GENERAL PROGRAM OF THE VIRTUAL ICCCC2020
CERCETARE DEZVOLTARE AGORA/ AGORA UNIVERSITY OF ORADEA/ ROMANIA
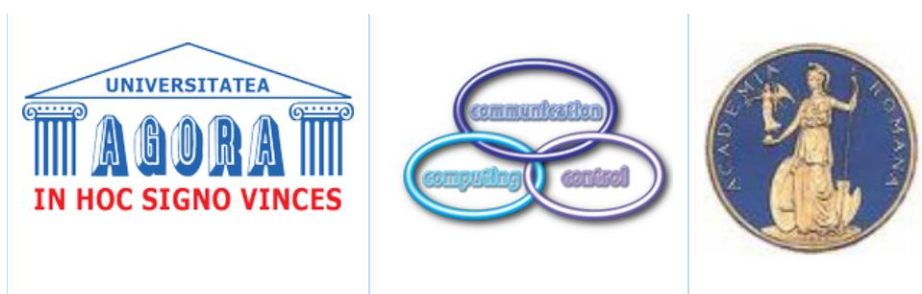### May 11-15, 2020

Springer volume: Advances in Intelligent Systems and Computing (Series Editor: Janusz Kacprzyk)

Time zones: Bucharest, Vilnius, Haifa, Athens: GMT + 3; Warsaw, Granada, Paris: GMT + 2; Ellensburg: GMT –7;
Bogota: GMT – 5; Santiago de Chile: GMT – 4.

Keynote speakers (in alphabetical order):
1. Prof. Razvan ANDONIE, Central Washington University, Ellensburg, USA
2. Prof. Valeriu BEIU, Aurel Vlaicu University, Arad, Romania
3. Prof. Alfred BRUCKSTEIN, Technion, Haifa, Israel
4. Prof. Felisa CORDOVA, University Finis Terrae, Santiago, Chile
5. Prof. Yezid DONOSO, Universodad de los Andes, Bogota, Colombia
6. Acad. Gintautas DZEMYDA, University of Vilnius, Vilnius, Lithuania
7. Acad. Florin Gheorghe FILIP, Romanian Academy, Bucharest, Romania
8. Prof. Enrique HERERRA-VIEDMA, University of Granada, Granada, Spain
9. Acad. Janusz KACPRZYK, Polish Academy of Sciences, Warsaw, Poland

Day	GMT Hours	Bucharest Hours	Activity	Speakers
Monday, May 11	14:00-16:00	17:00-19:00	Connection with Zoom Pro/ Official opening Break/Surprise	Ioan DZITAC (General Chair) Misu-Jan MANOLESCU (Chair) Florin Gheorghe FILIP (PC Chair) Domnica DZITAC (Virtual Chair) Simona DZITAC (Chair)
Tuesday, May 12	11:00-13:00	14:00-16:00	**Regular papers** *Chairperson: Alfred BRUCKSTEIN*	Chapter 1. *Integrated solutions in computer-based control and communications (ID 10, 12, 21, 35, 38, 53)*
			Break/Surprise	
	14:00-16:30	17:00-19:30	**Keynote lectures** *Chairperson: Janusz KACPRZYK*	Alfred BRUCKSTEIN Valeriu BEIU Yezid DONOSO
Wednesday, May 13	11:00-13:00	14:00-16:00	**Regular papers** *Chairpeson: Gintautas DZEMYDA Chairperson: Razvan ANDONIE*	Chapter 2. *Computational intelligence methods (ID 6, 11, 54)* Chapter 3. *Fuzzy methods and soft computing (ID 44, 50, 61, 64)*
			Break/Surprise	
	14:00-16:30	17:00-19:30	**Keynote lectures** *Chairperson: Florin Gheorghe FILIP*	Janusz KACPRZYK Gintautas DZEMYDA Razvan ANDONIE
Thursday, May 14	11:00-13:00	14:00-16:00	**Regular papers** *Chairperson: Enrique HERRERA-VIEDMA*	Chapter 4. *Decision making issues. Methods and support systems (ID 18, 36, 37, 42, 51, 62)*
			Break/Surprise	
	14:00-15:40	17:00-18:40	**Keynote lectures** *Chairperson: Yezid DONOSO*	Enrique HERERRA-VIEDMA Felisa CORDOVA
Friday, May 15	11:00-13:00	14:00-16:00	**Regular papers** *Chairperson: Valeriu BEIU*	Chapter 5. *Theory for Computing, Control and Communication Systems (ID 14, 15, 16, 22, 28, 31, 52, 57)*
			Break/Surprise	
	14:00-16:00	17:00-19:00	Official Closing Surprise	Ioan DZITAC (General Chair) Misu-Jan MANOLESCU (Chair) Florin Gheorghe FILIP (PC Chair) Domnica DZITAC (Virtual Chair) Simona DZITAC (Chair)

