

General Framework and Plenary Keynote Speakers of the Collocated Conferences

The 20th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2016
The 10th International Multi-Conference on Society, Cybernetics and Informatics: IMSCI 2016
The 15th Ibero-American Conference on Systems, Cybernetics and Informatics: CISCi 2016
Décima Quinta Conferencia Iberoamericana en Sistemas, Cibernética e Informática: CISCi 2016

Orlando, Florida, USA – July 5– 8, 2016

Tuesday, July 5th, 2016

9:00 AM – 12:00 and 1:00 PM – 5:00 PM Registration

10:00 AM – 11: 00 AM ***Conversational Session****

Co-Chairs and Co-Facilitators: **Dr. Jeremy Horne**, President-emeritus, Southwest Area Division, American Association for the Advancement of Science (AAAS), USA, **Professor Stuart Uempleby**, The George Washington University, and **Dr. Nagib Callaos**, Founding President of the IIS, “*Inter-Cultural and Inter-Disciplinary Communication*”

11:00 AM – 12: 00 PM ***Participative Workshop** (Part 1 of 2)***

Professor Stuart Uempleby, The George Washington University, USA, “*Academic Globalization*”

12:00 PM – 1:00 PM Lunch (on your own)

1:00 PM – 2:00 PM ***Participative Workshop** (Part 2 of 2)***

Professor Stuart Uempleby, The George Washington University, USA, “*Academic Globalization*”

2:00 PM – 3:00 PM ***Workshop*****

Tom Hull, MS, CIO, Florida Polytechnic University, USA and Moffitt Cancer Center, USA, “*3D Printing and Technologies*”

3:00 PM – 3:30 PM Coffee Break

3:30 PM – 4:30 PM ***Participatory Panel ****

Panelists and Co-Facilitators: **Dr. Jeremy Horne**, President-emeritus, Southwest Area Division, American Association for the Advancement of Science (AAAS), USA, **Professor Sushil Acharya**, Robert Morris University, USA, and **Dr. Nagib Callaos**, Founding President of the

IIS, *“Information Systems Verification and Validation: Three Perspectives: Technical, Systemic, and Philosophical.”*

4:30 PM – 5:30 PM ***Conversational Session****

Co-Facilitators: **Professor Andres Tremante**, Florida International University, USA, **Dr. Joe Manganelli**, Kent State University, USA, and **Dr. Luis Velazquez-Araque**: *“Research and Consulting: Research via Consulting and Consulting Via Research”*

5:30 PM – 6:30 PM ***Conversational Session****

Co-Facilitators: **Dr. Jeremy Horne**, President-emeritus, Southwest Area Division, **Dr. Risa Blair**, Grantham University, USA, **Dr. Nagib Callaos**, Founding President of the IIS, *“Differences and Relationships Among Education, Instruction, Learning, and Training”*

** Participants in conversational participative sessions or participatory panels will have the opportunity to write position or reflection papers related to the topics discussed in the respective session. These papers might be published in the post-conference proceedings, with no additional charge, as invited papers, after going through internal editorial review. The deadline for these papers will be 21 days after the conference is over. One of the objectives of these conversational sessions is to provide a learning process through the sharing of ideas, experiences, opinions, and knowledge, via inter-disciplinary communication. This learning might generate, in turn, position or reflections papers that should be, in our opinion, included in the proceedings of the conference, because a) they are part of its consequences and the information and knowledge that was shared through it, and b) they might, in turn, generate more inter-disciplinary communication.*

*** Conference participants who attend the whole workshop (its two parts) will receive an attendance certificate signed by its speaker and/or facilitator.*

Wednesday, July 6th, 2016

8:00 AM – 12:00 PM and 1:00 PM – 6:00 PM **Registration**

7:45 AM – 10:15 AM **Plenary Session** of all Collocated Events (with complimentary plated breakfast for the plenary session’s attendees)

Co-Chairs: **Dr. Robert Cherinka**, MITRE Corporation, USA
and **Eng. Joseph Prezzama**, MITRE Corporation, USA

7:45 AM – 8:00 AM Short Announcements.

- 8:00 AM – 8:30 AM Keynote Speakers: **Dr. Robert Cherinka and Eng. Joseph Prezzama**, MITRE Corporation, USA, “*Building a Cyber Professional Workforce: Key Enablers*”
- 8:30 AM – 9:00 AM Keynote Speaker: **David Shearer**, CISSP, The International Information, Systems Security Certification Consortium (ISC)², USA, “*Security: The Missing Component in the Product Development Lifecycle*”
- 9:00 AM – 9:30 AM Keynote Speaker: **Professor J. Eric Dietz**, Purdue University, USA, “*Purdue Homeland Security Institute Research*”
- 9:30 AM – 10:00 AM Keynote Speaker: **Anne Connell, MS, CFA**, Carnegie Mellon University, USA, “*Delight and Responsibility: Problematic Situations and Preferred Future States*”
- 10:00 AM – 10:15 AM Q&A
- 10:20 AM – 12:20 PM Breakout Sessions for WMSCI 2016, IMSCI 2016 and their collocated events
- 10:20 AM – 12:20 PM Plenary session for CISCi and SIECI 2015 (*In Spanish*)
- Moderadores: **Profesores Gabriela Vilanova y Jorge Varas**, Universidad Nacional de la Patagonia Austral, Argentina
- 10:20 AM – 10:50 AM Ponentes: **Profesores Gabriela Vilanova y Jorge Varas**, Universidad Nacional de la Patagonia Austral, Argentina, “*Formación de Recursos Humanos y Gestión de Proyectos de Investigación Multidisciplinar en Ambientes Mediados*”
- 10:50 AM – 11:20 AM Ponente: **Dra. María. Dolores García Perea**, Mexico, Instituto Superior de Ciencias de la Educación del Estado de México, “*El Docente y las Tecnologías Utilizadas en el Aula*”
- 11:20 AM – 11:50 AM Ponente: **Profesor Andrés Tremante**, Florida International University, USA, “*Integración de la Investigación, la Educación y la Solución de Problemas de la vida Real*”
- 11:50 AM – 12:20 AM P&R y conversación informal** respecto a la importancia de relacionar investigación con consultoría: investigación a través de la consultoría y consultoría a través de la investigación. (ver arriba la explicación de las dos **)
- 12:20 PM – 1:30 PM Lunch (on your own)

1:30 PM – 3:40 PM **Plenary Session** of all Collocated Events

Co-Chairs: **Dr. Russell Jay Hendel**, Towson University, USA
and **Professor Tomas Zelinka**, Czech Technical University in
Prague, Czech Republic

1:30 PM – 2:00 PM Keynote Speaker: **Dr. Mario Lamanna**, Evoelectronics, Italy
and Selex-SI, USA, “*The Key Role of Interdisciplinary
Communication in Cyber Security*”

2: 00 PM – 2:30 PM Keynote Speaker: **Professor Tomas Zelinka**, Czech Technical
University in Prague, Czech Republic, “*‘Smart’ as a Key
Component of the ‘Sustainable’ multidisciplinary city
Development*”

2: 30 PM – 3:00 PM Keynote Speaker: **Dr. Russell Jay Hendel**, Towson University,
USA, “*Effective Verbal Encouragement: Prayer, Business and
Teaching*”

3:00 PM – 3:30 PM Keynote Speaker: **Professor Richard Segall**, Arkansas State
University, USA, “*Big Data: A Treasure Chest for
Interdisciplinary Research*”

3:30 PM – 3:45 PM Q&A

3:45 PM – 4:15 PM Coffee Break

4:15 PM – 6:30 PM Breakout Sessions

7:00 PM – 8:30 PM **Welcome Reception: Buffet Dinner.**

Thursday, July 7th, 2016

8:00 AM – 12:00 PM and 1:00 PM – 6:00 PM **Registration**

7:45 AM – 10:15 AM **Plenary Session** of all Collocated Events (with complimentary plated
breakfast for the plenary session’s attendees)

Co-Chairs: **Professor Stuart A. Umpleby**, The George
Washington University, USA and **Dr. Karl H. Müller**, Director
of The Steinbeis Transfer Center, New Cybernetics, Vienna,
Austria

7:45 AM – 8:00 AM Short Announcements.

- 8:00 AM – 8:30 AM Keynote Speakers: **Professor Hans Mulder**, University of Antwerp, Belgium and **Jim Johnson**, The Standish Group, USA, "*CHAOS Chronicles, Focusing on Failures and Possible Improvements in IT projects*"
- 8:30 AM – 9:00 AM Keynote Speakers: **Professor Emeritus J. Hanns Pichler**, Austrian Institute for SME Research & Vienna University of Economics and Business, Austria, "*HYPOTHESES NON FINGO - Innovation and Entrepreneurship in Schumpeterian Perspective*"
- 9:00 AM – 9:30 AM Keynote Speaker: **Dr. Bruce E. Peoples**, Université Paris 8, France, "*Ensemble Innovations*"
- 9:30 AM – 10:00 AM Keynote Speaker: **Dr. Karl H. Müller**, Director of The Steinbeis Transfer Center, New Cybernetics, Vienna, Austria, "*Second-Order Science and Science from Within - Significant Differences and Perspectives*"
- 10:00 AM – 10:15 AM Q&A
- 12:20 PM – 1:30 PM Lunch (on your own)
- 1:30 PM – 3:40 PM **Plenary Session** of all Collocated Events
- Co-Chairs: **Dr. Marta Szabo White**, Georgia State University, USA and **Dr. Risa Blair**, Grantham University, USA
- 1:30 PM – 2:00 PM Keynote Speaker: **Dr. Marta Szabo White**, Georgia State University, USA, "*Pedagogy of Paradigms: Education Enrichment with Ethos, Pathos & Logos*"
- 2: 00 PM – 2:30 PM Keynote Speaker: **Dr. Doug Sparkes**, University of Waterloo, Canada, "*Entrepreneurship Education, an Experiential Journey*"
- 2: 30 PM – 3:00 PM Keynote Speaker: **Professor Bettina Harriehausen-Mühlbauer**, University of Applied Sciences, Germany "*Mobile Computation of Barrier-free Routes for Mobility Impaired Users via Voice Control*"
- 3:00 PM – 3:30 PM Keynote Speaker: **Dr. Denise K. Comer**, Duke University, USA, "*A Transfer-Based Framework for Inter-Disciplinary Communication, Teaching, and Research*"
- 3:30 PM – 3:45 PM Q&A

3:45 PM – 4:15 PM Coffee Break

4:15 PM – 6:30 PM Breakout Sessions

Friday, July 8th, 2016

8:00 AM – 12:00 PM **Registration**

7:45 AM – 10:15 AM **Plenary Session** of all Collocated Events (with complimentary plated breakfast for the plenary session's attendees)

Co-Chairs : **Professor Stuart A. Umpleby**, The George Washington University, USA and **Professor Ronald A. Styron, Jr.**, University of South Alabama, USA.

7:45 AM – 8:00 AM Short Announcements.

8:00 AM – 8:30 AM Keynote Speaker: **Professor Shigehiro Hashimoto**, Kogakuin University, Japan, "*How to Learn Multidisciplinary Design: Biomedical Engineering in Cross Cultural Seminar*"

8:30 AM – 9:00 AM Keynote Speaker: **Professor Stuart A. Umpleby**, The George Washington University, "*Vladimir Lefebvre's Theory of Two Systems of Ethical Cognition*"

9:00 AM – 9:30 AM Keynote Speaker: **Professor Gabriel Felley**, University of Applied Sciences Northwestern Switzerland "*Updating antique Chinese Knowledge*"

9:30 AM – 10:00 AM Keynote Speaker: **Professor Ronald A. Styron, Jr.**, University of South Alabama, USA and **Dr. Jennifer Styron**, University of South Alabama, USA, "*Engaging Online Learners in a Synchronous Environment*"

10:00 AM – 10:15 AM Q&A

12:20 PM – 1:30 PM Lunch (on your own)

1:30 PM – 3:40 PM **Plenary Session** of all Collocated Events

Co-Chairs: **Dr. Risa Blair**, Grantham University, USA and **Dr. Karl H. Müller**, Director of The Steinbeis Transfer Center, New Cybernetics, Vienna, Austria

1:30 PM – 2:00 PM Keynote Speaker: **Dr. Jeremy Horne**, President-emeritus, Southwest Area Division, American Association for the

Advancement of Science (AAAS), USA, *“How Globalized Academics Articulate”*

2: 00 PM – 2:30 PM Keynote Speaker: **Dr. Risa Blair**, Grantham University, USA,
“Training and Education: Is Training Education? Is Education Training? eLearning, Hybrid, and Face-to-Face Modalities - A Participatory Debate”

2: 30 PM – 3:00 PM Keynote Speaker: **Dr. Karl H. Müller**, Director of The
Steinbeis Transfer Center, New Cybernetics, Vienna, Austria,
“Varieties of Contemporary Second-Order Cybernetics”

3:00 PM – 3:30 PM Keynote Speaker: **Dr. Luis Velazquez-Araque**, University of
Guayaquil, Ecuador, *“Engineering Research and Innovation for
the Integration of Academy and Society”*

3:30 PM – 3:45 PM Q&A

3:45 PM – 4:15 PM Coffee Break

4:15 PM – 6:30 PM Breakout Sessions

7:00 PM – 8:30 PM **Awards Ceremony and Toast**

Award Certificates will only be delivered at the Awards Ceremony. No exceptions will be made under any circumstances.

