

DISTINGUISHED SPEAKERS – Global Engineering Education

Wednesday (July 25, 2017)

Session I: Global Engineering Education

9:00 am – 10:00 pm (WEDNESDAY) - Salon Diamante

Session Chair: Dr. Federico Felipe Durán, Instituto Politécnico Nacional México

9:00 - 9:30 (WEDNESDAY)



Dr. Francisco I. Giocondo César

Professor

Department of Industrial Engineering

Federal Institute of Education, Science and Technology of São Paulo
(IFSP - Campus Piracicaba)

Professor & Researcher Collaborator

Production Engineering Graduate Program

Campinas State University (FCA – UNICAMP – Campus Limeira)
Brazil

Dr. Francisco I. Giocondo César is a Mechanical Engineer (UNESP) with M.Sc. and Ph.D. in Production Engineering at the Methodist University of Piracicaba – UNIMEP. Currently doing my post-doctorate in Production Engineering at FCA - UNICAMP. He has certified qualifications in Project Management (PMI) and Green Belt. Dr. Giocondo has been a Professor at the Industrial Department

of Federal Institute of Education, Science and Tecnology of São Paulo (IFSP - Campus Piracicaba) since 2011. He is also a Professor Researcher Collaborator in the Production Engineering Graduate Program at the Campinas State University (FCA – UNICAMP – Campus Limeira) since 2016. Coordinated SB-Lab (Sustainable Business Lab). Dr. Giocondo has 23 years professional experience as an International Project Manager on TRW and Caterpillar Brazil. His current research interests are continuous improvement / lean production / six sigma, industry 4.0 / advanced manufacturing / industrial internet of things, entrepreneurship / business canvas and emergent technologies / disruptive technologies. Dr. Giocondo has collaboration in the following institutions: Collaborative Research Network on Supply Chain 4.0 as Founding member of the SC4, Engineer Association Brazil – Germany (VDI) as a member of the engineering education-working group, National Association of Research and Development of Innovative Companies (ANPEI) as a member of the ICT-Enterprise Interaction Committee (Scientific and Technological Institutions), ASQ – South America – American Society of Quality as Guiding member of the ASQ student branches and Innovation Plant (Usina da Inovação) / AgTechValley) as mentoring startup. He has published numerous research papers in conference proceedings and journals.

9:30 - 10:00 (WEDNESDAY)



Dr. Federico Felipe Durán

Profesor de Tiempo Completo

Instituto Politécnico Nacional México

Escuela Superior de Ingeniería Mecánica y Eléctrica Unidad Zacatenco
Mexico

Engineering Accreditation

Dr. Federico Felipe Durán is professor of computer science at Escuela Superior de Ingeniería Mecánica y Eléctrica (ESIME) of Instituto Politécnico Nacional (IPN) Mexico. His research interests include Artificial Intelligence, Data bases, Natural Language Processing and Engineering Education. Felipe is an electronic and communications engineering for the IPN (1984) and made graduate studies

at Centro de Investigación y Estudios Avanzados in electrical engineering, option Computer Science (1987).

Session II: Global Engineering Education

2:00 pm – 3:30 pm (WEDNESDAY) - Salon Diamante

Session Chair: Dr. Augusto Loureiro da Costa, UFBA - Federal University of Bahia, Brazil

2:00 – 2:30 pm (WEDNESDAY)

**Dr. Augusto Loureiro da Costa**

Associate Professor
Department of Electrical Engineering
Programa de Post-graduate Engenharia Eletrica
UFBA - Federal University of Bahia
Ondina, Salvador - State of Bahia, Brazil
Visiting Scholar - University of Pennsylvania, USA

Prof. Augusto Loureiro da Costa has his PhD in Electrical Engineering in 2001 at Federal University of Santa Catarina (Brazil), was visiting PhD student at Karlsruhe University (Germany). He is an associate professor at the Electrical Engineering Department (DEE) of Federal University of Bahia (UFBA). He leads the research group of the Robotic Laboratory (LaR). He coordinated CEIA, the Special Committee of Artificial Intelligence of the Brazilian Computer Society (SBC) from 2008 until 2010 and Intelligent Systems Technical Committee of Brazilian Automation Society from 2012 until 2016. He was Visiting Professor at University of Pennsylvania, USA, from July 2012 until June 2013. His main research topics are related to Autonomous Robots and Multi-robots Systems. Currently he is Undergraduate Teaching accessor at Undergraduate Prorectory of Federal University of Bahia.