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communication
computing control

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2020 8th International Conference on Computers Communications and Control (ICCCC)

http://univagora.ro/en/icccc2020/

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On site event canceled due to coronavirus COVID - 19
ICCCC2020 will be held online via Zoom Pro instead of in person

PROGRAM FOR CHAPTERS

Tuesday, May 12	11:00-13:00	14:00-16:00	Regular papers *Chairperson: Alfred BRUCKSTEIN*	Chapter 1. *Integrated solutions in computer-based control and communica tions (ID 10, 12, 21, 35, 38, 53)*

Chapter 1. Integrated solutions in computer-based control and communications

ID	Authors	Title
10	**Corina Stefania Nanau** *Transilvania University of Brasov* **Romania**	*Queuing Theory Application on DTN Buffer Management*
12	**David Cordero Vidal and Cristian Barria Huidobro** *Universidad Mayor* **Chile**	*Proposal of a Multi-Standard Model for Measuring Maturity Business Levels with Reference to Information Security Standards and Controls*
21	**Catalin Ceaparu** *Bucharest University of Economic Studies* **Romania**	*IT Solutions for Big Data Processing and Analysis in the Finance and Banking Sectors*
35	**Lucio Cañete Arratia*, Felisa Córdova** and Andrés Pérez de Arce***** **Universidad de Santiago de Chile* ***Universidad Finis Terrae* ****Trade Plus S.A.* **Chile**	*Automatons immersed in ocean currents for transformation of biomass into fuel*
38	**Grigore Lupescu and Nicolae Tapus** *University Politehnica of Bucharest* **Romania**	*Challenges porting blockchain library to OpenCL*
53	**Arpad Gellert and Constantin-Bala Zamfirescu** *Lucian Blaga University of Sibiu* **Romania**	*Using Two-Level Context-Based Predictors for Assembly Assistance in Smart Factories*

Wednesday, May 13	11:00-13:00	14:00-16:00	Regular papers *Chairpeson: Gintautas DZEMYDA Chairperson: Razvan ANDONIE*	Chapter 2. *Computational intelligence methods (ID 6, 11, 54)* Chapter 3. *Fuzzy methods and soft computing (ID 44, 50, 61, 64)*

Chapter 2. Computational intelligence methods

ID	Authors	Title
6	**Martynas Sabaliauskas and Gintautas Dzemyda** *Vilnius University* **Lithuania**	*Visual analysis of multidimensional scaling using GeoGebra*
11	**Razvan Cristian Marales, Adela Bâra and Simona-Vasilica Oprea** *Bucharest University of Economic Studies* **Romania**	*Edge Computing in Real-Time Electricity Consumption Optimization Algorithm for Smart Grids*
54	**Alexey Myachin and Andrei Akhremenko** *National Research University Higher School of Economics* **Russia**	*The Study of Trajectories of the Development of State Capacity Using Ordinal-Invariant Pattern Clustering and Hierarchical Cluster Analysis*

Chapter 3. Fuzzy methods and soft computing

ID	Authors	Title
44	**Alejandra Valencia*, Cecilia Montt Veas*, Astrid Oddershede** and Luis Quezada**** **Pontificia Universidad Catolica de Valparaiso **University of Santiago of Chile* **Chile**	*A Micro Simulation Approach for a Sustainable Reduction Traffic Jam*
50	**Bogdana Stanojević* and Milan Stanojević**** **Mathematical Institute of the Serbian Academy of Sciences and Arts **Faculty of Organizational Sciences, University of Belgrade* **Serbia**	*Empirical versus analytical solutions to full fuzzy linear programming*
61	**Victorita Radulescu** *University Politehnica of Bucharest* **Romania**	*Application of Fuzzy Logic in Optimizing the Operation of Pumping Station*
64	**Mihaela Frigura-Iliasa*, Attila Simo*, Simona Dzitac**, Flaviu Mihai Frigura-Iliasa* and Felicia Ioana Baloi*** **Politehnica University Timisora **University of Oradea* **Romania**	*Fuzzy-Logic Based Diagnosis for High Voltage Equipment Predictive Maintenance*