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Conversational Participative Session – Tuesday, July 5th, 2016, 10:00 AM – 11:00 AM

“Inter-Cultural and Inter-Disciplinary Communication”

Co-Facilitators



Professor Stuart Umpleby

The George Washington University, USA
Director of the Research Program in Social
and Organizational Learning
Former President of
The American Society of Cybernetics



Dr. Jeremy Horne

President-emeritus,
Southwest Area Division,
American Association for the
Advancement of Science (AAAS), USA
CEO - Inventors Assistance League,
USA



Dr. Nagib Callaos

Founding President of the International
Institute of Informatics and Systemics, USA
Former Dean of Research and Development
of the University Simon Bolivar, Venezuela
Founding Editor in Chief of the Journal of
Systemics, Cybernetics and Informatics

Abstract

Taking into account that a discipline can be conceived as intellectual culture, is there the possibility of reciprocal learning, via analogical thinking, between studies and research in ‘Inter-Cultural Communication’ and ‘Inter-Disciplinary Communication’?” How both areas are related to Academic Globalization?

Short Bios

Dr. Stuart Umpleby is a professor emeritus in the Department of Management and Director of the Research Program in Social and Organizational Learning in the School of Business at The George Washington University. He received degrees in engineering, political science, and communications from the University of Illinois in Urbana-Champaign. From 1975 to the present he has been a professor at The George Washington University. From 1994 to 1997 he was the faculty facilitator of the Quality and Innovation Initiative in the GW School of Business and Public Management. From 1997 to 2000 he worked on the Year 2000 Computer

Crisis, viewing it as an opportunity to test social science theories using a before and after research design. He teaches courses in the philosophy of science, cross-cultural management, organizational behavior, cybernetics, and systems science. Other interests include process improvement methods, group facilitation methods, and the use of computer networks.

Umpleby has published articles in *Science*, *Policy Sciences*, *Population and Environment*, *Science Communication*, *The Futurist*, *Futures*, *World Futures*, *The Journal of Aesthetic Education*, *Simulation and Games*, *Business and Society Review*, *Journal of International Business and Economics*, *Review of Business Research*, *Telecommunications Policy*, *Journal of the Washington Academy of Sciences*, *Reflexive Control*, *Systems Practice*, *Kybernetes*, *Cybernetics and Human Knowing*, *Cybernetics and Systems* and several foreign language journals. He is a past president of the American Society for Cybernetics. He is Associate Editor of the journal Cybernetics and Systems.

Umpleby has received research grants from the National Science Foundation, the Charles F. Kettering Foundation, the Charles Stewart Mott Foundation, the Nathan Cummings Foundation, the U.S. Department of State's Bureau of Educational and Cultural Affairs and the Central Asia Research Initiative. He has consulted with the World Bank, with government agencies in the U.S. and Canada and with corporations in the U.S., Europe, Japan, and China. He has advised on the creation of a PhD program in management and business in Almaty, Kazakhstan. In May 2008 he conducted a video conference on "How to do Research" with Uzbek scholars at the U.S. Embassy in Tashkent.

In connection with his work in systems theory and management, he has been a guest scholar at the Wharton School of the University of Pennsylvania, the International Institute for Applied Systems Analysis in Laxenburg, Austria, the University of Vienna, the Institute for Advanced Studies in Vienna, Austria, and the University of St. Gallen in St. Gallen, Switzerland. He is a member of the Principia Cybernetica Project at the Free University of Brussels. In spring 2004 he was a Fulbright Scholar in the School of Economics and Business, University of Sarajevo, Sarajevo, Bosnia-Herzegovina.

Between 1981 and 1988 Umpleby was the American coordinator of a series of meetings between American and Russian scientists to discuss the foundations of cybernetics and systems theory. These meetings were supported by the Russian Academy of Sciences and the International Research and Exchanges Board of the American Council of Learned Societies. His interest in the transitions in the post-communist countries has resulted in his presenting lectures at various institutes of the Academies of Science of Russia, Ukraine, Poland, Hungary, and Bulgaria. He is a member of the American Association for the Advancement of Science, the American Society for Cybernetics, the Austrian Society for Cybernetic Studies, the Society for the Advancement of Socio-Economics, and the International Society for the Systems Sciences.

Dr Jeremy Horne is President-emeritus of the Southwest Area Division of the American Association for the Advancement of Science: AAAS. He currently the Chief Executive Officer of the Inventors Assistance League, a non-profit organization dedicated to helping independent inventors bring their creations to fruition. He is doing research and writing in the areas of Logic as the language of innate order in the universe, which is an ongoing 40 year project.

Dr Horne taught many courses in political science and technology, delivered many presentations on the philosophy of scientific methods for the American Association for the Advancement of Science (AAAS) and Quantum Mind conferences, has been reviewer for various journals about the structure and process in binary space, consciousness studies, systems, theory, and philosophy of science, and Documentation Systems Developer, for White Sands Missile Range in New Mexico. His most recent publication consists of two chapters on the philosophy of binary logic and artificial minds in *Research and Applications in Global Supercomputing*, released by IGI Global Press March 2015.

Dr. Horne is member of several professional organizations such as The American Association for the Advancement of Science, (AAAS, the World's largest general scientific society) where he was President of its Southwest Area Division; Bioelectromagnetics Society; Institute of Electrical and Electronics Engineers where he is a voting member of Fiber Optic Technical Advisory Group.

Dr. Jeremy Horne earned his Ph. D. in Philosophy at University of Florida, Gainesville; His Master of Science in Political Science at New Haven, CT, and his Bachelor in Art in International Relation at Johns Hopkins University, Baltimore, He has been a member of the Phi Kappa Phi, National Academic Honor Society, and his name was included in several Who's Who directories.

Dr. Nagib Callaos is the founding president of the IIIS and the founding president of the Journal of Systemics, Cybernetics, and Informatics (JSCI). He is former Dean of Research and Development of the University Simon Bolivar and was the founding presidents of several organization on research, development, and technological innovation, e.g. The Foundation of Research and Development of the University Simon Bolivar, the founding president of the Venezuelan Fund for Technological Innovations (created by presidential decree), The founding president of the Venezuelan Association of Executives in Patents and Copyrights, etc. His main research and professional activities were in the area of systemic Methodologies of Information System Development, Group Decision Support Systems, and Action-Research mainly via Operations Research. He tutored more than 100 undergraduate and graduate theses and produced more than 100 research papers and reflection articles.

Related to the topic of this conversational session he has been continuously designing and redesigning (for about 35 years) more effective methodologies for information/informing system development, which effectiveness depends on including ethos, pathos, and logos to the in the context of a combination of systemic and traditional systematic analysis, design, and development methodologies. A synthesis of what he has achieved in this methodological area can be found at <http://www.iiis.org/nagib-callaos/Toward-Systemic-Notion-of-Methodology-Practical-Consequences.pdf>. With regards to the cybernetic relationships implicitly or explicitly should exist between episteme and techne, science and engineering, in the context of their industrial and societal insertion can be found at <http://www.iiis.org/nagib-callaos/engineering-and-meta-engineering/engineering-and-metaengineering.pdf>. This kind of insertion is necessary for the Ethos, Pathos and Logos of both episteme and techne as well as of both Science and Engineering/technology. This has strong consequences in the Ethos, Pathos and Logos, especially in Higher education.

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Participative Workshop – Tuesday, July 5th, 2016, 11:00 AM - 12:00 PM & 1:00 PM – 2:00 PM



Professor Emeritus Stuart A. Umpleby

The George Washington University, USA
Director of the Research Program in Social and Organizational Learning
Former President of The American Society of Cybernetics

Keynote Address

“Academic Globalization”

Abstract

In a two hour workshop we shall discuss recent progress in academic globalization and then consider how the systems and cybernetics community can act together – cooperating on research projects, establishing educational programs, coordinating conferences, enriching the content of Wikipedia, and other activities. We shall brainstorm needed actions, cluster them on a wall and then form into groups to plan strategies for implementation. A key topic in our discussions may be cultural conflicts or misunderstandings that may arise as people from different societies interact more frequently. Actions that can be taken to minimize or manage such conflicts will be part of the discussion.

Short Bio

See above at the Conversational Participative Session — Tuesday, July 5th, 2016, 10:00 PM – 11:00 PM

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Workshop – Tuesday, July 5th, 2016, 2:00 PM – 3:00 PM



Mr. Tom Hull

**Florida Polytechnic University, USA
Vice President and Chief Information Officer**

Former: VP and CIO of Pace University; VP and CIO of Siena College; VP and CIO of Visions FCU; IBM Director

Workshop

"3D Printing and Technologies"

Abstract

The speaker will briefly describe in the workshop the nature in 3D technologies, their principal present uses, their future potential and why these technologies are so important and even necessary in some cases for integrating research, education and innovations or real life problem solving. He will show the huge potential of 3D Technologies providing synergic bridges between academy and industry. He will show why 3D Technologies provide a real support for huge educational innovations in Higher Education and pre-college education. He will present the case of the Florida Polytechnic University as an example of this kind of Educational Innovations. He will also highlight the great potential of 3D Technologies for entrepreneurship and innovations in MANY industrial areas and human activities, including art, humanities, design, architecture, engineering, manufacturing, biomedical engineering, health systems, product prototyping, customization, etc. some demonstrations of 3D printing will also be included in this workshop, which will complement the exhibition planned to be organized in the same venue of the workshop and the conference.

Short Bio

Tom Hull is the leader of Florida Polytechnic's Technology Services Department. Hull's role is to plan for and implement the technology systems at Florida Polytechnic to reflect and enhance the cutting-edge, 21st Century teaching, learning and research environments at the University. The division he oversees provides technology and user services, leadership, consulting and innovative ideas and solutions to support the University and its mission. Hull has served as CIO for several universities in this 30-year career. Most recently he was Vice President and Chief Information Officer at Pace University in New York City. He also was CIO at Virginia Commonwealth University and Siena College in the Albany, New York area. His background includes strategic technology planning for IBM, where he was Executive Director for IBM Global Services. He held a similar post at the U.S. Defense Department, where he worked on a Strategic Technology Plan for the Pentagon, and he performed a Lucent Bell-Labs divestiture to a new company, Viasystems in the U.S., Mexico and China.

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Participatory Panel – Tuesday, July 5th, 2016, 3:30 PM – 4:30 PM

“Information Systems Verification and Validation: Three Perspectives”

Panelists and Facilitators



Professor Sushil Acharya

Robert Morris University, USA
Director of Research & Grants
School of Engineering,
Mathematics and Science
Software Engineering



Dr. Jeremy Horne

President-emeritus,
Southwest Area Division,
American Association for the
Advancement of Science (AAAS), USA
CEO - Inventors Assistance League, USA



Dr. Nagib Callaos

Founding President of the International
Institute of Informatics and Systemic, USA
Former Dean of Research and Development
of the University Simon Bolivar, Venezuela
Founding Editor in Chief of the Journal of
Systemics, Cybernetics and Informatics

Abstract

Three panelists will present a different perspective (Technical, Systemic, and Philosophical) in 10 minutes with regards to Information Systems Verification and Validation”. Then, the audience will have 30 minutes to ask questions and make comments, not necessarily related to the content presented by the panelists.

Some suggested questions for the conversational part: Should V&V start in the week of the developing project? Should V&V be organically or systemically embedded with the information systems development methodology? Is an updated Trivium required in order to have an adequate interaction with the users? Is Ethos, Pathos, and Logos important, or even necessary, in information systems V&V? Should the users and stakeholders have a similar knowledge or experience regarding V&V and not to let it just the responsibility of the developers? How painful is the Beta test as a necessary part of V&V? Should the users be prepared for this painful phase? Might these answers be generalized to any kind of real life systems analysis and synthesis?

Short Bios

Dr. Eng. Sushil Acharya is Professor of Software Engineering and Director, Research and Grants (Research and Grant Administration) at Robert Morris University, USA. Among his professional activities are the following:

- Sr. Operations Analyst , US AIRWAYS, OPERATIONS CONTROL CENTER, Pittsburgh, PA,
- Practitioner Faculty, UNIVERSITY OF PHOENIX, Dallas (Texas) and Pittsburgh (PA)
- Subject Matter Expert VCLEARN INC., Brussels, Belgium
- Resource Manager/ SCM Team Lead - Education Services , i2 TECHNOLOGIES, Inc. Irving, Texas
- Sr. Solution Architect- Product Management, i2 TECHNOLOGIES, Inc. Irving, Texas
- Consultant/Sr. Consultant/Team lead, i2 TECHNOLOGIES, Inc. Irving, Texas
- Project Systems Manager , THE CENTER FOR ENERGY-ENVIRONMENT RESEARCH & DEVELOPMENT (CEERD), Asian Institute of Technology, Bangkok, Thailand

Among his publications are the followings:

