder and András Molnár	Implementing augmented reality using Microsoft Kinect
35	Augusto Urru, Marco Bonini and Wolfgang Echelmeyer	Planning of a Milk-Run Systems in High Constrained Industrial Scenarios

11:20 – 12:40   [F1c] Session on Systems Engineering II   ROOM D, METRUM ROOM, 0 FLOOR

Session chair: Cezara Liliana Rat

58	**Tomasz Górski**	Towards Enterprise Architecture for Capital Group in Energy Sector
99	Jerzy Kotowski, Jacek Oko and Monika Żygadło	Green Computing at Lower-Silesia in Poland
44	Cezara Liliana Rat, Octavian Prostean, Ioan Filip and Cristian Vasar	The Modeling and Simulation of an Archimedes Spiral Turbine for use in a Hydrokinetic Energy Conversion System
15	Martin Soltes, Sascha Koberstaedt, Armin Reif and Markus Lienkamp	Design and Implementation of an Effort Estimation Tool for Electric Vehicle Development

12:40 – 14:00   break

14:00 – 15:40   parallel sessions

14:00 – 15:40   [F2a] Session on Intelligent Manufacturing Systems I   ROOM B, 3 FLOOR

Session chair: **Czeslaw Smutnicki**

17	**Patrick Herrmann**, Martin Gerngroß and Christian Endisch	Numerical Optimization in Planning of Needle Winding Trajectories
43	**Nicolae Tarfulea**, **Mihaela Frigura-Iliasa**, **Flaviu Mihai Frigura-Iliasa**, **Ionel Balcu**, **Marius Mirica** and **Stefan Novaconi**	Automatic Stand for Testing the Influence of Humidity and Temperature on Dielectric Charges
72	**Wojciech Bozejko** and Mieczyslaw **Wodecki**	On cyclic job shop scheduling problem
25	**Bogdan Filip**, **Sorin Musuroi**, **Flaviu Mihai Frigura-Iliasa**, **Doru Vatau**, **Petru Andea** and **Mihaela Frigura-Iliasa**	Automatic Diagnosis of the Main Contact Status for High Voltage SF6 Circuit Breakers
34	**Czeslaw Smutnicki**	A new approach for cyclic manufacturing

14:00 – 15:40   [F2b] Session on Intelligent Manufacturing Systems II   ROOM C, MARITIME ROOM, 0 FLOOR

Session chair: **Zoltán Balogh**

28	**Lukas Leitner** and Christian Endisch	Skewed and Heavy-Tailed Hidden Random Walk Models with Applications in Automated Production Testing
50	**Christoph Pallasch**, **Nicolai Hoffmann**, **Simon Storms** and **Werner Herfs**	ProducTron: Towards Flexible Distributed and Networked Production
62	**Jela Abasova, Jan Janosik, Veronika Simoncicova and Pavol Tanuska**	Proposal of effective preprocessing techniques of financial data
66	**Zoltán Balogh, Emil Gatial, José Barbosa and Tomáš Matejka**	Reference Architecture for a Collaborative Predictive Platform for Smart Maintenance in Manufacturing
19	**Hamed Parvaresh, Hedieh Sajedi and Amir Hosein Rahimi**	Leukemia Diagnosis using Image Processing and Computational Intelligence

14:00 – 15:40   [F2c] Session on Intelligent Mechatronics and Robotics System   ROOM C, METRUM ROOM, 0 FLOOR

Session chair: **Péter Galambos**

63	**Daniel Stojcsics**, Istvan Lovas, Zsolt Domozi and Andras Molnar	HIGH RESOLUTION 3D THERMAL IMAGING USING FLIR DUO R SENSOR
70	**Joanna Isabelle Olszewska**	SAMI: Interactive, Multi-Sense Robot Architecture
36	**Csaba Kertesz and Markku Turunen**	Body State Recognition for a Quadruped Mobile Robot