2:30 – 3:00 pm (WEDNESDAY)

**Mariana Tafur, PhD**

Assistant Professor
School of Education - CIFE
Los Andes University
Bogotá, Colombia

Dr. Mariana Tafur is an assistant professor of School of Education at Los Andes University, Bogotá, Colombia. She received her Ph.D. from School of Engineering Education at Purdue University. She has a M.S., education, Los Andes University, Bogota, Colombia; and a B.S., electrical engineering, Los Andes University, Bogota, Colombia. She is a 2010-2013 Fulbright Fellow. Her research interests include engineering skills development, STEM for non-engineers adults, motivation in STEM to close the technology literacy gap, and STEM formative assessment.

3:00 – 3:30 pm (WEDNESDAY)

Dr. Alberto Un Jan

Dean
Faculty of Engineering
Universidad Wiener in Lima
Peru

Dr. Jan is an engineer in electronics (Universidad Nacional de Ingeniería, UNI, Lima, Peru. He hold an MSc degree in systems engineering (UNI), an MSc degree in information systems in management (Sheffield Hallam University, UK; and a Doctor degree in engineering (Universidad Nacional Federico Villarreal, Lima, Peru. Dr. Jan worked ten years in the development of software for petroleum and geology for PetroPerú and PetroMar, the state owned oil companies. He has been Dean of the Faculty of Engineering at Universidad Wiener in Lima, with two careers: Industrial Engineering and Systems and Informatics Engineering. Under his management, the career of Systems and Informatics Engineering was certified with ISO 9001 in education processes. He knows Peruvian markets for education. Dr. Jan has numerous publication.

Session III: Global Engineering Education

4:00 pm – 5:30 pm (WEDNESDAY) - Salon Diamante

Session Chair: Professor Juan José Encina Cabrera, National University of Asuncion of Paraguay

4:00 – 5:30 (WEDNESDAY)

Dr. Julio Santisteban

Associate Researcher
School of Computer Science
San Pablo Catholic University (UCSP)
Arequipa – Peru

4:00 – 5:30 (WEDNESDAY)



Professor Juan José Encina Cabrera

Director of the Department of Electricity
Faculty of Engineering
National University of Asuncion of Paraguay
San Lorenzo – Paraguay

Use of application software vs. Traditional teaching of Engineering

Professor Encina is working as an engineer for 17 years ago at the electricity sector, Power Company, National Electricity Administration (ANDE), Institution of Government. He was Head of Quality Management Section from 2001 – 2007 and Head of Billing Department from 2007- 2010 of the National Electricity Administration (ANDE) of Paraguay. Professor Encina was Head of Large Clients and Head of Metropolitan Commercial Division and Lower Chaco of the commercial management. He was Electromechanical Engineer of the Metropolitan Commercial Division and Lower Chaco of the commercial management. He is graduated in Electromechanical Engineer from the Faculty of Engineering of the National University of Asuncion of Paraguay. He was Director of the Department of Electrical Engineering Faculty of the National University of Asuncion. He is pursuing a Masters in Government and Public Management. He has presented lectures and conferences in different universities in Paraguay. He has published a book on "Energy Policy of Paraguay to 2023" that is registered with the copyright. He received several awards from the National University Best Teacher. He is currently the Chairman of the Southern Cone IEEE and IEEE Section president Paraguay, having been a founding member of the section.

4:00 – 5:30 (WEDNESDAY)



Dr. Fáber D. Giraldo

Assistant Professor
Faculty of Engineering
University of Quindío
Armenia, Circasia, Quindío, Colombia

Taming global challenges in Software Engineering education: learned lessons in the Quindío region of Colombia

Fáber D. Giraldo is a System and Computer Engineer from the University of Quindío, Colombia (with a grant from the Ministry of Education of Colombia). He has a Ms. Eng. degree with emphasis on Informatics from EAFIT University, Colombia (with a grant from EAFIT University). He holds a Ph.D.(C) in Informatics from the Universidad Politécnica de València, Spain (with a grant from the National administrative department of Science, Technology and Innovation of Colombia – COLCIENCIAS) and is currently working with the PROS Research Center.