- **Acharya, S., et. al.**, (2014) “Using Software Engineering Best Practices to create an App to Test Touchscreen Compatible Prostheses”, International Journal of Engineering Research & Innovation (IJERI), Print ISSN: 2152-4157, Online ISSN: 2152-4165
- **Acharya, S. et.al.** (2014), Enhancing Manufacturing Process Education via Computer Simulation and Visualization, Journal of Education and Learning, ISSN # 1927-5250 (Print) ISSN# 1927-5269 (Online)
- **Acharya, S., et. al.**, “Collaborative Education: Building a Skilled Software Verification and Validation User Community“, Journal of Computers in Education, ISSN# 0736-8607
- **Acharya , S. & Ackerman, F.**, (2011), “Software Engineering Education Needs More Engineering” 2012 ASEE Annual Conference & Exposition – Software Engineering Constituent Committee June 10 - 13 – San Antonio, Texas
- **Acharya , S., & Schilling, W.**, (2011), “Effective Active Learning Approaches to Teaching Software Verification” 2012 ASEE Annual Conference & Exposition – Software Engineering Constituent Committee June 10 - 13 – San Antonio, Texas
- **Acharya, S. and Sirinterlikci, A.**, “Introducing Engineering Design through an Intelligent Rube Goldberg Implementation”, The Journal of Technology Studies, 2010
- **Acharya, S. and Sirinterlikci, A.**, “Intelligent Rube Goldberg using Vex Robotics Development System”, 2010 ASEE Annual Conference & Exposition Louisville, KY
- **Acharya, S. et. al.**, “Using Student Incepted Projects to Retain Student Interest in Software Engineering”, Technology Interface Journal, Volume 9 No.2, Spring 2009, ISSN# 1523-9926
- **Acharya, S. et. al.**, “Integration of Service Learning into a Manufacturing Engineering Course: A Case Study”, International Journal of Service Learning in Engineering, Vol. 4, No. 1, pp. 44?52, Spring 2009, ISSN# 1555?9033
- **Acharya, S.**, “Enhancing the Software Verification and Validation Course through Laboratory Sessions”, ASEE Annual Conference, June 22-23, 2008
- **Acharya, S. and Czajkiewicz Z.J.**, “Technology Based Hands-On Education in Engineering”, in Proceedings of the X International Conference on Engineering and Technology Education - INTERTECH'2008, Santos, Brazil, March 2-5, 2008
- **Acharya S, Harvey V., Holdan E.G., Maxwell M.M., Wood D.F. and Wu P.Y.**, “Discrete Mathematics Applications for Information Systems Professionals”, 2nd Edition, Robert Morris University, 2005 (Supplement to Richard Johnsonbaugh, Discrete Mathematics, Sixth Edition, Prentice Hall, 2005).
- **Acharya, S. and Burke, D.**, “Incorporating Gaming in Software Engineering Projects: Case of RMU Monopoly”, Journal of Systemics, Cybernetics and Informatics (JSCI), ISSN#: 1690-4524, Volume 7, Number 1, Year 2009

See above (Conversational Participative Session — Tuesday, July 5th, 2016, 10:00 PM – 11:00) for Drs. Jeremy Horne and Nagib Callaos short bios

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Participatory Panel – Tuesday, July 5th, 2016, 4:30 PM – 5:30 PM

*“Research and Consulting:
Research Via Consulting and Consulting Via Research”*

Facilitators



Professor Andres Tremante

Florida International University, USA
The *Mechanical & Materials*
Engineering (MME) Department



Dr. Joe Manganelli

Kent State University, USA
Fluor Corporation,
xplr design, llc

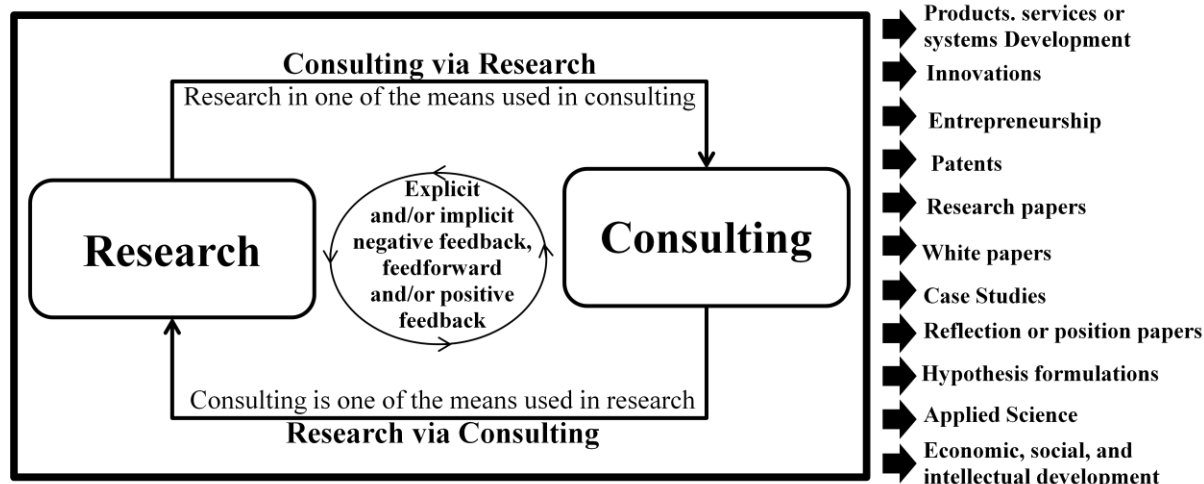


Dr. Luis Velazquez-Araque

University of Guayaquil, Ecuador
Faculty of Chemical Engineering
Founder of the Aerodynamics Laboratory at
National University of Tachira, Venezuela

Motivation

Some academic areas requires necessarily of consulting activities of other related practicing experience. For example what would be the “lab” for a professor of information systems development methodologies if not information systems development in the real world? In some other academic fields consulting activities might enrich, support and enhance research as it might be the case of some Engineering fields, Law, Medicine, Managements Science, Operation Research, etc. Still in other academic fields consulting is perceived as distracting activities from what is considered to be a scholarly research. In some fields or disciplines this might be true, but even in these cases scholarly research would eventually generate, via other scholars or researchers, applied research which would support real life problem solving and, consequently, decision and policy making processes which part of the consulting activities. Consequently, research and consulting are, directly or indirectly, immediately or mediately, related and complementing each other via cybernetic co-regulative loops (negative feedback or feedforward) and co-amplificatory loops (positive feedback) which, in turn, might potentially produce synergic effects that a) increase the effectiveness (and possibly the efficiency) of both kinds of activities, and/or b) generate systems/products development, innovations, entrepreneurship, patents, research papers, etc.



An increasing number of academics are explicitly or implicitly relating their research and consulting activities between themselves and sometimes with their educational activities. Consulting via research and making research via consulting are both being used with more frequency, in the corporative sector as well as in the academic sector, or in organizations created by and/or in the context of Higher Education organizations.

Some academic areas requires necessarily of consulting activities of other related practicing experience. For example what would be the “lab” for a professor of information systems development methodologies if not information systems development in the real world? In some other academic fields consulting activities might enrich, support and enhance research as it might be the case of some Engineering fields, Law, Medicine, Managements Science, Operation Research, etc. Still in other academic fields consulting is perceived as distracting activities from what is considered to be a scholarly research. Each of these three perspectives might relatively be the right one; they would not conflict with each other, depending on the academic fields they are referring to. Having said so, a Higher Education organization should have both activities integrated with each other in order to ingrate the organization to the Society at large which is a necessary condition for legitimizing itself and reciprocating the financial support being provided by the Society to maintain its own functioning as an academic organization, not completely dedicated to instruction or education, but also to research.

Depending on the academic perspective, “research and consulting” are, are not, might be, or should be related as complementing each other. We think that frequently they are, or might be, explicitly or implicitly, directly or indirectly, cybernetically related via co-regulative loops (negative feedback or feedforward) and co-amplificatory loops (positive feedback) which, in turn, might certainly produce synergic effects that a) would increase the effectiveness (and possibly the efficiency) of both kinds of activities, and/or b) generate systems/products development, innovations, entrepreneurship, patents, research papers, etc.

Short Bios

Dr. Joe Manganelli writes “My goal is improving the capacity of the built environment to support and enhance human health, well-being, and performance. My building design experience is primarily in the industrial (most recently, bio-tech/pharmaceutical facilities), educational (K-

12 & higher ed), and healthcare market sectors in facilities planning & space planning, requirements definition, conceptual design, sustainable design, detailed design, and construction documents. I also have non-recent experience in fabrication and construction administration. My web/software/systems design experience primarily entails needs analyses, heuristic evaluations, usability analyses, and systems modeling for healthcare-related applications and websites. My human factors experience includes research studies with human subjects related to environmental design, wayfinding, human-machine interfaces, distracted driving, and systems modeling. I currently work on the design of industrial facilities with Fluor Enterprises, teach online courses in user experience design and information architecture for Kent State University, am wrapping up a study on human way finding in complex buildings, am active with the state chapter of the USGBC, and am writing a book on architecture, cognition, and systems.

Dr. Luis Velazquez-Araque received his Mechanical Engineering degree from the National University of Tachira, Venezuela in 2003. He has experience in the oil industry having worked for Petroleos de Venezuela and also in the cement industry having worked for Lafarge Group. He received his Ph.D. in Thermodynamics and Fluid Dynamics at the Czech Technical University in Prague in 2011 and has been a university professor for more than 10 years at the National University of Tachira and visiting professor at the Czech Technical University in Prague during 4 years. After returning from Czech Republic he founded the Aerodynamics Laboratory at the National University of Tachira and started the course named "Fundamentals of Aerodynamics". He is member of the following societies: American Society of Thermal Fluid Engineers ASTFE, American Society of Mechanical Engineers ASME, International Institute of Informatics and Systemics IIIS, Venezuelan Society of Engineers CIV and Rotary Club International. He has been part of the "Prometeo Project" from Ecuador, an initiative of the Ecuadorian Secretary of Higher Education Science and Technology, sharing his expertise in the field of teaching and research in biofuels. Luis also began his career as a motivational speaker in 2012, basing his conferences on people development key areas such as leadership, perseverance and attitude. Dr. Luis Velazquez-Araque has published more than 20 papers at international conferences and journals in countries such as USA, Japan, Russia, Taiwan, Netherlands, Austria, New Zealand, Czech Republic, Ecuador and Venezuela. He is currently associate professor at the Faculty of Chemical Engineering at the University of Guayaquil in Ecuador.

Dr. Andrés Tremante received both his BS and MS in Mechanical Engineering (ME) from Simon Bolivar University in Venezuela, and his PhD from ENSAM in Paris, France. He remained there for post-doctoral studies in multi-phase flow and pumping. Presently he teaches courses in the fluid mechanics stem of the BSME program. Dr. Tremante began his stint at FIU working as a senior research scientist with the Applied Research Center before moving to the Mechanical and Materials Engineering Department in 2009. Prior to this he was Professor and Head of "The Mechanical Energy Conversion Laboratory" at Simon Bolivar University (Laboratorio de Conversión de Energía Mecánica. Universidad Simón Bolívar – USB) from 1992 to 2005 where his Undergraduate & Graduate courses and Research Areas included: Thermodynamics, Fluid Mechanics & Heat Transfer, Statics & Dynamics, Thermal & Hydraulic Turbomachines, Internal Combustion Engines, Energetic Systems, Hydro & Thermal Power Generation, Fossil & Renewable Energy, Oil Production & Multiphase Flow. In the recent past, he has been an editorial member of 23 journals and has published 125 papers in his area of expertise.

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Conversational Session – Tuesday, July 5th, 2016, 5:30 PM – 6:30 PM

“Differences and Relationships Among Education, Instruction, Learning, and Training”

Panelists and Facilitators



Dr. Risa Blair

Grantham University, USA
College of Arts and Sciences
Kaplan University
eLearning Instructional Designer



Dr. Jeremy Horne

President-emeritus,
Southwest Area Division,
American Association for the
Advancement of Science (AAAS), USA
CEO - Inventors Assistance League, USA



Dr. Nagib Callaos

Founding President of the International
Institute of Informatics and Systemic, USA
Former Dean of Research and Development
of the University Simon Bolivar, Venezuela
Founding Editor in Chief of the Journal of
Systemics, Cybernetics and Informatics

Abstract

“Education is that which remains, if one has forgotten everything he learned in school.”

Albert Einstein

“But education, in the true sense, is not mere instruction...It is unfolding the whole human nature. It is growing up in all things to our highest possibility” J. F. Clarke

“By education I mean an all-round drawing out of the best in child and man-body, mind and spirit. Literacy is not the end of education or even the beginning.” Mahatma Gandhi

How important is to differentiate the notion of “education” from the notions of “*Instruction, Learning, and Training*”? In previous conversational conference we tried to differentiate between “education and instruction” as well as between “education and e-learning”. On the later we even held a debate. A consequence of these conversational and debate session a draft of an article was written where “education and instruction” were differentiated and related, with the purpose of trying to make more effective moth of them. The conclusion in this article was that “instruction” was a mean, even a necessary means in any educational process, but it should not be taken as an end in itself. The suggestion for this conversational session is propose that “Learning, and Training” are other means used in educational processes which should not be taken as ends in themselves. Several means may, or should, be used in education, but (we suggest) that none of this mean should be taken as an end in itself. Otherwise we might generate a conceptual (or

intellectual) corruption that might have undesirable epistemological and pragmatic consequences.

Is this suggestion acceptable? If not, why? If yes, then what could we do in order to avoid confusing these notions?

The following is the abstract of the referenced article draft

([https://www.academia.edu/14466263/Higher Education or Higher instruction](https://www.academia.edu/14466263/Higher_Education_or_Higher_instruction))

The purpose of this short article is to differentiate between the notions of Education and Instruction, especially in the context of Higher Education, and to identify the kind of relationships that would make more effective the implementation of both of them.

To confuse the meanings of these terms or what concepts and uses are involved in their respective notions might be the source of intellectual muddle, unintentional misleading, and, hence, of pragmatic ineffectiveness, especially with regards to educational processes. Our hope is to continue reflecting and researching on this issue and, potentially, generate reflections and research from teachers and professors specifically regarding what is (and/or what should be) the meaning of *Higher Education*, and its differences with what we might call *Higher Instruction*. An increasing number of scholars (consciously or unconsciously) perceive or conceive some universities as institutions of, what might call, Higher Instruction rather than Higher Education.

In our opinion, there is an increasing confusion among meaning of the terms of “education” and “instruction” and, sometimes, they are used almost as synonyms. Both terms are much related, but they do not mean the same ideas or concepts. Using the metaphor of “color” and “surface” we know that both are completely different concepts though very related to each other. There is no color that is not seen on a surface and no empirical surface with any color on it, but to confuse the notions of no color that is not seen on a surface and no empirical surface with any color on it, but to confuse the notions of “color” and “surface” might take us to non-sense jumble between “Optics” and “Geometry”. “Color” and “surface” should be differentiated as concepts or notions in order to understand the reality in which both of them co-exist together.