Thursday, May 14	11:00-13:00	14:00-16:00	Regular papers Chairperson: Enrique HERRERA-VIEDMA	Chapter 4. *Decision making issues. Methods and support systems (ID 18, 36, 37, 42, 51, 62)*

Chapter 4. Decision making issues. Methods and support systems

ID	Authors	Title
18	**Ramona Lacurezeanu and Vasile Paul Bresfelean** *Babes-Bolyai University Cluj Napoca* **Romania**	*Making a multi-criteria analysis model for choosing an ERP for SMEs in a KM world*
36	**Pablo Alberto Aliste*, Ivan Derpich** and Felisa Cordova***** **School of accountants auditors of Santiago* ***University of Santiago of Chile* ****University of Finis Terrae* **Chile**	*Design of a multivariable model to reduce urban traffic congestion*
37	**Constanta Zoie Radulescu*, Marius Radulescu**, Lidia Bajenaru* and Adriana Alexandru*** **National Institute for Research and Development in Informatics* ***Institute of Mathematical Statistics and Applied Mathematics Gheorghe Mihoc - Caius Iacob* **Romania**	*A Multi-Objective Model for Devices Procurement with application in Health Care*
42	**Claudio Macuada, Astrid Oddershede, Luis Quezada and Pedro Palominos** *Universidad de Santiago de Chile* **Chile**	*Methodological proposal to define the degree of automation in the sanitary industry in chile to adapt to climate change*
51	**José Ricardo López-Robles*, Manuel Jesus Cobo Martin**, N.K. Gamboa-Rosales*** and Enrique Herrera-Viedma****** **University of the Basque Country/ Universidad del País Vasco* ***University of Cádiz* ****University of Zacatecas* ****University of Granada* *(*)(**)(****)***Spain** *******Mexico**	*Mapping the intellectual structure of the International Journal of Computers Communications & Control: A content analysis from 2015 to 2019*
62	***Rodrigo Barraza Alonso*, Juan Miguel Sepúlveda*, Juan Francisco Venegas Gutiérrez*, Vinka Monardes** and Ivan Derpich**** **Universidad Santiago de Chile* ***Universidad Antofagasta* ***Chile***	*A Model for Solving Optimal Location of Hubs: A Case Study for Recovery of Tailings Dams*

| | Friday, May 15 | 11:00-13:00 | 14:00-16:00 | Regular papers *Chairperson: Valeriu BEIU* | Chapter 5. *Theory for Computing, Control and Communication Systems* *(ID 14, 15, 16, 22, 28, 31, 52, 57)* |

Chapter 5. Theory for Computing, Control and Communication Systems

ID	Authors	Title
14	**Dragoi Vlad-Florin*, Chouria Ali** and Jean-Gabriel Luque*** *Aurel Vlaicu University of Arad* **LITIS* *Romania* **France*	*On recursively defined combinatorial classes and labelled trees*
15	**Dragoi Vlad-Florin*, Bucerzan Dominic*, Hoara Sorin*, Pierre-Louis Cayrel** and Brice Colombier*** *Aurel Vlaicu University of Arad* *** Université Jean Monnet* *Romania* *** France*	*Soving a modified syndrome decoding problem using integer programming*
16	**Dragoi Vlad-Florin, Cowell Simon Robin and Beiu Valeriu** *Aurel Vlaicu University of Arad* *Romania*	*Tight Bounds on the Coeficients of Consecutive k-out-of-n:F Systems*
22	**Simon Cowell, Mariana Nagy and Valeriu Beiu** *Aurel Vlaicu University of Arad* *Romania*	*Reliability of Two-Terminal Networks Equivalent to Small Optimal Sorting Nets*
28	**Sorin Hoara, Roxana-Mariana Beiu and Valeriu Beiu** *Aurel Vlaicu University of Arad* *Romania*	*Implementing Hammock Networks on IBM Q*
31	**Simon Cowell, Sorin Hoara and Valeriu Beiu** *Aurel Vlaicu University of Arad* *Romania*	*Experimenting with Beta Distributions for Approximating Hammocks' Reliability*
52	**Ahmad Hiasat** *Princess Sumaya University for Technology* *Jordan*	*General Frameworks for Designing Arithmetic Components for Residue Number System*
57	**Leonard Daus and Marilena Jianu** *Technical University of Civil Engineering Bucharest* *Romania*	*The shape of the reliability polynomial of a hammock network*

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- Springer (Series Editor: Janusz KACKPRZYK).