93	**Bertalan Csanádi, Péter Galambos, József Tar, György Györök and Andrea Serester**	Revisiting Lyapunov's Technique in the Fixed Point Transformation-based Adaptive Control
52	**Lars Lienenlüke, Lukas Gründel, Simon Storms, Werner Herfs, Michael Königs and Michael Servos**	Temporal and flexible automation of machine tools

15:40 – 16:00   Coffee break   **TERRACE, 2 FLOOR**

16:00 – 17:40   Parallel sessions

16:00 – 17:40   [F3a] Session on Artificial Intelligence in Engineering   ROOM B, 3 FLOOR

Session chair: **Jan Nikodem**

24	**Kamil Szyc**	Comparison of different deep-learning methods for image classification
26	**Yu Zhang**, Gbanaibolou Jombo and Anthony Latimer	A Knowledge Transfer Platform for Fault Diagnosis of Industrial Gas Turbines
38	**Marek Kulbacki**, Jakub Segen, Wojciech Knieć, Konrad Kluwak, Ryszard Klempous and Julita Kulbacka	Survey on Drones for Agriculture Automation from Planting to Harvest
92	**Ryszard Klempous, Konrad Kluwak, Jan Nikodem, Marek Kulbacki, Jakub Segen, Wojciech Kniec and Andrea Serester**	Review of algorithms for Tag Detection in video sequences
39	**Julita Kulbacka, Marek Kulbacki, Jolanta Saczko, Anna Zielichowska, Anna Choromanska, Nina Rembialkowska, Olga Michel, Ryszard Klempous, Jakub Segen and Grzegorz Chodaczek**	Image analysis to study cytoskeleton alterations in cancer cells exposed to nanosecond pulsed electric field (nsPEF)

16:00 – 17:40   [F3b] Session on Intelligent Engineering Systems   ROOM C, MARITIME ROOM, 0 FLOOR

Session chair: **Bako Rajaonah**

59	**Bako Rajaonah** and João Sarraipa	Trustworthiness-Based Automatic Function Allocation in Future Humans-Machines Organizations

61	Ahlam Mallak, Ali Behravan, Christian Weber, Madjid Fathi and Roman Obermaisser	A Graph-based Sensor Fault Detection and Diagnosis for Demand-Controlled Ventilation Systems Extracted from a Semantic Ontology
10	Jude Hemanth, Daniela Elena Popescu and Anitha J	Analysis of Daubechies Wavelet Transform based Human Detection Approaches in Digital Videos
45	Marcell Nagy and Roland Molontay	Predicting Dropout in Higher Education based on Secondary School Performance
64	Andreia Artifice, João Sarraipa and Ricardo Jardim-Goncalves	Methodology for Attention Detection based on Heart Rate Variability

16:00 – 17:40   [FP] Poster session   O FLOOR

Session chair: **Jan Lipina**

18	**Albert Nagy** and József Tick	Modeling of operative planning solution for transport management systems
29	**Tibor Krenicky and Juraj Ruzbarsky**	Alternative Concept of the Virtual Car Display Design Reflecting Onset of the Industry 4.0 into Automotive
40	**Michael Skarpetis, Fotis Koumboulis and Paolo Papanikolaou**	Control and Visualization of Mobile Robot Formation
41	**Michael Skarpetis, Fotis Koumboulis and Xenophon Loutas**	Missile Autopilot Design using a Robust Asymptotic Tracking Controller
54	**Andrea Vaclavova and Michal Kebisek**	Design of Production Line Virtual Model Using Wonderware ArchestrA
60	**Jan Lipina, Václav Krys and František Fojtík**	Tensile test on samples produced by Rapid Prototyping technology with a higher number of contours
49	**Onur Boyar, Bilgin Metin and Mehmet Enes Özen**	Detection of Denial-of-Service Attacks with SNMP/RMON

19:00   Banquet   RESTAURANT LA MARINERA