To achieve our stated objective, we will not try to conceptually define “education” and “instruction.” This is not the place to do it, nor is it our intention. Furthermore, from a systemic perspective, as well as from a post-modernist stand, definition of education should be done in the context of a culture and/or value system. Consequently, the definition should be done by the users of specific educational systems and processes. This is why we worked out in another article⁵ a meta-definition of “Education,” i.e. we defined a way of producing a definition of education by means of the corresponding users (students, parents, teachers, etc). Our purpose in this article is to describe important denotations and connotations of the notions of “Education” and “Instruction” with the objective to differentiate them with the purpose of effectively relating them. We will then briefly refer to the mentioned previous article in order to provide a context for what will follow.

Short Bios

Dr Risa Blair is Passionate leader and trainer with extensive experience in higher education and corporate settings, including project management, curriculum development and delivery for face-to-face and online settings. Exceptional skills in facilitating content delivery to meet the needs of the client. Strong proponent of utilizing real world experience and technology to promote and reinforce learning, as well as to meet required outcomes. Easily able to deliver technical content to non-technical audiences. Quality Matters trained online course reviewer.

See above (*Conversational Participative Session* — Tuesday, July 5th, 2016, 10:00 PM – 11:00) **for Drs. Jeremy Horne and Nagib Callaos short bio.**

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Plenary Session – Wednesday, July 6th, 2016, 7:45 AM - 10:15 AM



Dr. Robert Cherinka

**MITRE Corporation, USA
Senior Principal
Information Systems Engineer**



Eng. Joseph Prezzama

**MITRE Corporation, USA
Associate Department Head,
Tampa Operations**

Keynote Address

“Building a Cyber Professional Workforce: Key Enablers”

Abstract:

With increasingly complex cyber-attacks, an organization's entire IT and communications infrastructure could be compromised in a matter of minutes. Cyber threats have become a worldwide systemic problem, and one that we all need to be aware of, prepare for, and be part of the solution. To make matters worse, the demand for a cyber skilled workforce is high, much higher than the current supply and talent pool. We are all facing serious workforce challenges, but in the area of Cyber, this drought in talent could have very high implications. In this presentation, we will discuss aspects of building a professional cyber security workforce. In particular, we will highlight current cybersecurity workface challenges; examine the anatomy of a cybersecurity professional workforce in terms of the culture, people, processes and technology representing key enablers for building the talent, framework and capabilities necessary; introduce an approach for building a professional career path and talent pipeline in cyber security; and finally we will highlight our use of Cyber Capture the Flag (CTF) competitions as a corporate initiative aimed at adopting new approaches for hiring.

Short Bios

Dr. Robert Cherinka is a Senior Principal Computer Scientist for the MITRE Corporation, located in Tampa, FL. His expertise is in software and process engineering, with a focus toward agile development technologies. Bob is currently a Department Head for Agile Engineering and Innovation, leading a distributed team of IT professionals developing and applying emerging technologies across several major US Government domains. Bob earned a Ph.D. and M.S. in computer science from Old Dominion University, Norfolk, Virginia, leading research in static analysis and testing techniques for component-based systems. In addition, he earned a B.S. in computer science in 1987 from the University of Pittsburgh. After 6 years in the US Air Force, he joined MITRE in 1993.

Mr. Joseph Prezzama is currently the Associate Department Head for the MITRE Corporation, Tampa Operations Office. In 1996 he earned a Master of Science in Software Engineering from Monmouth University, Eatontown, New Jersey. Prior to that, he earned a Bachelor of Science in Electrical Engineering from Trenton State College, Ewing, New Jersey.

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Plenary Session – Wednesday, July 6th, 2016, 7:45 AM – 10:15 AM



David Shearer, CISSP, PMP,

**The International Information
Systems Security Certification Consortium (ISC)², USA,
Chief Executive Officer**

Deputy Chief Information Officer at the U.S. Department of the Interior

Keynote Address

"Security: The Missing Component in the Product Development Lifecycle"

Abstract

Electrical engineers are building systems and grids; software engineers are building applications for the masses; and civil engineers are building airports and other structures. What do all of these engineering disciplines have in common? Security is a missing component throughout all of their product development lifecycles. With the pressure to rush products to market, security considerations are overlooked or brushed aside in favor of product functionality and condensed development timelines. The consequences rendered from this type of product development culture are evident in instances such as the mass recall after the Jeep hack, which resulted in extra cost, employee time and reputational damage. When we look at the entire product development lifecycle, we must start advocating for security until it becomes a key requirement on par with functionality.

Short bio

Mr. Shearer has more than 30 years of business experience including the chief operating officer for (ISC)², associate chief information officer for International Technology Services at the U.S. Department of Agriculture, the deputy chief information officer at the U.S. Department of the Interior, and the executive for architecture, engineering and technical services at the U.S. Patent and Trademark Office. Mr. Shearer has been responsible for managing and providing services via international IT infrastructures, and he has implemented large-scale SAP Enterprise Resource Planning (ERP) projects. Mr. Shearer has led large geographically separated staffs that support global solutions. Mr. Shearer holds a B.S. from Park College, a M.S. from Syracuse University, management and technical certificates from the U.S. National Defense University, and he is a U.S. federal executive presidential rank award recipient. As (ISC)² Chief Executive Officer, Mr. Shearer is responsible for the overall direction and management of the organization.

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Plenary Session – Wednesday, July 6th, 2016, 7:45 AM – 10:15 AM



Professor J. Eric Dietz

Purdue University, USA

Computer and Information Technology Department

Director of Purdue Homeland Security Institute

Keynote Address

“Purdue Homeland Security Institute Research”

Abstract

Homeland security is one of the most important new areas of study in the twenty-first century. As an interdisciplinary field of study, homeland security is positioned at the intersection of science, engineering, technology, agriculture, management and economics, health sciences, and the social sciences of sociology, psychology, communication and political science. This interdisciplinary focus serves to broaden our fundamental understanding of homeland security issues and offers the potential to significantly impact and contribute to a wide variety of emerging technologies and science.

The program provides students with the opportunity to gain specific skills and an understanding of homeland security issues from a diverse group of faculty while also studying a specific discipline. Students are exposed to theoretical and fundamental issues related to preventing, mitigating, preparing for, responding to, and recovering from catastrophic events.

Through a campus-wide, interdisciplinary, graduate-level area of specialization in homeland security, students who complete a required set of two core courses plus additional elective hours in their major area, will earn a designation on their transcripts. Enrollment in and approval of this specialization is done through individual departments and colleges. Below is a list of links to department and college websites related to the homeland security area of specialization.

Graduate students interested in this specialization should contact their departments directly. The Purdue Homeland Security Institute was established in response to the events of September 11, 2001 with the charter to help our nation prevent, protect, respond and recover from any threat or action taken against our homeland. Today, we fully embrace the principles outlined in the National Response Framework as we work daily to identify and confront the myriad of homeland

security challenges our nation faces. We then pursue solutions using the power of interdisciplinary discovery, learning, and engagement here at Purdue University and apply that knowledge across the State of Indiana and the nation.

Short Bio

Dr. J. Eric Dietz is the Director of the Purdue Homeland Security Institute and Professor in the Computer and Information Technology Department at Purdue University. On loan from Purdue to the State from 2005-2008, Eric was the founding Executive Director for the Indiana Department of Homeland Security, a new cabinet-level department in Indiana that included over 300 public safety employees. Eric reorganized Indiana's public safety planning and response placing the responsibility for the safety and security of 6.3 million Indiana residents in one organization. In this time, Dr. Dietz led development of comprehensive plans, training, and exercises needed for Indiana's emergency response and had responsibility for the fire protection policy including the states' building inspection functions. Also during this period, Eric led Indiana's response to 7 Presidential Major Disasters and Emergency Declarations which included restoration and recovery of critical infrastructure. Prior to serving as Executive Director, Indiana Department of Homeland Security, Dr. Dietz was responsible for the catalysis of Purdue's homeland security research, increasing the impact of Purdue research on society, and organizing Super Projects in Purdue's Discovery Park. Retiring as a Lieutenant Colonel from the U.S. Army in 2004, Dr. Dietz led Army research and acquisition programs including chemical weapons detectors, command and control software, communications prototypes and army power systems and was in the initial cadre of Uniformed Army Scientists and Engineers. An Indiana native, Eric was graduated in 1984 from Rose-Hulman Institute of Technology after earning a bachelors of science in chemical engineering. He also earned a master's of science from Rose-Hulman Institute of Technology in 1986 and a PhD in Chemical Engineering in 1994 from Purdue University.

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Plenary Session – Wednesday, July 6th, 2016, 7:45 AM – 10:15 AM



Anne Connell, MS, CFA

Carnegie Mellon University, USA

Software Engineering Institute – CERT

Cybersecurity Engineer

Forensics, Incident Response, Assessment and Risk Management

Keynote Address

“Delight and Responsibility:

Problematic Situations and Preferred Future States”

Abstract:

The simplest way to describe the human-centered design process is to divide it into two phases: analysis and synthesis. But this description misses a crucial element—the connection between the two, the active move from one state to another, the transition or transformation that is at the heart of solving real problems. How do we move from analysis to synthesis? From problem to solution? From current situation to preferred future? From research to concept? From constituent needs to proposed response? From context to form? How do researchers bridge the gap?

The bond model illustrates one way of thinking about the path from analysis to synthesis—the way in which the use of models to frame research results acts as a basis for framing possible futures. It says something more than “then the other thing happens.” It shows how developers and researchers move up through a level of analysis in order to move forward through time to the next desired state. And bond models act as the vehicle for that move.

The bond model is the best way to illustrate this. It is organized as a two-by-two matrix. On one side we represent the analysis (the problem, current situation, research, constituent needs, context). The right column represents synthesis (the solution, preferred future, concept, proposed response, form). The bottom row represents the glue world we inhabit or could inhabit. The top row represents abstractions, models of what is or what could be, which we imagine and share with others. Ideally, the human-centered design process begins with observation and investigation—an inventory (or description) of the current situation.

We make sense of research by analysis, filtering data we collect to highlight points we decide are important or using tools we’re comfortable with to sort, prioritize, and order. We frame the current situation, but move out of the strictly concrete. We define the problem. We interpret. Analysis begins as thoughtful reflection on the present and continues as conversation with the

possible. Crucial for progress is documenting and visualizing our analysis, making it possible for us to come back to it, making it possible to imagine alternatives, making it possible ultimately to discuss and agree with others on our framing and definition. We might write down a list of findings or a statement defining the problem. Better still is writing a story. A story describes actors and actions; it suggests relationships, which we may represent in visual form. A story of what happens suggests a model of what is—an interpretation of our research. The process of coming to a shared representation externalizes individual thinking and helps build trust across disciplines and stakeholders.

Having agreed on a model of what is (framed the current situation, defined the problem) then the other side of the coin (the preferred future, the solution) is implied. We can devise stories about what could happen. We can model alternatives in relation to our first bond model. In doing so, we've moved to the use and development of bond models of what could be. It is in the realm of abstraction—by thinking with bond models—that we bridge the gap between analysis and synthesis.

Short Bio

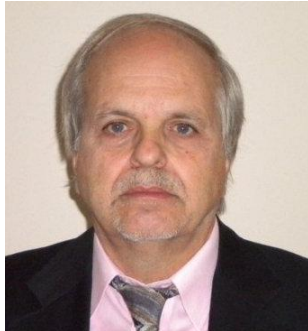
Anne Connell is a member of the Cyber Security Solutions Directorate of the CERT Division at Carnegie Mellon University's Software Engineering Institute. In addition to developing the user experiences for digital forensic tools and training material for law enforcement and intelligence agencies, Anne's research focuses on emerging trends and tool development in the fields of forensics, incident response, assessment and risk management.

Specialties: Project management, requirements engineering, information architecture, and design. Managing projects, developing user experiences for digital forensics and incident response tools, training, and services. I love visualizing information and data to enhance both information and information gaps, teaching, information architecture, software design, and user experience.

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Plenary Session – Wednesday, July 6th, 2016, 1:30 PM – 3:45 PM



Dr. Mario Lamanna

**Evoelectronics, Italy
and
Selex-SI, USA
Senior Scientist**

Keynote Address

“The Key Role of Interdisciplinary Communication in Cyber Security”

Abstract

Developments in electronics and computers during the last 70 years have given rise to the so called Information Age and created the new entity of the so called Cyber Space, as the backbone of the main economic and social activities. As a consequence, the life and wellness of citizen and nations in the Third Millennium are going to depend more and more on the efficient and secure use of this new entity. In order to achieve a satisfactory level of Cyber Security, a new multifaceted/multidisciplinary approach is mandatory. This new multidisciplinary approach consists in coupling computer technologies with social and geopolitical aspects of the new Information Age. Analyzing the key role of Interdisciplinary Communication in Cyber Security is the essential step to achieve the right level of Cyber Security.

Short Bio

Dr. Mario LaManna received the degree in Electronic Engineering from the University S. Anna College in Pisa (Italy). He has spent most of his professional career working with Selex ES Finmeccanica SpA, (Italy) and as a Teaching Professor with the University of Pisa. He has been working as Program Manager of a number of international cooperative projects in the fields of Military, Aerospace and Security, in Pisa, Rome, Europe and US. He is presently working with Evoelectronics SRL in Rome, Italy. He has participated in more than 100 international conferences as paper author, session chairman and invited speaker. He is a Member of IEEE and IIS and an Expert Member of EDA and EU.