2020 8th International Conference on Computers Communications and Control (ICCCC)

Place: *Hotel President (4 stars, aqua-park, spa), Băile Felix, Oradea, România*
Period: *May 11-15, 2020*

 IMPORTANT ANNOUNCEMENT:
On site event canceled due to coronavirus COVID - 19.
ICCCC2020 will be held online instead of in person!

Organizer: Cercetare Dezvoltare Agora (Research & Development Center of Agora University) under the aegis of the Romanian Academy- Information Science and Technology Section (President: Florin Gheotghe FILIP).

Partners: Aurel Vlaicu University of Arad (Rector: Ramona LILE), Association Cluster of Scientific Research, Innovation and European Studies from Oradea (President: Simona DZITAC), Springer (Advances in Intelligent Systems and Computing, Series Editor: Janusz Kacprzyk).

- Post Conference Proceedings will be published by Springer ("Advances in Intelligent Systems and Computing" Series)

Dedication: This edition is dedicated to the:

- **100th** anniversary of Isaac Asimov (1920-1992);
- **20th** anniversary of Agora University of Oradea;
- **15th** anniversary of International Journal of Computers Communications & Control;
- **10th** commemoration since Acad. Mihai Drăgănescu(1929-2010) passed away.

ICCCC2020 Scope and Topics

The International Conference on Computers Communications and Control (ICCCC) has been founded in 2006 by I. Dzitac, F.G. Filip and M.-J. Manolescu and organized every even year by Agora University of Oradea, under the aegis of the Information Science and Technology Section of Romanian Academy.

The goal of this conference is to bring together international researchers, scientists in academia and industry to present and discuss in a friendly environment their latest research findings on a broad array of topics in computer networking and control.

The Program Committee is soliciting paper describing original, previously unpublished, completed research, not currently under review by another conference or journal, addressing state-of-the-art research and development in all areas related to computer networking and control.

Proceedings of ICCCC2020 will be published by Springer (**Advances in Intelligent Systems and Computing** *Series*, Editors: I. Dzitac, S. Dzitac, F.G. Filip, J. Kacprzyk, M.J. Manolescu, H. Oros).

Topics
Chapter 1. Integrated solutions in computer-based control and communications;
Chapter 2. Computational intelligence methods
Chapter 3. Fuzzy methods and soft computing
Chapter 4. Decision making issues. Methods and support systems
Chapter 5. Theory for Computing, Control and Communication Systems

ICCCC2020 Chairs and Committees

General Chair: Ioan DZITAC,
Rector of Agora University of Oradea, Romania,
rector@univagora.ro, professor.ioan.dzitac@ieee.org

Prof. Ioan Dzitac   received his B.Sc.(eq.M.Sc.) in Mathematics (1977) and Ph.D. in Information Sciences (2002) from Babes-Bolyai University of Cluj - Napoca. In 2019 he has defended his Habilitation Thesis "Soft computing for decision making" at "Alexandru Ioan Cuza"University of Iasi. He is a mathematics and information sciences professor at Agora University of Oradea (since 2017) and at Aurel Vlaicu University of Arad (since 2009).
Also he is a PhD supervisor at University of Craiova. He was Rector of Agora University of Oradea in period 2012-2016 and was re-elected for a new mandate (2016-2020). He was an Adjunct Professor at University of Chinese Academy of Sciences - Beijing, China (2013-2016) and since 2016 is an Advisory Board Member at Graduate School of Management of Technology, Hoseo University, South Korea

He was in managerial positions, such as: Director of Math & Informatics Department (2004-2005), Head of IT Chair (2005-2008), Director of R&D Center (2009-2017), and Rector (2012-2016). His current research interests include different aspects of artificial intelligence, soft computing and applications of fuzzy logic in technology and economy. He is co-founder and an Editor-in-Chief of an ISI SCI Expanded quoted journal (2006), International Journal of Computers Communications & Control (nominee by Elsevier for Journal Excellence Award - Scopus Awards Romania 2015) and member in Editorial Board of 10 scientific journals. Also