He is a full assistant professor in the Faculty of Engineering at the University of Quindío, He coordinates the Master in Engineering with emphasis on Software Engineering at the University of Quindío. He is a researcher of the Information Systems and Industrial Control research group (SINFOCI) at the University of Quindío, and is recognized as Associate Researcher Type I by COLCIENCIAS. His research interests include software engineering, model-driven engineering, software quality, quality in model-driven engineering, software architecture, technical debt, enterprise architecture, enterprise modelling, HCI and innovation. He has supervised more than 100 undergraduate projects, and He has eight master works under his direction to date. He is also invited professor of some Universities of Colombia for master courses in Software Architecture and Software Process Improvement. Currently He has research projects about quality in model-driven engineering projects, telecare systems for older people, information systems to support agricultural production chains, and serious games to support advertising in public health prevention and teaching process in immunology.

Thursday (October 26, 2017)

Session IV: Global Engineering Education

8:00 am – 9:00 am (THURSDAY) - Salon Diamante

Session Chair: Dr. Hernán Nina Hanco, National University of San Antonio Abad, Cusco, Peru

8:00 – 8:20 (THURSDAY)

Dr. Hernán Nina Hanco

Professor, Department of Computer Engineering
Master in Administration and Systems and Computer Engineering
National University of San Antonio Abad
Cusco, Peru



Diagnostic of Industry 4.0 in the South Region of Perú

Hernán Nina is currently Professor of the Department of Computer Engineering, Master in Administration and Systems and Computer Engineering at the National University of San Antonio Abad of Cusco, Member and Author of ACM (Computer Machinery Association), Member of Electrical and Electronic Engineers of IEEE, Member of the IEEE Computing Society, Certified Educator of Google Level 1, Director of the Professional Academic School of Systems and Computer Engineering of UAP's subsidiary, Cusco 2011-2012. Exercising the profession of computer engineering and systems 20 years ago, most of my activities were in the field of computer education in universities and institutes in southern Peru. The subject of interest is Computer Graphics, Database Systems and Software Development, Cloud Computing and Higher Education.

8:20 – 8:40 (THURSDAY)

Ignacio Laiton Poveda

Licenciado en Física Universidad Pedagógica Nacional, Bogotá, Colombia
Especialista en Ciencias, Física, Universidad Nacional de Colombia. Magister en Educación, Universidad de la Salle, Bogotá, Colombia
Doctor en Educación, tesis Cum Laude, Universidad de Granada, España



Docente de todos los niveles educativos a lo largo de 28 años de trayectoria. Durante los últimos doce años dedicados a la docencia universitaria y los últimos ocho a la investigación sobre la enseñanza de pensamiento a través de las ciencias básicas en Ingeniería, desarrollando varios proyectos de investigación en esta línea. Investigaciones expuestas en diferentes escenarios y congresos entre los que se destacan congresos sobre educación en Ingeniería en La Habana, Cuba, Orlando y Boston, Estados Unidos, Bilbao, España, Munich, Alemania, Bucaramanga y Bogotá, Colombia. Los resultados de los proyectos investigativos sobre la enseñanza de pensamiento en el contexto de las ciencias básicas en Ingeniería, sustentan una sólida base para la charla sobre este ítem, denominada "El desarrollo de pensamiento crítico en estudiantes de ingeniería a través de las ciencias básicas". Se pretende debelar como a través de la aplicación de metodologías desarrolladas por diversos grupos de trabajo a nivel mundial, entre las que se destacan los grupos de la Universidad de Harvard, el grupo Eduthink en España, entre otros, es posible generar y potenciar habilidades de pensador crítico en los estudiantes de primeros semestres de ingeniería. El pensamiento crítico aporta no solo en el sentido profesional del ingeniero, sino que aporta en la calidad del egresado como persona y en su papel como ciudadano.