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Plenary Session – Wednesday, July 6th, 2016, 1:30 PM – 3:45 PM



Professor Tomas Zelinka

**Czech Technical University in Prague, Czech Republic,
Faculty of Transportation Sciences, Vice-Dean
Among his present research interests: Smart Cities & villages**

Keynote Address

***‘Smart’ as a Key Component of the ‘Sustainable’
Multidisciplinary City Development***

Abstract

Smart city as an urban development vision is targeting on sustainable city development and higher quality of life. Such vision is reachable by complex multidisciplinary approach based on balanced excelling in multiple key areas like environment, economy, people living, and government and its success is tightly connected with investments in human and social capital, as well as in mobility and ICT communication infrastructure. Even though smart city development emphasizes both environmental, economic as well as social aspects of sustainability, the social sustainable development is faced to the weakest possibility to be well understood, objectively quantified and managed. This paper points out the social aspects with aim to identify principal importance to effectively include these aspects in all critical processes and decisions to ensure reaching one of the key the goals of Smart city vision – the higher quality of life

Short Bio

Education:

Professor of Informatics at the Czech Technical University (CTU) in Prague,
PhD in Experimental Physics at the Czechoslovak Academy of Sciences,
Master degree in Cybernetics and Computer Sciences at the Czech Technical University in Prague.

Employment:

2005 - Czech Technical University in Prague

Lectures - basic and advanced lectures in area of communications sciences, specific telecommunication solutions for the Intelligent Transport Systems (ITS), telecommunications services management etc.,

R&D - theoretical background of the specific telecommunications solutions dedicated for the ITS, Electronic Fee Collection (EFC) acting as well as the national representative in ISI/CEN, ETC systems Value Added Services (VAS), vehicle On Board Units architecture, ITS and its security requirements etc.

1993 – 2005 Communications business

New products R&D, business development for products like VSAT data services or IP based (VoIP) alternative solution for the global voice communications networking designed for countries of the CEEMEA region, working with EuroTel / Nextel / Global One (i.e. Sprint Int., France Telecom, Deutsche Telekom) etc.,

And simultaneously acting as the external teacher and mentor at the Faculty of transport sciences of the CTU in Prague

1976 – 1993 Geophysical Institute of the Czechoslovak Academy of Sciences

Experimental laboratory and observatory methods in geophysics, studies of the variations and drift of the Earth magnetic field, data communication solutions within international geomagnetic observatory system (INTERMAG),

Computer modeling of magnetic material structures with on-line laboratory identification, laboratory study of the magnetic properties of rocks,

1972 – 1976 Industrial R&D

Automatic control systems for the technological processes – CNC (Computer Numerical Control),

Data communications and computer based control in the heavy technological processes,

Published above 120 scientific papers, monographs, books and University textbooks in physics, informatics, ITS, transport telematics and telecommunications.

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Plenary Session – Wednesday, July 6th, 2016, 1:30 PM – 3:45 PM



Dr. Russell Jay Hendel

Towson University, USA

Dept of Mathematics

Keynote Address

“Effective Verbal Encouragement: Prayer, Business and Teaching”

Abstract

You are evaluating a student’s work. Your goal is to get the student to improve. What is the most effective verbal encouragement you can give? Would it be a letter Grade? If so, would it be A, B, or C? Or would it be words and guidance? You are a doctor saying goodbye to a person who just recovered from a heart attack. You have a moment to wish the patient well. What is the most effective verbal encouragement? Is there a real difference in terms of avoidance of recurrence in what you say? You are a big athlete who just lost a competitive match. You spontaneously exclaim to yourself, “I don’t believe I did that?” Is there other self-talk that would prevent future mistakes? You are a Rabbi, Priest, Imam or Atheist praying for someone’s good fortune in some sphere. Does it matter what you say? Can different prayers achieve significantly outcomes? In this talk, we will focus on effective verbal encouragement. The theory is not fully developed but more like a fresh meadow sprouting after a winter thaw-out. We will expose the audience to the varied colors of this young field, we will see its best opportunities and we will learn principles of effective verbal encouragement. Along the way, we will water our field with the principles of attribution theory and measurability. Numerous examples will be given.

Short Bio

Russell Jay Hendel holds a doctorate in theoretical mathematics from M.I.T., an associateship from the Society of Actuaries, and is in a doctoral program at the Spertus Institute for a degree in Jewish studies. He is currently an Adjunct II faculty member at Towson University which has recently become a Center of Actuarial Excellence. His research and publication interests include discrete number theory, actuarial science, biblical exegesis, the theory of pedagogy, applications of technology to pedagogy, and the interaction of mathematics and the arts. He regularly reviews books for the Mathematical Association of America

Joint Event of the Collocated Conferences

The 20th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2016
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Décima Quinta Conferencia Iberoamericana en Sistemas, Cibernética e Informática: CISCI 2016

Plenary Session – Wednesday, July 6th, 2016, 1:30 PM – 3:45 PM



Professor Richard Segall

**Arkansas State University, USA
Department of Computer and Information Technology**

Keynote Address

“Big Data: A Treasure Chest for Interdisciplinary Research”

Abstract

Big Data is an evolving term that describes any voluminous amount of structured, semi-structured and unstructured data that has the potential to be mined for information.

Although Big Data doesn't refer to any specific quantity, the term is often used when speaking about Petabytes and Exabytes of data. Measured in terms of volume, velocity, and variety, Big Data represents a major disruption in the business intelligence and data management landscape, upending fundamental notions about governance and Information Technology (IT) delivery. With traditional solutions becoming too expensive to scale or adapt to rapidly evolving conditions, companies are scrambling to find affordable technologies that will help them store, process, and query all of their data. Innovative solutions will enable companies to extract maximum value from Big Data and create differentiated, more personal customer experiences. Big Data also is all data that is not fit for the traditional highly structured Relational Database Management Systems (RDBMS) whether used for Online Transactional Processing (OLTP) or analytics purposes. Hence utilizing Big Data calls for the needs for new technology to handle and analyze. Clusters in Big Data contains data organized into key spaces that can contain multiple “column families” that can be considered analogous to tables but can have any number of columns or be completely dynamic columns that change with the time horizon.

According to a report on Big Data by the McKinsey Global Institute (2011): Big Data if used creatively and effectively to drive efficiency and quality, the health care sector can create more than \$300 billion in value each year, a retailer using Big Data to the full could increase its operating margin by more than 60 percent, and users of services enabled by personal-location data could capture \$600 billion in consumer surplus.

The field of Big Data involves expanded technologies & architectural patterns, using Big Data in clouds, clusters and grids; programming systems for Big Data; storage, visualization and analytics for Big Data; and study of state of practice of using Big Data.

The numerous applications of Big Data range from such areas as manufacturing, agriculture, air traffic control, to computational energy, medicine, earth and atmospheric sciences.

The objective of this talk is to present the concepts of Big Data, explore its analytics and technologies and their applications and develop a broad understanding of issues pertaining to the use of Big Data in multidisciplinary fields.

Short Bio

Dr. Richard S. Segall is Professor of Computer & Information Technology at Arkansas State University in Jonesboro, AR where he also teaches in the College of Engineering Master of Engineering Management (MEM) Program. He has served on the faculty of Texas Tech University, University of Louisville, University of New Hampshire, University of Massachusetts-Lowell, and West Virginia University.

His publications have appeared in journals including *International Journal of Information Technology and Decision Making* (IJITDM), *International Journal of Information and Decision Sciences* (IJIDS), *Applied Mathematical Modelling* (AMM), *Kybernetes: International Journal of Cybernetics, Systems and Management Science*, *Journal of the Operational Research Society* (JORS) and *Journal of Systemics, Cybernetics and Informatics* (JSCI).

He has book chapters in *Encyclopedia of Data Warehousing and Mining*, *Handbook of Computational Intelligence in Manufacturing and Production Management*, *Handbook of Research on Text and Web Mining Technologies*, *Encyclopedia of Information Science & Technology*, and *Encyclopedia of Business Analytics & Optimization*.

He has edited 2 published books: Visual Analytics and Interactive Technologies: Data, Text and Web Mining Applications published by IGI Global in 2011, Research and Applications in Global Supercomputing published by IGI Global in 2015, and is currently editing a 3rd book titled Big Data Storage and Visualization Techniques to be published by IGI Global in 2017.

He is a member of the Arkansas Center for Plant-Powered-Production (P3), and on the Editorial Board of the *International Journal of Data Mining, Modelling and Management* (IJDMMM) and *International Journal of Data Science* (IJDS), and served as Local Arrangements Chair of the 2010 MidSouth Computational Biology & Bioinformatics Society (MCBIOS) Conference.

His research interests include data mining, text mining, web mining, database management, Big Data, and mathematical modeling. His research has been funded by National Research Council (NRC), U.S. Air Force (USAF), National Aeronautical and Space Administration (NASA), Arkansas Biosciences Institute (ABI), and Arkansas Science & Technology Authority (ASTA). He is recipient of Session Best Paper awards at the 2008, 2009, 2010, 2011 and 2013 World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI) conferences, and Arkansas State University, College of Business Faculty Award for Excellence

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Plenary Session – Thursday, July 7th, 2016, 7:45 AM – 10:15 AM



Professor Hans Mulder

University of Antwerp, Belgium
Executive Professor at the
Antwerp Management School
European research Director at the Standish Group



Jim Johnson

The Standish Group, USA
Founder and Chairman
40 Years of Experience in the Computer Industry
Mission-Critical Applications and Technology

Keynote Address

"CHAOS Chronicles, Focusing on Failures and Possible Improvements in IT Projects"

Abstract

The Standish Group has been formally researching the causes of software project success and failure since 1994. Prior to this date very little research was done and the problems of software project failure were hidden due to lack of transparency. Standish's cumulative research encompasses 22 years of data on why projects succeed or fail, representing more than 50,000 active completed IT projects and more than 60,000 inactive completed projects stored in a database. Currently, the crisis in IT projects continues. Governments, industry, and parliaments in North America and Europe seek answers regarding why IT projects add little or no value for society, organizations, and individuals. Standish's research is used more than ever before. Through the CHAOS University program, The Standish Group has hosted almost 500 workshops, as well as focus groups, project "group therapy" sessions, and executive retreats around the globe that focus on particular issues of project management. Major changes in the way software projects were accomplished resulted directly from the findings in this research.

Some of these changes improved project performance, while others have exacerbated the problem. Therefore, the overall results show very little improvement for the last 22 years. There is both much current debate and new areas of discovery to which the CHAOS Database offers clues. These debates and discoveries include the future role of the project manager, do sophisticated tools help or hurt, how to create a good project culture, is Scrum the holy grail, and what does it take to be a good project executive sponsor?

Short Bios

Jim Johnson is the founder and chairman of The Standish Group. He has been professionally involved in the computer industry for over 40 years and has a long list of published books, papers, articles and speeches. He has a combination of technical, marketing, and research achievements focused on mission-critical applications and technology. He is best known for his research on project performance and early recognizing technology trends. Jim is a pioneer of modern research techniques and continues to advance in the research industry through case-based analytical technology.

Professor Dr Ing. Hans Mulder, PhD is Standish European research director, executive professor at the Antwerp Management School. As the founder of Viagroep.nl, a company which has investments in IT industry, he is on the management and executive boards of various IT companies. He is regularly engaged as an IT expert when conflicts between companies need to be resolved in or out of court. He is frequently involved in matters of dispute settlement, such as participating in arbitration, mediation and expert reports. Since 1996, he has been involved in over 150 cases of arbitration, mediation and expert reports. Furthermore, he has published more than 100 articles in specialist journals and international magazines, and is the author of several books.

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Plenary Session – Thursday, July 7th, 2016, 7:45 AM – 10:15 AM



Professor em. J. Hanns Pichler

Vienna University of Economics & Business, Austria

Austrian Institute for SME Research

Senior Schumpeter Fellow, Center for European Studies/Harvard University

Keynote Address

HYPOTHESES NON FINGO

"Innovation and Entrepreneurship in Schumpeterian Perspective"

Abstract

In trying to paintbrush background and scientific "environs" when Schumpeter's visionary "Theory of Economic Development" (1912) came out, classical and neoclassical thought as well as Marx' "Capital" (in all its volumes) had been exposed already for some time to scholarly scrutiny by the learned community.

In contrast to the Classics, the Neoclassics and Marx though, Schumpeter explicitly pins his interpretation of the economic process on the role or – in his own words – on the "leadership" of the entrepreneur: being depicted as an agent of change, of innovation and, thereby, of the very dynamics of long run development of a market-based system. Only later on – especially with the English translation in 1934 - this original notion of business "leadership" was popularised as the "pioneering" role (in the very first edition of the "**Theory**" being referred to by implication only, never explicitly so).

We shall refrain here from reiterating the widely known "five cases" or criteria of the Schumpeterian entrepreneur. Emphasis rather should be placed on pinpointing the not so obvious, the more hidden notion of what – in Schumpeter's view – really is driving the market-oriented ("capitalist") process; of what, in the end, typifies its underlying dynamics as a kind of ingeniously perceived dialectical "paradox".

In neither classical-neoclassical nor Marxist visions, the entrepreneur explicitly figures. It is Schumpeter's truly seminal interpretation of the capitalist process, wherein the entrepreneur as such takes centre stage as the "pioneering" driving force in a dialectic sense as, in fact, sort of villain, as the "**antithesis**" to the market system. As indeed an element constantly striving to outmanoeuvre constraining competition, to "trick" given market conditions and, thereby, forever to challenge "the system" itself, or more pointedly still: when and wherever possible to be, or to become, a monopolist.

In an essentially market-based context, this not only characterises the very nature and understanding of Schumpeterian entrepreneurship, it at the same time reveals the subtlety of its intrinsically underlying – and as such non-Marxist - dialectics.