he is co-founder and General Chair of International Conference on Computers Communications and Control and he was member of the Program Committee of more than 70 international conferences. He is a Senior Member of IEEE (since 2011) and other professional organizations (ROMAI, SRAIT, SSMAR, RNG-ISCB etc.). . He was an invited speaker and/or invited special sessions' organizer and chair in China (2013: Beijing, Suzhou and Chengdu, 2015: Dalian, 2016: Beijing), India (2014: Madurai, 2017: Delhi), Russia (2014: Moscow), Brazil (2015: Rio), Lithuania (2015: Druskininkai), South Korea (2016: Asan), USA (2018: Nebraska). He has published 3 books, 12 courses and materials for students, 6 conference proceedings and more than 80 scientific papers in journals and conferences proceedings (over 40 in ISI Web of Science indexed journals with over 220 citations, h-index=10).

Program Committee Chair: Florin Gheorghe FILIP

President of "Information Science and Technology" Section of Romanian Academy, Romania, ffilip@acad.ro

Prof. Florin Gheorghe Filip is a full member of Romanian Academy, President of "Information Science and Technology" Section of Romanian Academy, and director of Library of Romanian Academy. He was a Vice-President of the Romanian Academy (2000 - 2010), Managing director of National Institute for R&D in Informatics (19911997). He authored/coauthored over 250 papers published in international journals (IFAC J Automatica, IFAC J Control Engineering Practice, Annual Reviews in Control, Computers in Industry, System Analysis Modeling Simulation, Large Scale Systems etc) and contributed volumes printed by international publishing houses (Pergamon Press, Springer, Kluwer, Chapmann & Hall etc).

He is also the author/coauthor of ten monographs. He was an IPC member of more than 50 international conferences held in Europe, USA, South America, Asia and Africa and gave plenary papers at scientific conferences held in Chile, China, France, Poland, Portugal, Rep. of Moldova, Spain, Tunisia, UK. He is co-founder and Editor-in-Chief of International Journal of Computers Communications & Control and co-founder of International Conference Computers Communications & Control**.** He has received Doctor Honoris Causa title from "Lucian Blaga" Univers ity of Sibiu (November 2000), "Valahia" University, Targoviste (2007), "Ovidius" University, Constanta (2007), Ecolle Centrale de Lille (France) (2007), Technical University "Traian Vuia", Timisoara (2009), Agora University of Oradea (2012) and Academy of Economic Studies, Bucharest (2014).

Organizing Committee Chair: Misu-Jan MANOLESCU

President of Agora University of Oradea, Romania, mmj@univagora.ro

Prof. Misu-Jan Manolescu is a Professor of Risk Management and President of Administration Council of Agora University. He is an Engineer, PhD in Energy Engineering, PhD in Management, president of Agora Foundation, Founder of Agora University and co-founder and Managing Editor of International Journal of Computers Communications & Control and co-founder of International Conference Computers Communications & Control**.** His publications and research results consist in 10 books, over 60 papers and 2 inventions.

Organizing Committee Chair: Simona DZITAC

Researcher at R&D Agora, rd.agora@univagora.ro, simona@dzitac.ro

Dr. Simona Dzitac is an Associate Professor at Energy Engineering Department, Faculty of Energy Engineering and Industrial Management, University of Oradea, Romania. She received her B.Sc. in Mathematics (2000), Energy Engineering (2005), Economic Informatics (2007) and PhD in Energy Engineering (2008). Her current research interests include different aspects of reliability, modelling, simulation, quality management, IT management. She has published 11 books/courses and materials for students and more than 100 scientific papers in journals and conferences proceedings. Her research activity includes participation in 30 grants/projects. The impact of her published works are over 100 citations and h-index 6 in ISI Web of Science.

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Keynote Speakers at ICCCC 2020 (online)

1.Prof. Razvan ANDONIE

Central Washington University, 400 East University Way, Ellensburg, WA 98926, USA, Phone: (509) 963-1430, FAX: (509) 963-1449, andonie@ cwu.edu

Title of lecture: "Practical Hyperparameter Optimization for Deep Learning"

Brief Bio Sketch: *Razvan ANDONIE* received the M.S. degree in mathematics and computer science from University of Cluj-Napoca, Romania, and the Ph.D. degree from University of Bucharest, Romania. His Ph.D. advisor was Solomon Marcus, Fellow of the Romanian Academy. He is currently a Professor of Computer Science at both Central Washington University and Transilvania University of Brasov, Romania. He has published more than 130 research papers and was an invited professor at many universities. His actual research interests are computational intelligence techniques and applications, parallel/distributed computing, machine learning, and big data analytics.