8:40 – 9:00 (THURSDAY)

Dr. Lilian Adriana Borges

Senior Lecturer and Research Coordinator
Pro-vice-chancellor's Office for Research
UNIDAVI - Universidade para o Desenvolvimento do Alto Vale do Itajaí
Rio do Sui, Brazil

Dr. Lilian Adriana Borges is a Senior Lecturer and Research Coordinator at the Pro-vice-chancellor's office for Research at UNIDAVI, in Brazil. Prior to her academic career, Lilian worked for large multinational companies such as Philip Morris, dealing with imports/exports and operations management. She has 13 years of experience in teaching and research in Brazil and the United Kingdom, having published books and papers in four-star journals and high-profile conferences. Currently, Dr Borges is involved in four projects related to sustainability, which address food supply logistics (FSL) and the measurement of environmental performance in hospitals in Brazil. Recently, Lilian coordinated with her British counterpart the International Workshop "A Pathway to Global Sustainability - role of local food supply logistics in global sustainability", which gathered 30 early career researchers from Brazil and the UK to discuss and address sustainability issues related to the Brazilian FSL networks and supply chains. The event took place in May at UNIDAVI and was funded by the British Council and Newton Fund.

Session V: Global Engineering Education

9:00 am – 10:00 am (THURSDAY) - Salon Diamante

Session Chair: Prof. Eduardo Cardoso Moraes, Federal University of Bahia, Brazil

9:00 – 9:30 (THURSDAY)



Prof. Eduardo Cardoso Moraes

Federal Institute of Alagoas

Federal University of Bahia, Salvador, Brazil

Engineering education challenges with advances of Industrial Revolution - Industry 4.0

Abstract: The world is assisting to a rapid evaluation of technologies and one of most impacted area due to high competition is the industrial area. In the academic area is common to say there is a fourth industrial revolution, with several domains of science and technology being strongly developed and, specially, being integrated with each other, allowing to build evolvable complex systems. Internet of Things, virtualization, data analytics, big-data, distributed control, Cyber-Physical. stems and self-organization, amongst others, are playing an important role in this journey. The new engineer will have to handle and adapt himself with this new context. The universities should be aware and adapt the curriculum and mentality. Enterprise Integration is getting cheaper, real-time, mobile and ubiquitous. an important role. This talk will discuss about these technology challenges and opportunities for

Service paradigm is taking educational field.

9:30 – 10:00 (THURSDAY)



Ing./MFN José Gabriel Suárez Delgado

Aguascalientes, Ags. México

IEEE Aguascalientes Section Chair

Leadership for High Professional Performance

MFN/Ing. J. Gabriel Suárez D. is an Electronics & Telecommunications Engineer graduated from the Mexico's National Polytechnic Institute and also holds a Finance and Business Master Degree with Magna Cum Laude from the University of Aguascalientes. Mr. SUÁREZ is an experimented professional in the electronics and electromechanical manufacturing area where he spent 40 years of his life working for the following companies: IBM, Ericson, Magnavox, Xerox and Flextronics. Mr. SUÁREZ worked in many projects especially for Xerox and Flextronics: he sat up the Xerox Mexicana Mfg. Div. Reliability Laboratory, the PCBAs repair area saving the company \$10 million dollars on a yearly basis for 10 years, the 1st PCBA line, the CO2 cleaning area to clean copiers to be remanufactured, the scrap recycling area generating multiple benefits for the company and the Aguascalientes State community, etc. With Flextronics, he and his multinational team developed the Flextronics BCP (Business Continuity Plan) and was Flextronics Global Lead for this industry practice, responsible for the implementation of the electronics industry RoHS (Restriction of Certain Hazardous Substances) requirement for the Flextronics sites in the Americas, responsible also to implement the Social and Environmental Program for the Flextronics Americas sites and also with a multinational teams developed the Flextronics Drive Safe Program and the Sustainable Packaging Program. Presently, Mr. SUÁREZ is the IEEE Aguascalientes, Mexico Section Chair, Aguascalientes CONALEP's (one of the biggest mid technical school systems in Mexico) Liaison President, founder of the Aguascalientes CANIETI (National Electronics, Telecommunications & Information Technology Chamber) and Business Topics Professor at the UTR (El Retoño Technological University) 1st. BIS (Bilingual International and Sustainable) university in Mexico.

Session VI: Global Engineering Education

4:30 pm – 5:30 pm (THURSDAY) - Salon Diamante

Session Chair: Dr. Vitor M. Caldana, IFSP - Instituto Federal de São Paulo - Campus Sorocaba, Brazil

4:30 – 5:00 pm (THURSDAY)



Dr. Vitor M. Caldana

Professor

Depto. de Eletroeletrônica

IFSP - Instituto Federal de São Paulo - Campus Sorocaba

Santana de Parnaíba, SP, Brazil

An Analysis of Engineering Education impact on Brazil's Micro Regions

Vitor Mendes Caldana is a Professor at Instituto Federal de São Paulo at the Sorocaba campus for Electronics. He graduated in Electronic Engineering at Mackenzie University in 2004 and obtained his Master of Science (M.Sc.) in Industrial Engineering in 2017. He worked in the industry for 15 years before entering in the teaching career. He has published articles in international conferences and

journals. His M.Sc. research was based on the understanding of Engineering Education and the impacts in microregions. He is currently in the early stages of developing his Ph.D. project.