Apart from Schumpeter's subsequent more pessimistic outlook¹ as to the sustainability of the entrepreneur's ever so demanding role, his basic notion quite specifically also relates to, and as such emphasises, the particular socio-economic exposure under whichever conditions: in referring to the very challenging role of seizing the "kairos" of given opportunities, of carrying them through and bringing them to economic fruition. A role unavoidably fraught with risks, with unforeseeable human action and decisions which true entrepreneurship constantly is being faced with and unable to freely extricate or steal itself away from.

When relating this to modern entrepreneurship, its pivotal role in both a global and especially so in a structural as well as developmental context, Schumpeter's vision nowadays, more than ever in times of dynamic change, may serve as a guide for any entrepreneurially oriented policy formulation.

For a policy geared to providing a framework conducive to entrepreneurial initiative and leadership, to fostering business opportunities for the benefit of society as a whole, or putting it somewhat differently: for creating conditions where doing business, in both its entrepreneurial and its socio-economic relevance, simply remains and is being recognised as rewarding an undertaking well worth the efforts going along with.

Short Bio

Born 1936 in Aspach, Austria. Graduated from Vienna University of Economics and Business, (Master's 1958; Doctorate 1960) and Univ. of Illinois, USA (M.Sc. Economics/Econometrics, 1963); Dr. habil. in Economics (1967). Senior Economist/Resident Representative, World Bank Group (1965-74) with far ranging responsibilities in Latin America, the Caribbean, Eastern Africa, and especially South & South-East Asia. From 1973/74 full professor (chair: "Political Economy and International Development"); Head, Department & Institute of Economics, 1975-2004; Emeritus since 2004.

Senior Schumpeter Fellow, Center for European Studies/Harvard University. President/Chairman and memberships of various scientific as well as professional societies and institutions; Editor/Editorial Board member of national/international scientific journals with recognition and distribution world wide. Dean/Legatus, European Academy of Sciences & Arts (til 2012); Consultant/Representative, ICOMP-International Council on Management of Population Programs; Consultant World Bank Group and UNIDO; Arbitrator, I.C.S.I.D. (World Bank); Overseas Supervisor, China Scholarship Council; Past President, International Council for Small Business (ICSB).

Awards/Honours: Best Thesis Award, Austrian Chambre of Labour (1960); Cardinal Innitzer Science Award (1966); University of Economics Honours Prize (1982); Austrian Cross of Honour for Science & Art, First Class (1988); Leopold Kunschak-Award (1990); Honorary Doctorate in Economics, Cath. Univ. Brussels (1994); Grand Decoration of Honour in Silver to the Republic of Austria (2001); Wilford White Fellow, International Council for Small Business (2003); Knight, Old Order of St. George (2006); American Order of Merit („OM“, 2009); ICSB President's Award for Outstanding Services (2009); abi, Hall of Fame (2010); PhD Certificate in Gold, Vienna University of Economics & Business (2010); Honorary Fellow, Academia Scientiarum et Artium Europaea (2013); Fellow, ECSB (2014)

Listings in various Who is Who editions and international scientific directories. Numerous books, contributions and articles in a broad specter of scientific journals on international economic issues, international finance, development and development strategies; on business leadership, entrepreneurial values and attitudes, on SME structures, related policy issues and entrepreneurship.

¹ Cf. his equally famous „Capitalism, Socialism and Democracy“, 1942.

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Décima Quinta Conferencia Iberoamericana en Sistemas, Cibernética e Informática: CISCИ 2016

Plenary Session – Thursday, July 7th, 2016, 7:45 AM – 10:15 AM



Dr. Bruce E. Peoples

Université Paris 8, france

Laboratoire Paragraphe

Chair Emeritus of an ISO/IEC Standards Committee

Generated over 50 Invention Disclosures,

15 Patent Applications and 8 Patent Awards

Keynote Address

“Ensemble Innovations”

Abstract

Innovation has been defined several different ways by different experts. Some define Innovation as a “significant positive change” while others define it as “anything that is new, useful, and surprising”. This presentation will focus on Ensemble Innovations...innovations that combine multiple existing innovations to create something never conceived of before that is useful and market disruptive. The presentation will explore what Ensemble Innovations are and how they come to life. An example Ensemble Innovation dealing with assessing reading skills will be given along with supporting inventions needed to effectively implement the resultant innovation.

Short bio

Dr. Bruce E. Peoples has over 27 years experience in researching and developing advanced complex training, performance, decision, and production support systems and has architected several advanced, “self learning” systems. His research activities led to the filing of over 50 Invention Disclosures and 15 Patent Applications. His inventions include the development of a cutting edge BCI system that controls the flight of an unmanned aerial vehicle using only thoughts. Dr. Peoples also designed and led development of the first paperless learning media production system that mass-produced digital “modular” information objects, also known as Sharable Content Objects (SCOs) that could be used standalone, as aggregations, or in Performance Support Systems and Decision Support Systems, in any delivery environment, without changing “module” code. In recognition of his past research, Dr. Peoples was awarded a Raytheon 2006 Excellence in Technology award. Dr. Peoples has been active in several International Standards Committees, developing the standards necessary for implementing “next gen” Information Communication Technologies on a global scale. He is Chair Emeritus of an ISO/IEC Standard Committee, ISO/IEC JTC1 SC 36 *Information Technology for Learning, Education and Training*. Dr. Peoples was awarded BS and MS degrees from Clarion University of Pennsylvania, and a PhD degree from Université Paris 8 Saint-Denis, France

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Plenary Session – Thursday, July 7th, 2016, 7:45 AM – 10:15 AM



Dr. Karl H. Müller

**Director of The Steinbeis Transfer Center
New Cybernetics, Vienna, Austria
Senior Researcher, University of Ljubljana
Member of the International Academy for
Systems and Cybernetic Sciences**

Keynote Address

***“Second-Order Science and Science from Within –
Significant Differences and Perspectives”***

Abstract

In recent years a significant number of differentiations of science have been put forward like Science I & II, first-order science & second-order science, Science 1.0 and Science 2.0, first-order cybernetics second-order cybernetics, etc. All these separations point to great transformations as well as to new architecture of the overall science system. The lecture will be divided into three main parts.

- The first part lays out the new environments of second-order science and emphasizes the new configuration of first-order science as the science as we know it and the two new levels and types, namely zero-order science with its concentration on research infrastructures and second-order science which operates on the building blocks from first-order science like models, theories, test results, theoretical concepts or other inputs or outputs from first-order science.
- The second part focuses on new and highly innovative perspectives for second-order science which go very far beyond well-established practices like meta-analyses or systematic literature reviews.
- Finally, the third part focuses on a significant new major reflexive inversion within the science system, namely to a shift in epistemic modes from a traditional approach from without (exo-mode) to a new mode from within (endo-mode). In combination, second-order science and the endo-mode constitute a new Copernican revolution. It will be shown that this new Copernican revolution can be characterized as a joint complexity and reflexivity revolution within the overall science system.

Literature:

Malnar, B., Müller, K.H. (2015), *Surveys and Reflexivity. A Second-Order Analysis of the European Social Survey (ESS)*. Wien:edition echoraum
Müller, K.H. (2016), *Second-Order Science. The Revolution of Scientific Structures*. Wien:edition echoraum
Müller, K.H., Riegler, A. (2014b), „Second-Order Science: A Vast and Largely Unexplored Science Frontier”, in: *Constructivist Foundations*, vol. 10, no. 1, 7 – 15

Short Bio

From 1997 to 2001, Karl H. Müller was head of the Departments of Political Science and Sociology at the Institute for Advanced Studies (IHS) in Vienna. Currently. Until 2014 he was head of WISDOM, Austria's infra-structural centre for the social sciences and President of the Heinz von Foerster Society. Now he is Director of The Steinbeis Transfer Center New Cybernetics, Vienna, Austria and Professor at the University of Ljubljana, Slovenia.

His main research interests range from issues in complex modeling within the social sciences and from interdisciplinary analyses of innovation processes in science, technology and economy to the history and the current potential of inter- and transdisciplinary research, to the frontiers of second order cybernetics and radical constructivism or to the newly emerging risk-potentials for contemporary societies in general.

His recent publications reflect these various interests, namely *Market Expansion and Knowledge Integration. Double Movements within Modernity* (Frankfurt:Campus-Verlag 1999), *Socio-Economic Models and Societal Complexity. Intermediation & Design* (Marburg:Metropolis-Verlag 1998), *Advancing Socio-Economics* (together with J. Rogers Hollingsworth and Ellen Jane Hollingsworth) (Lanham: Rowman&Littlefield 2002), *An Unfinished Revolution? Heinz von Foerster and the Biological Computer Laboratory 1958 – 1976* (Wien:edition echoraum 2007) (together with Albert Müller), *Gordon Pask, Philosopher Mechanic. An Introduction to the Cybernetician's Cyberrnetician* (Wien:edition echoraum 2007)(together with Ranulph Glanville), *The New Science of Cybernetics. The Evolution of Living Research Designs. Vol. I. Methodology* (Wien:edition echoraum 2008), *Modern RISC-Societies. Towards a New Paradigm for Societal Evolution* (Wien:edition echoraum)(together with Ivan Svetlik *et al.*) and *The New Science of Cybernetics. The Evolution of Living Research Designs. Vol. II. Theory* (Wien:edition echoraum 2011).

From 1997 to 2001, Karl H. Müller was head of the Departments of Political Science and Sociology at the Institute for Advanced Studies (IHS) in Vienna. Currently. Until 2014 he was head of WISDOM, Austria's infra-structural centre for the social sciences and President of the Heinz von Foerster Society. Now he is Director of The Steinbeis Transfer Center New Cybernetics, Vienna, Austria and Professor at the University of Ljubljana, Slovenia.

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Plenary Session – Thursday, July 7th, 2016, 1:30 PM – 3:45 PM



Dr. Marta Szabo White

Georgia State University, USA
Director of the Study Abroad in Transition Economies
Director of Business Learning Community
Director of the Program Business Mediterranean Style

Keynote Address

***“Pedagogy of Paradigms:
Education Enrichment with Ethos, Pathos & Logos”***

Abstract

The model from the conference website [1], coupled with Kuhn’s [2] work on paradigms and Isaac’s [3] interpretation of Kuhn’s work, serve as the inspiration for this plenary address. In the first model, cybernetic loops are modified through feedback loops, linking with “Academic Globalization” and “Inter-Cultural Communication”, which are supported by Systemics, Cybernetics and Informatics [1]. Celebrating these cornerstones, and their support of pivotal relationships, this paper draws upon Kuhn’s structure of paradigms in Aristotle’s terms of ethos, pathos and logos [4], [5], & [6], and Isaac’s analysis [3] to propose a *Creative Destructive* [7] process, enriching education through paradigms.

References

- [1] Symposium on **Academic Globalization and Inter-Cultural Communication: AGIC 2016**, <http://www.iiis2016.org/wmsci/website/about.asp?vc=22>
- [2] Kuhn, T.S. [1996]. **The Structure of Scientific Revolutions**. [3rd Ed.] Chicago: University of Chicago Press.
- [3] Isaac, J. [2012]. **Kuhn’s Education: Wittgenstein, Pedagogy, and the Road to Structure**. *Modern Intellectual History*, 9, 1, pp. 89–107 © Cambridge University Press 2012 doi: 10.1017/S1479244311000497
https://www.academia.edu/8285253/Kuhns_Education_Wittgenstein_Pedagogy_and_the_Road_to_Structure_
- [4] Ramage, J.D. & Bean, J.C. [1998]. **Writing Arguments**. [4th Ed.]. Needham Heights, MA: Allyn & Bacon. pp 81-82.

[5] Sproat, E., Driscoll, D.L. & Brizee, A. [2012]. **Aristotle's Rhetorical Situation**. Copyright ©1995-2014 by The Writing Lab & The OWL at Purdue and Purdue University.

<https://owl.english.purdue.edu/owl/resource/625/03/>

Accessed February 15, 2014.

[6] White, M.S., [2015] “Academic Ethos, Pathos, and Logos Intersect with Innovation and Entrepreneurship.” **Plenary Keynote Session Academic Globalization: Proceedings of the 19th World Multi-Conference on Systemics, Cybernetics and Informatics/8th**

Short Bio

Dr. White is the Program Director for both the Study Abroad in Transition Economies [China/Russia/South Africa] and for the Business Mediterranean Style: Study Abroad in Greece & Turkey Program. She is also the Director of the Robinson Honors Program and the Director of Robinson Business Learning Community.

Internationally, Dr. Marta Szabo White has lectured at The RONALD H. BROWN INSTITUTE for SUB-SAHARAN AFRICA and the UNIVERSITÉ PANTHÉON-SORBONNE. She is the recipient of several teaching awards, including the 2004 Outstanding Teacher at Georgia State University, the 1999, 2003 and 2009 J. Mack Robinson College of Business Faculty Recognition Award for Outstanding Teaching, the 2002 Board of Advisors Teaching Excellence Award, the 2002 International Education Excellence Award, the 2005 Master Teacher Certificate Award and the nomination for the 2008 J. Mack Robinson College of Business Faculty Recognition Award for Outstanding Teaching.

In addition to striving for excellence and innovation in the practice of teaching, many of her contributions to the scholarship of teaching stem from her collaborations with the Duke CIBER, which have resulted in the publication of several Cross-Cultural Negotiation Simulations; the implementation of the ALBION in China simulation in Singapore, detailed in a 2004 Special Issue of Global Business Languages; and more recently, her role as ICE Teaching Consortium Advisor, the dissemination of CultureActive [pioneered by Richard Lewis] and ICE [initiated by Duke], both cross-cultural assessment tools grounded in the LMR [Linear-active, Multi-active, and Reactive] framework. Other research interests include strategy/structure/performance linkages.