2. Dr. Valeriu BEIU

Department of Mathematics and Computer Science, Aurel Vlaicu University of Arad, Romania, valeriu.beiu@uav.ro

Title of lecture: "Land of the Giants ... AI Chips"

Valeriu Beiu (S'92–M'95–SM'96) received the MSc in CE from the University "Politehnica" Bucharest (UPB) in 1980, and the PhD summa cum laude in EE from the Katholieke Universiteit Leuven (KUL) in 1994.

His affiliations include the Research Institute for Computer Techniques, UPB, KUL, King's College London, Los Alamos National Laboratory, Rose Research, Washington State University, United Arab Emirates University, and "Aurel Vlaicu" University of Arad, while his research interests have constantly been on biological-inspired nano-circuits and brain-inspired nano-architectures (low-power, highly reliable, massively parallel), being funded at over US$ 41M, and publishing over 250 papers (42 invited and 11 patents) as well as giving over 190 invited talks and organizing over 100 conferences.

Dr. Beiu received 5 fellowships and 7 best paper awards, and is a member of ACM, INNS, ENNS, and MCFA. He was a member of the SRC-NNI Working Group on Novel Nano-architectures, the IEEE CS Task Force on Nano-architectures, and the IEEE Emerging Technologies Group on Nanoscale Communications, and has been an Associate Editor of the IEEE Transactions on Neural Networks, Nano Communication Networks, *and* IEEE Transactions for Very Large Scale Integration Systems.

3. Dr. Alfred M. BRUCKSTEIN

Alfred M. Bruckstein, Ollendorff Chair in Science, Technion, IIT, Haifa, Israel, freddy@cs.technion.ac.il

Title of lecture: "Erratic Extremism Leads to Dynamic Consensus"

Alfred M. Bruckstein holds the Ollendorff Chair in Science at the Technion, IIT, in the Deppartment of Computer Science. A graduate of the Technion, with a BSc and an MSc in EE, he earned a PhD at Stanford University, in the EE Department, in 1984. Since then he is on faculty at the Technion, with long-term visiting professorship positions at Bell Laboratories at Murray Hill, NJ, USA (from 1987 to 2000), and at Nanayang Technological University, in Singapore (from 2009-present). His shorter visiting positions include Tsing-Hua University in Beijing, China (2002-2003), and visiting positions at Universite d'Evry, Paris France, at CEREMADE, University Dauphine, Paris, france, and Karlsruhe University in Germany. At the Technion, Professor Bruckstein served as the elected Dean of the Graduate School, from 2002 to 2005, and as the Head of the Technion Excellence Program for Undergraduates, from 2006 to 2012. He is a member of the MAA and AMS, and in 2014 he was elected Fellow of SIAM for contributions to Signal Processing, Image Analysis and Ant Robotic.

4. Prof. Felisa CORDOVA

Director School of Engineering, Faculty of Engineering, University Finis Terrae, Santiago, Chile, fcordova@uft.cl

Title of lecture: "Trends and challenges of cyber-social-technological-cognitive approach in ecosystems"

Prof. Felisa Córdova, Felisa CORDOVA is graduated in Electrical Engineering at the University of Santiago of Chile (USACH). She obtained the D.E.A. in Electronics and the *Docteur Ingenieur* degree at the University of Paris XI, France (1981). Now she is Director of the School of Engineering at University Finis Terrae. She was also professor, Director of the Department of Industrial Engineering and Academic Vice Rector at USACH. Her main research interests include Strategic and Operations Management and Knowledge Management of the Supply Chain. She has participated in several national and international research projects in the fields of Robotics, AGV and Virtual Operation Systems in underground mining. She has published more than 80 papers in conference proceedings and international journals in the areas of Robotics and Production Research, Knowledge and Strategic Management, Neuromanagement and Neuromarketing. She is past-president of the Chilean Association of Automatic Control ACCA (member of IFAC). She has participated in the organization of national and international Conferences (ACCA, LCA, LCR, SEPROSUL, ICCC, ICPR). She is national councilor and past Vice President of the Engineers College of Chile. She was president of the accreditation board at the Agency Acredita CI, and actually, she is member of the Directory of the Agency.