5:00 – 5:30 pm (THURSDAY) – **INDUSTRY SOLUTIONS**



Antonio J. Jara

Adjoint Scientifique

University of Applied Sciences Western Switzerland (HES-SO)

Vice-Chair of the IEEE Communications Society Internet of Things Technical Committee

Digitalization of Cyber Physical Processes with FIWARE

Antonio J. Jara; Adjoint Scientifique at the University of Applied Sciences Western Switzerland (HES-SO), Founder at HOP Ubiquitous S.L. (www.hopu.eu) and vice-chair of the IEEE Communications Society Internet of Things Technical Committee. He did his PhD (Cum Laude) at the Intelligent Systems and Telematics Research Group of the University of Murcia (UMU) from Spain in 2013. He received two M.S. (Hons. - valedictorian) degrees. Since 2007, he has been working on several projects related to IPv6, Security and WSNs in automation and healthcare. He is especially focused on the design and development of new protocols for security and mobility for Future Internet of things, which was the topic of his Ph.D. He did the transfer of the results from his PhD around Security in the American Company United Technologies. Nowadays, he continues working on IPv6 technologies for the Internet of Things In areas such as security, heterogeneity integration and the application of IoT in sectors such as industry 4.0, energy, and smart cities. He has also carried out a Master in Business Administration (MBA). He has published over 100 international papers (>2000 citations, h: 25), As well he holds several patents in the IoT domain. Finally, he has participated in several European Projects about Internet of Things (networking, security and intelligence distribution – fog computing) and applied Internet of Things (energy, industry 4.0 and Smart Cities).



INTERNATIONAL FEDERATION OF
ENGINEERING EDUCATION SOCIETIES

The International Federation of Engineering Education Societies (IFEES)

IFEES was founded in 2006, at the American Society for Engineering Education's Global Conference in Rio de Janeiro, Brazil. Engineering education leaders from around the world had gathered the previous year to explore to possibilities of creating an international organization for engineering education societies. IFEES is proud to be leading the effort in connecting the world's engineering education societies and leveraging our members' collective strengths in order to improve engineering education worldwide. IFEES members represent a diversity not only in cultures, but in engineering education interests, from quality assurance to engineering education, from pedagogy to the role of technology in the classroom. IFEES member societies are expanding their global reach, and new relationships and collaborations are created all the time through IFEES' global network.

Through the collaboration of its member societies, IFEES will work to establish effective engineering education processes of high quality around the world to assure a global supply of well-prepared engineering graduates. IFEES will strengthen member organizations and their capacity to support faculty and students. It will attract corporate participation, helping to connect engineering graduates with international corporations that have a pressing need for well-trained engineers who can work in a global environment. IFEES will also enhance the ability of engineering faculty, students and practitioners to understand the varied cultures of the world and work effectively in them.



GLOBAL ENGINEERING
DEANS COUNCIL

Global Engineering Deans Council (GEDC)

Recognizing the global need for a world-wide forum of engineering deans and rectors, a group of over 20 leaders of engineering education institutions and corporate partners first met in Rio de Janeiro, Brazil, on 9 October 2006 and in Istanbul, Turkey, on 30 September 2007. Encouraged by IFEES and modeled after the ASEE Engineering Deans Council (EDC), the Global Engineering Deans Council (GEDC) was created on 9 May 2008 in Paris, France. The main goal of the GEDC is to provide engineering deans and rectors with ideas, tools, and

“best” practices necessary to become innovative leaders of engineering education

The GEDC holds annual meetings surrounding four strategic objectives: Institutional Leadership, Curriculum Leadership, Policy Leadership and Accreditation Leadership. Accommodating for its diverse membership, the GEDC has met in Argentina, Brazil, Turkey, France, Singapore, People's Republic of China, United States of America, Hungary, the United Arab Emirates, and will meet in Italy and Australia in 2015.