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Plenary Session – Thursday, July 7th, 2016, 1:30 PM – 3:45 PM



Dr. Doug Sparkes, P.Eng

**University of Waterloo, Canada
Conrad Business Entrepreneurship and Technology Centre
Associate Director, Undergraduate Programs**

Keynote Address

“Entrepreneurship Education: An Experiential Journey”

Abstract

The University of Waterloo and the Region of Waterloo have established a reputation as a leader in Canadian Entrepreneurship. This presentation provides an overview of the evolution of entrepreneurship programs within Waterloo’s Conrad Centre, and how the lessons learned have shaped their development. Through our own journey, we have come to understand many of aspects of the programs that are important for entrepreneurship education and how they impact the student’s personal entrepreneurial journeys.

Short Bio

Dr Doug Sparkes has had over 30 years’ experience in Academia, Consulting, Government and Industry. He is one of the founding faculty members of the University of Waterloo’s Conrad Business Entrepreneurship and Technology Centre, and currently is its Associate Director, Undergraduate Programs. The Conrad Centre is part of the Faculty of Engineering and provides entrepreneurship education and support across all faculties. He has been responsible for the development of the Centre’s undergraduate education programs, as well as being involved in programs and competitions focused on fostering student entrepreneurship.

Doug is an electrical engineer and entrepreneur who has been involved in several technology start-ups in addition to his own company in the Ottawa and Waterloo regions. He has also worked for the National Research Council of Canada and Stelco Inc. He is a member of the Professional Engineers of Ontario, the Institute of Electrical and Electronics Engineers, and is active in local minor sports.

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Plenary Session – Thursday, July 7th, 2016, 1:30 PM – 3:45 PM



Professor Bettina Harriehausen-Mühlbauer

University of Applied Sciences, Germany
Computer Science Department
A.I., Natural Language Processing, and Mobile Applications

Keynote Address

***“Mobile Computation of Barrier-free Routes for
Mobility Impaired Users via Voice Control”***

Abstract

Modern information technology can improve life for people with special needs. Mobility impaired people are often confronted with barriers along their chosen routes which lead to unreachable destinations and frustration. Not only outdoor barriers, such as steep ramps, stairs, or uneven surface conditions are often insurmountable for mobility impaired users, but also indoor barriers, such as broken elevators, can lead to unreachable destinations. We have developed a mobile application which computes and displays barrier-free routes between outdoor or indoor locations in case barriers are detected along the shortest route. Our multi-modal interface includes voice control.

Short Bio

Professor Harriehausen-Mühlbauer studied Linguistics and Computer Science at the University of California Santa Barbara and Berkeley, where she did her PhD work in the field of Natural Language Processing. She worked at IBM’s Research Centers in Yorktown Heights, New York and Heidelberg, Germany in the knowledge-based-systems group, primarily working on the development of electronic grammars. In 2000, she accepted a tenure position at the Computer Science Department in Darmstadt, Germany, continuing her research on NLP, and running projects in the area of mobile computing. Professor Harriehausen-Mühlbauer holds visiting professor positions at the University of Utah and the University of California, Berkeley, as well as an honorary professorship at the University of Post and Telecommunication in Xi’an, China.

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Décima Quinta Conferencia Iberoamericana en Sistemas, Cibernética e Informática: CISCi 2016

Plenary Session – Thursday, July 7th, 2016, 1:30 PM – 3:45 PM



Dr. Denise K. Comer

Duke University, USA
Director of First-Year Writing in the Thompson Writing Program
Founding director of the Duke-Ronald McDonald House of
Durham Family Story Project

Keynote Address

***“A Transfer-Based Framework for Inter-Disciplinary
Communication, Teaching, and Research”***

Abstract

A Transfer-Based Framework for Inter-Disciplinary Communication, Teaching, and Research
This talk foregrounds transfer as a crucial framework for navigating the dynamic, intersecting, and disparate contexts of academia. A transfer framework invites faculty, administrators, and students to actively engage with, reflect on, and position themselves within and across those varying and overlapping domains. Doing so can facilitate increased networks of collaboration, more robust advances in knowledge and research methods, improved pedagogy, and increased student learning gains.

Short bio

Denise Comer, Assistant Professor of the Practice of Writing Studies and Director of First-Year Writing at Duke University, has worked for over fifteen years with writing faculty who hold Ph.D.s from across the social sciences, natural sciences, and humanities. Duke University’s award-winning and nationally recognized Thompson Writing Program (TWP) is founded on the premise that cross-disciplinary conversations about writing improve the teaching of writing and help students learn how to more effectively navigate the varying landscape of academic writing. This shared endeavor of approaching the teaching of first-year writing as an intellectual endeavor based in disciplinary and interdisciplinary inquiry have helped earn the TWP national recognition with the 2006 CCCC Writing Program Certificate of Excellence and the 2012 *U.S. News & World Report*, which commended Duke for “making the writing process a priority at all levels of instruction and across the curriculum.” Comer’s scholarship, which has been published in leading journals, explores writing theory and pedagogy. She has two books forthcoming in 2014 from Fountainhead Press: *It’s Just a Dissertation: Transforming Your Dissertation from Daunting to Doable to Done* (co-authored with Barbara Gina Garrett), and *Writing in Transit. An Anthology with Readings from the Disciplines*.

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Plenary Session – Friday, July 8th, 2016, 7:45 AM- 10:15 AM



Professor Shigehiro Hashimoto

Kogakuin University, Japan
Associate to the President and Dean of Admissions Center
Doctor of Engineering and
Doctor of Medicine Biomedical Engineering

Keynote Address

“The way to learn multidisciplinary design will be discussed”

Abstract

“ Biomedical engineering” is exemplified for multidisciplinary field. “ Biomedical Engineering” makes the multidisciplinary research area, which includes biology, medicine, engineering, and others. The cross-cultural student seminars on biomedical engineering have been exemplified as the case studies. In the group work, students are divided into the small cross cultural groups. Each group finds a problem, methods to solve the problem, contribution to the society. Presentations are made using information in the internet. They have learned how to communicate with students, who has variety of cultural backgrounds. The training awakes in students several points: thinking from a different point of view, variation of communication tools. The process is effective to learn multidisciplinary design.

Short Bio

Professor Shigehiro Hashimoto is Doctor of Medicine from Kitasato University in 1987, and Doctor of Engineering from Tokyo Institute of Technology in 1990. Professor Hashimoto was Research Associate at the School of Medicine, Kitasato University, (1981-1989), Assistant Professor in the School of Medicine, Kitasato University (1989 -1994), Associate Professor at the Department of Electronics, Osaka Institute of Technology (1994-2001), and Professor at Osaka Institute of Technology (2001-2011).

He also was the Creator of the first Department of Biomedical Engineering in Japan at Osaka Institute of Technology (2005) and Director of its Medical Engineering Research Center (2005-2011). He is the current Associate to the President and Dean of Admissions Center of the Kogakuin University, Japan (2012-) Professor Hashimoto experienced internship in Research Center for Artificial Heart in Free University in Berlin, Germany in 1977.

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Plenary Session – – Friday, July 8th, 2016, 7:45 AM– 10:15 AM



Professor Stuart A. Umpleby

The George Washington University, USA
Director of the Research Program in Social and Organizational Learning
Former President of The American Society of Cybernetics

Keynote Address

“Vladimir Lefebvre’s Theory of Two Systems of Ethical Cognition”

Abstract

In his 1982 book *Algebra of Conscience* Vladimir Lefebvre contended that the dominant ethical systems in the West and the Soviet Union were fundamentally different. However, people on each side usually assume that there is only one type of ethical reasoning. The result is that each side takes actions that are misunderstood by the other side. With the guidance of Lefebvre's theory it became possible for both sides to take actions which, although counterintuitive in their own thinking, could lead to more success in negotiations and a reduction in armaments. Luckily, Lefebvre's theory was used at the highest levels of the governments of the US and the Soviet Union during the break-up of the Soviet Union. This presentation will explain how Lefebvre's theory can be used in negotiations between governments, between businesses, and between individuals. The theory explains some of the difficulties encountered in the transitions in the post-communist countries. It may prove helpful in negotiating with extremist groups in the Middle East and Africa.

Short Bio

See above at the Conversational Participative Session — Tuesday, July 5th, 2016, 10:00 PM – 11:00 PM

Joint Event of the Collocated Conferences

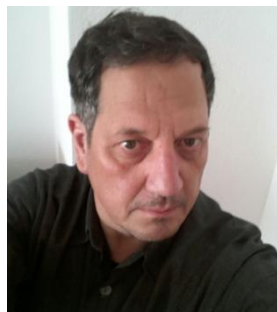
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Plenary Session – – Friday, July 8th, 2016, 7:45 AM- 10:15 AM



Professor Gabriel Felley

University of Applied Sciences Northwestern Switzerland

School of Business, Institute for Information Systems

Head of the Competence Centre IT Management and Governance.

Keynote Address

“Updating antique Chinese Knowledge”

Abstract

The Western culture and its established paradigms lead the world economy and structure the global market. The backbone of this culture roots in a technocratic vision of the world, based on the principle of causality. This understanding of the economic and societal reality has shown great success with continuous achievements. Nevertheless, today our society is facing big problems. More specifically, the globalization of markets has substantially complicated the process of making the right decisions. A different approach to problem solving may help design a better solution. This approach has to overstep the too obvious true-false logic and offer a holistic frame for a new way of analyzing the economic and social realms. Looking back at the ancient Chinese philosophers, they had developed an astonishing methodology called the Yijing, which was used to support government officials in making the right decisions. This article attempts to link the PDCA Deming cycle to some special elements of this framework.

Short Bio

Professor Gabriel Felley has a large academic, research and professional experience. He is the Head of UNWS (University of Applied Sciences Northwestern Switzerland (UNWS) Competence Centre IT Management and Governance. He developed and organized a Master Program in Business Information System in collaboration with the Ho Chi Minh City University of Technology. Along with his academic activities he has been involved in consulting which provided him with the opportunities of generating synergies between Research and Consulting.

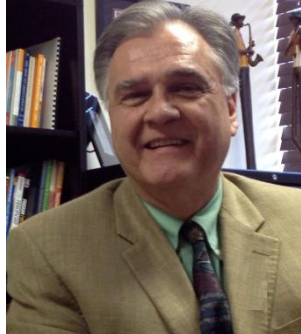
He identified important application of Ancient Chinese Philosophy and current Policy and Decision Making. He has many contributions in exploring the possibility of Yijing-based methodologies. Among his most recent projects are the following

- Research project “Analysis of the Deming Circle based on the Yijing’s logic”. Published 2015.
- “Analysis of the Deming Circle based on the Yijing’s logic”. Published 2015.
- Analysis of the structure of the pre-heaven or FuXi hexagrams based on the concept of nuclear hexagrams. (ISBN/Nr. 978-3-03724-144-8, published in Chinese Studies /<http://www.scirp.org/journal/chnstd/>)

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Plenary Session – – Friday, July 8th, 2016, 7:45 AM– 10:15 AM



Professor Ronald A. Styron, Jr.

University of South Alabama, USA
Educational Leadership Program Coordinator
Director of the Quality Enhancement Plan

Professor of Educational Leadership



Dr. Jennifer Styron

University of South Alabama. USA
Educational Leadership Program Coordinator
College of Nursing
Former Research Specialist and
Distance Education Coordinator at The
University of Southern Mississippi, USA

Keynote Address

“Engaging Online Learners in a Synchronous Environment”

Abstract

This presentation will focus on the use of four technologies aimed at fostering student engagement in virtual learning environments. These technologies, the Comprehensive Assessment of Team Member Effectiveness (CATME), InteDashboard, VoiceThread, and WebEx are deployed in a synchronous virtual learning environment. All four promote active learning and have been found to improve the acquisition and retention of content by promoting meaningful discussion and the sharing of information

Short Bios

Dr. Ronald A. Styron, Jr. is currently the Quality Enhancement Plan Director and Professor of Leadership and Teacher Education at the University of South Alabama. He has received numerous awards including Principal of the Year, Louisiana PTA Educator of Distinction and several outstanding conference research paper awards. He has received over \$3 million in grant awards and has a proven record of publications with 35 refereed articles, a book chapter, and a

series of administrator-training manuals. He has also conducted over 90 professional research presentations and 50 speaking engagements.

Dr. Jennifer Styron is an assistant professor at the University of South Alabama, USA, College of Nursing and a Former Research Specialist and Distance Education Coordinator at The University of Southern Mississippi, USA. She has been teaching especially in courses of “Advanced Nursing Research”

She is affiliated to:

American Medical Informatics Association (AMIA)
Association for Educational Communications and Technology
Healthcare Information and Management Systems Society (HIMSS)
International Institute of Informatics and Systemics (IIS)
Mid-South Educational Research Association
Society of International Chinese in Educational Technology
Team-Based Learning Collaborative
Transcultural Nursing Society

Her Research and Areas of Interests are the following

Nursing Education
Instructional Technology and Design
Electronic Health Record Adoption and Use
Team-Based Learning
Cyberbullying
Interprofessional Education

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Plenary Session – Friday, July 8th, 2016, 1:30 PM – 3:45 PM



Dr. Jeremy Horne

American Association for the Advancement of Science (AAAS), USA
President-emeritus, Southwest Area Division,
CEO - Inventors Assistance League, USA

Keynote Address

“How Globalized Academics Articulates”

Abstract

We academics may not realize that we are a privileged lot. We often assume literacy, intelligence, and a “normal” level of critical thinking. A reality check is in order, given statistics that show 50% of the US population is reading below the 8th grade level. All about us, events seem to confirm that traditional and acceptable ways of coping with world problems are breaking down, largely because of the population quality, one that is not sufficient to meet today's social needs. Academics often have been accused of only residing in “ivory towers”, far away from the unwashed and untutored. Scholars have been both on dark sides (Nazi Germany, being an example) and more enlightened ones (mainly in science) in creating and sustaining social systems. Until modern times (starting in the mid-19th century, with the onrush of globalization), serious social problems could be contained, their effects being minimized to a local area. Since the US Civil War, World War I, and surely World War II, just about any event involving more than two countries reverberates worldwide. Worldwide stability cannot tolerate a country's leadership fraught with substandard capacities. Increased planetary interdependence illustrates rising complexity. Yet, this dynamic organic system is not healthy.