5. Dr. Yezid DONOSO

Professor, Academic ViceDirector, Head of the Master Program in Information Security Systems and Computing Engineering Department, Universidad de los Andes, Bogotá, Colombia, South America, 57-1-3394949 Ext 1723, ydonoso@uniandes.edu.co

Title of lecture: "Methodologies for Solving Complex Multi-Objective Combinatorial Problems in Engineering: An Evolutionary Approach Applied to Computer Networks"

Yezid Donoso received the System and Computing Engineering degree from Universidad del Norte, Barranquilla, Colombia, in 1996 (IEEE M'02 – SM'05) , M.S. degree from Universidad de los Andes, Bogotá, Colombia, in 1998, D.E.A. in Information Technology from Girona University, Girona, Spain, in 2002 and the Ph.D. (Cum Laude) in Information Technology from Girona University, Spain, in 2005. He is currently Associate Professor at Universidad de los Andes, Colombia and Coordinator of the Information Security Master Program and Academic ViceDirector of the Department. He is Senior Member IEEE, DVP (Distinguished Visitor Professor) Computer Society IEEE from 2005 to 2009 and President IEEE Colombia Section 2013 – 2014.

Dr. Donoso has several national and international awards and medals. Biography published in the books: "Who's Who in the World", edition 2006 and "Who's Who in Science and Engineering" by Marquis Who's Who in the World and "2000 Outstanding Intellectuals of the 21th Century" by International Biographical Centre. Cambridge, England, 2006. "Distinguished Professor", given by Universidad del Norte. Colombia. Octubre 2004. National Award of Operations research given by The Colombian Society of Operations Research. 2004..He is the co-author of several books, including Multi-Objective Optimization in Computer Networks Using Metaheuristics and Network Design for IP Convergence and He has more than 240 papers published between journals and conferences.

6. Prof. Gintautas DZEMYDA

Prof. Dr. Habil. Full member of the Lithuanian Academy of Sciences, Director of the Institute of Mathematics and Informatics, Head of the Systems Analysis Department, Institute of Mathematics and Informatics, Vilnius University, Akademijos St. 4, gintautas.dzemyda@mii.vu.lt

Title of lecture: "Recent advances in data dimensionality reduction using multidimensional scaling"

Brief Bio Sketch: Prof. Gintautas Dzemyda was born in Vilnius, Lithuania, on July 24, 1957. In 1984 he received the doctoral degree in technical sciences (Ph.D.), and in 1997 he received the degree of Doctor Habilius from the Kaunas University of Technology. He was conferred the title of Professor (1998) at the Kaunas University of Technology. Full member of the Lithuanian Academy of Sciences (2011). Recent employment is at the System Analysis Department of the Vilnius University Institute of Mathematics and Informatics as a Head of System Analysis Department and Principal Researcher. Since 2005, he is a Director of the Vilnius University Institute of Mathematics and Informatics.

The research interests include visualization of multidimensional data, optimization theory and applications, data mining, multiple criteria decision support, neural networks, parallel computing, internet data mining, recommender systems, image analysis. Applied problems have been solved in various areas including medicine and technologies. A software is designed both for general purposes and for applications. International and national RTD projects are managed. The author of 220 research papers, one monograph, five textbooks and two electronic courses for students.

Editor in Chief of the international journals *Informatica* (http://www.mii.lt/informatica) and the *Baltic Journal of Modern Computing* (http://www.lu.lv/baltic-journal-of-modern-computing/), Executive Editor a member of Editorial Board of the international journals: - *Nonlinear Analysis: Modelling and Control (Associate Editor)*, - *Informatics in Education*, - *Journal of Civil Engineering and Management, - Vestnik BSU. Series 1. Physics. Mathematics. Informatics*, - *Information Technology and Management Science. The Journal of Riga Technical University*. Member of Lithuanian Computer Society, Lithuanian Mathematical Society, Lithuanian Operational Research Society, IFIP Technical Committee 12 Artificial Intelligence.

7. Prof. Florin Gheorghe FILIP

President of "Information Science and Technology" Section of Romanian Academy, Romania, ffilip@acad.ro

Title of lecture: "10th commemoration since Acad. M. Draganescu (1929-2010) passed away"

Brief Bio Sketch: Prof. Florin Gheorghe Filip is a full member of Romanian Academy, President of "Information Science and Technology" Section of Romanian Academy, and director of Library of Romanian Academy. He was a Vice-President of the Romanian Academy (2000 - 2010), Managing director of National Institute for R&D in Informatics (19911997). He authored/coauthored over 250 papers published in international journals (IFAC J Automatica, IFAC J Control Engineering Practice, Annual Reviews in Control, Computers in Industry, System Analysis Modeling Simulation, Large Scale Systems etc) and contributed volumes printed by international publishing houses (Pergamon Press, Springer, Kluwer, Chapmann & Hall etc).

He is also the author/coauthor of ten monographs. He was an IPC member of more than 50 international conferences held in Europe, USA, South America, Asia and Africa and gave plenary papers at scientific conferences held in Chile, China, France, Poland, Portugal, Rep. of Moldova, Spain, Tunisia, UK.

He is co-founder and Editor-in-Chief of International Journal of Computers Communications & Control and co-founder of International Conference Computers Communications & Control**.** He has received Doctor Honoris Causa title from "Lucian Blaga" Univers ity of Sibiu (November 2000), "Valahia" University, Targoviste (2007), "Ovidius" University, Constanta (2007), Ecolle Centrale de Lille (France) (2007), Technical University "Traian Vuia", Timisoara (2009), Agora University of Oradea (2012) and Academy of Economic Studies, Bucharest (2014).

8. Prof. Enrique HERERRA - VIEDMA

Vicerector of research, DECSAI - University of Granada, Spain, viedma@decsai.ugr.es

Title of lecture : "Consensus in Group Decision Making and Social Networks"
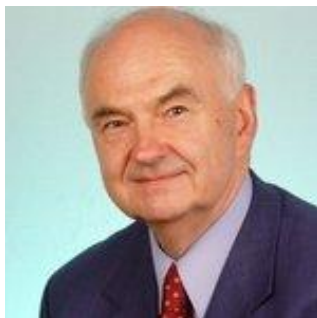
Brief Bio Sketch: Enrique Herrera-Viedma is Professor in Computer Science and A.I in University of Granada and Vice-President for Research and Knowlegde Transfer. He is also Vice-President for Publications in the IEEE System Man and Cybernetic Society. His current research interests include group decision making, consensus models, linguistic modeling, aggregation of information, information retrieval, bibliometrics, digital libraries, web quality evaluation, recommender systems, block chain and social media. In these topics he has published more than 250 papers in JCR journals and coordinated more than 22 research projects.

Dr. Herrera-Viedma is EiC of the journal Frontiers in Artificial Intelligence and an Associate Editor of more than 10 JCR journals such as the IEEE Trans. On Syst. Man, and Cyb.: Systems, IEEE Trans. On Fuzzy Systems, IEEE Trans. On Intelligence Transportation Systems, Knowledge Based Systems, Soft Computing, Fuzzy Optimization and Decision Making, Applied Soft Computing, Journal of Intelligent and Fuzzy Systems, and Information Sciences. According to Web of Science his h-index is 77 with more than 17000 citations received and according to Google Scholar his h-index is 84 with more than 28000 citations. He has been identified by Clarivate Analytics as a Highly Cited Author in both scientific categories "Computer Science" and "Engineering" during the years 2014, 2015, 2016, 2017, 2018 and 2019.

9.Janusz KACPRZYK

Professor, Ph.D., D.Sc. , Systems Research Institute, Polish Academy of Sciences
Head of Intelligent Systems Laboratory, Janusz.Kacprzyk@ibspan.waw.pl

Title of lecture : "Decision aid, decision advice, decision support: when, why, for whom"

Brief Bio Sketch: Professor Ph.D., D.Sc. Janusz Kacprzyk is Head of Intelligent Systems Laboratory, Systems Research Institute, Polish Academy of Sciences. His research interests are**:** Uncertainty and imprecision in systems modelling, Intelligent decision support systems, Data mining and knowledge discovery, Soft computing, theory and applications, Fuzzy logic.

He receive Pioneer Awards: Pioneer Award, IEEE CIS (Institute of Electrical and Electronics Engineers, Computational Intelligence Society) for pioneering works on multistage fuzzy control, in particular fuzzy dynamic programming, 2005; 6-th Kaufmann Award and Gold Medal of pioneering works on the use of fuzzy logic in economics and management, 2006; Pioneer Award for Outstanding Contributions to Granular Computing and Computing with Words by the Silicon Valley, California, IEEE Computational Intelligence Society Chapter, 2007. He is Full member, Polish Academy of Sciences, since 2010 (Member correspondent since 2002); Foreign member, Spanish Royal Academy of Economic and Financial Sciences (RACEF), since 2007 and Foreign member, Bulgarian Academy of Sciences, since 2013.