Academics throughout history have been charged with solving social problems, but the ambient complexity may have exceeded our ability to manage it. Traditionally, even the experts have had to create tools to aid them in problem solving, and the current situation is no exception. Not only are interdisciplinary efforts desirable, they are requisite for any solution that is purported to meet heterogeneous needs. Artificial intelligence to date has been largely confined to individual problems (“THE” brain, a specific application, etc.).

However, in light of the need to meet social complexity and our apparent native inability to manage it, again, we may have to create a tool to do so, in effect, reinventing ourselves. Here, I introduce a new highly interdisciplinary approach – arguably a totality of disciplines, sociointelligence. This presentation, followed by publications (some scheduled to be released in 2017), will elaborate

Short Bio

See above (*Conversational Participative Session* — Tuesday, July 5th, 2016, 10:00 PM – 11:00)

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Plenary Session – Friday, July 8th, 2016, 1:30 PM – 3:45 PM



Dr. Risa Blair

**Grantham University, USA
College of Arts and Sciences**

**Kaplan University, USA
e-Learning Instructional Designer, Education Management**

Keynote Address

***“Training and Education: Is Training Education? Is Education Training?
eLearning, Hybrid, and Face-to-Face Modalities - a Participatory Debate”***

Abstract

Are training and education synonymous? Why or why not? What is the current status and preferred delivery method of education and training in the university setting? In terms of eLearning, face-to-face learning, and hybrid learning, have the educational delivery modalities become equalized? What is the expectation of our millennial students, Gen Y and Gen Z students? Perhaps, even more importantly, what is the expectation of the administration and the accrediting bodies? How do we achieve our educational goals?

Short Bio

Dr. Blair has extensive experience in higher education and online education. She most recently worked for Blackboard Collaborate where she was responsible for working with customers and collaborate teams to implement project plans. Previously, she worked at FedEx Latin America Caribbean Division as a Training Advisor responsible for delivering training, designing online training, and optimizing the use of technology to produce results.

Previously she worked as a Senior Instructional Designer for the Virtual College at Miami Dade College where she coordinated and trained faculty in the course development process. She additionally teaches for Grantham University, as well as Kaplan University. She has a strong background in technology and communications, business and management, instructional design, and online and traditional teaching.

Dr. Blair is past president of Florida Distance Learning Association, the Florida affiliate of the United States Distance Learning Association, where she lead the organization in conducting technology training, state-of-the-art workshops, seminars, and webinars.

She is a passionate leader and trainer with extensive experience in higher education and corporate settings, including project management, curriculum development and delivery for face-to-face and online settings. She got exceptional skills in facilitating content delivery to meet the needs of the client, as well as Strong proponent of utilizing real world experience and technology to promote and reinforce learning, as well as to meet required outcomes. She is easily able to deliver technical content to non-technical audiences. Quality Matters

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Plenary Session – Friday, July 8th, 2016, 1:30 PM – 3:45 PM



Dr. Luis Velazquez-Araque

**University of Guayaquil, Ecuador
Faculty of Chemical Engineering**

**Founder of the Aerodynamics Laboratory at
National University of Tachira, Venezuela**

**Visiting professor at the Czech Technical
University in Prague, Czech Republic**

Keynote Address

***“Engineering Research and Innovation for the
Integration of Academy and Society”***

Abstract

The main role given to engineering research and innovation towards a smart, sustainable and inclusive growth in the world, means that academic and scientific institutions make full use of their human capital, thereby involving both men and women. Evidence shows that promoting gender equality at all levels contributes to achieving excellence and efficiency in research and innovation performance. Although some initiatives have been developed in Europe and the US for several years, they have proved to be insufficient and have not helped to address the structural barriers contributing to the leaky pipeline phenomenon. This has led to a shift in focus towards addressing the structural transformation of institutions, using a systemic, comprehensive and sustainable approach.

An exhaustive analysis of the role that scientific and academic institutions must play in order to enhance integration of academy and society for a structural change is made, so that decision making is more transparent, unconscious bias is removed from institutional practices, human resources management is modernized, excellence is promoted through diversity, and research and innovation are improved by the integration of diverse perspectives. While a lead is required from government institutions, a wider range of actors also need to play an active role in renovating the way in which research and innovation is conducted in all countries.

Short Bio

See above at the Participatory Panel — Tuesday, July 5th, 2016, 4:30 PM – 6:30 PM

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Plenary Session – Friday, July 8th, 2016, 1:30 PM – 3:45 PM



Dr. Karl H. Müller

**Director of The Steinbeis Transfer Center
New Cybernetics, Vienna, Austria
Professor at the University of Ljubljana, Slovenia
Member of the
International Academy for Systems and Cybernetic Sciences**

Plenary Address

“Varieties of Contemporary Second-Order Cybernetics”

Abstract

Second-order cybernetics was developed, following Ranulph Glanville, in the period between 1968 and 1975 by authors like Heinz von Foerster, Gordon Pask, Louis H. Kauffman or Ranulph Glanville himself. Even forty years after the emergence of second-order cybernetics its scope and dimensions remain rather unclear. On the contrary, the argument has been made recently that the road from first-order to second-order cybernetics was unsuccessful at best and a blind alley from the start (Kline, 2015)

However, looking at contemporary authors like Louis H. Kauffman, Stuart A. Umpleby, Bernard Scott and others a surprisingly coherent and strong research agenda can be built for second-order cybernetics for today's science landscapes. The lecture provides a fresh and rather new summary on the mostly unfulfilled research program of second-order cybernetics.

Literature:

Kline R.R. (2015) *The Cybernetics Moment or Why We Call our Age the Information Age*.

Baltimore: The Johns Hopkins University Press

Riegler, A., Müller, K.H. (2016)(eds.), *Varieties of Second-Order Cybernetics*. Special Issue of *Constructivist Foundations*, 11(3)

Short Bio

See above at the Keynote Address “*Second-Order Science and Science from Within Significant Differences and Perspectives*”

CISCI/SIECI 2015 Plenary Session (In Spanish)

The 15th Ibero-American Conference on Systems, Cybernetics and Informatics: CISCI 2016

Décima Quinta Conferencia Iberoamericana en Sistemas, Cibernética e Informática: CISCI 2016

Sesión Plenaria – Miércoles 6 de Julio, 2016, 10:20 AM – 12:20 PM



Profesora Gabriela Vilanova

**Universidad Nacional de la Patagonia
Austral, Argentina
Directora de Proyectos en Ingeniería
de Software**



Profesor Jorge Varas

**Universidad Nacional de la Patagonia
Austral, Argentina
Co-Director de Proyectos en Ergonomía
Organizacional**

Ponencia Plenaria

***“Formación de Recursos Humanos y Gestión de Proyectos de Investigación
Multidisciplinar en Ambientes Mediados”***

Breve Resumen

En la actual sociedad del conocimiento las exigencias sobre formación permanente son constantes, es necesario contar con personas formadas, reflexivas y con pensamiento crítico, que sean capaces de realizar las transformaciones necesarias dentro del lugar donde se desempeñan como profesionales.

Enfrentarse a los nuevos retos que plantea la sociedad actual requiere que el investigador no necesite ser solo un experto en un área en particular sino que debe poseer múltiples habilidades y competencias básicas. Entre esas habilidades se encuentra el trabajo en equipo, la comunicación en ambientes mediados y la construcción de conocimiento colaborativo en red.

Breve CV de la Profesora Gabriela Vilanova

Profesora Adjunta Área Sistemas, Ingeniería de Software (Antigüedad en docencia universitaria, 25 años).

Directora de Proyectos de Investigación en el área Ingeniería de Software. Modelado y diseño de software, enfoque arquitectural, en el ITA (Instituto de Tecnología Aplicada), y en el área Educación e Innovación en práctica docente en el IEC (Instituto de Educación y Ciudadanía) de la Universidad Nacional de la Patagonia Austral - Unidad Académica Caleta Olivia, Patagonia ARGENTINA

Área de interés: Sistemas de Información, Metodologías de Desarrollo de Software Ágiles y Arquitecturales. Tic's aplicadas a la Educación. Modelos de Enseñanza en Entornos Virtuales.

Tesista de Maestría en Educación en Entornos Virtuales UNPA-Universidad de Islas Baleares. Doctoranda del posgrado de Matemática aplicada computacional e industrial (Universidad Nacional del Centro de la Provincia de Buenos Aires).

Participante como organizadora y expositora en eventos nacionales e internacionales, cuenta con publicaciones en eventos nacionales e internacionales.

Breve CV del Profesor Jorge Varas

Profesor Adjunto Área Ergonomía y Psicosociología del Trabajo (Antigüedad en docencia universitaria, 17 años).

Co-Director de Proyectos de Investigación en el área de Factores Humanos y Organizacionales, Ergonomía Organizacional aplicada a organizaciones relacionadas a Sistemas Complejos en el ITA (Instituto de Tecnología Aplicada), y participante como integrante en el área Educación e Innovación en práctica docente en el IEC (Instituto de Educación y Ciudadanía) de la Universidad Nacional de la Patagonia Austral - Unidad Académica Caleta Olivia, Patagonia ARGENTINA.

Áreas de interés: Ergonomía y Diseño de puestos de Trabajo, Factores Humanos y Organizacionales, Diseño Instruccional aplicado a Organizaciones Laborales, Tic's aplicadas a la Educación, Modelos de Enseñanza en Entornos Virtuales de Aprendizaje.

Tesista de Maestría en Educación en Entornos Virtuales UNPA-Universidad de Islas Baleares

Cuenta con publicaciones en eventos nacionales e internacionales.

CISCI/SIECI 2015 Plenary Session (In Spanish)

The 15th Ibero-American Conference on Systems, Cybernetics and Informatics: CISCI 2016
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Sesión Plenaria – Miércoles 6 de Julio, 2016, 10:20 AM – 12:20 PM



Dra. María Dolores García Perea

Instituto Superior de Ciencias de la Educación del Estado de México

Investigadora en Educación

Ponencia Plenaria

“El Docente y las Tecnologías Utilizadas en el Aula”

Breve Resumen

El presente trabajo, además de tener dos objetos de estudio - el docente y las tecnologías que utiliza en el aula escolar-, tiene como objetivos analizar: los procesos de transformación irreversibles que existen en ambos, el impacto, beneficios y críticas sobre la utilización de las tecnologías en la educación y el empoderamiento que otorga las tecnologías al docente cuando éste se ha alfabetizado.

Las tecnologías en el aula han sido y siguen siendo un tema insoslayable e impostergable en la educación mexicana debido a los beneficios y ventajas que ofrecen cuando son utilizados por los docentes para organizar, planificar y gestionar los procesos de enseñanza y por los estudiantes para fomentar, incrementar y garantizar los procesos de aprendizaje y la gestión del conocimiento.

También, han sido severamente criticadas, no tanto por su potencial informativo y de comunicación, de aprendizaje y conocimiento, para el empoderamiento y la participación, sino por las actitudes de los docentes de concebirlas como fines cuando solamente son un medio y de sublimarlas y convertirlas en la panacea de solución a los problemas educativos y sociales cuando solo son parte de la cultura y jamás la podrán sustituir.

Las transformaciones que ha sufrido tanto las tecnologías en el aula escolar como algunas de las funciones realizadas por el docente, son irreversibles y difíciles de ignorar, porque ambos están implicados en la tarea de educar, porque las tecnologías han sido creadas para utilizarse como dispositivos para fomentar e incrementar el aprendizaje y la gestión del conocimiento y el docente tiene que generar rupturas en sus patrones culturales para familiarizarse, dominarlas y convertirlas en dispositivos educativos y de formación.

Identificar el vínculo que tienen las tecnologías utilizadas en el aula por parte de los docentes, desde la educación tradicional hasta la educación oblicua, implica reconocer que la transformación de las tecnologías generada por su evolución, jamás podrá ser paralela a los procesos de formación del docente, debido a que las webs impulsan la creación continua, progresiva y permanente de las tecnologías y herramientas tecnológicas utilizadas en el aula, y

que la crisis del docente para alfabetizarse, se debe, no solo a la infoxicación que genera el internet, sino también a los procesos de cambio, adaptación y desfase que tiene que enfrentar para estar acorde a los avances tecnológicos.

Breve CV

La Dra. María Dolores García Perea es, desde 1992, Investigador Educativo del *Instituto Superior de Ciencias de la Educación del Estado de México*, actualmente es Investigador Nacional, Nivel I, del *Sistema Nacional de Investigadores* de CONACYT y está certificada en Competencias docentes por CERTIDEMS (2014).

Es autora de los libros: *El investigador educativo en las sociedades del conocimiento y de la información. Tomo II (Gestión del conocimiento y Teleformación)* (2015), *El investigador educativo en las sociedades del conocimiento y de la información. Tomo I* (2015), *Aprender a aprehender la esperanza* (2013), *Las nociones de formación en los investigadores* (2010 y 2012) y *Formación, concepto vitalizado por Gadamer* (2006, 2007 y 2015). Coautora del libro: *El concepto de percepción en Georg Berkeley* (2009).

Es miembro de las redes académicas siguientes:

Internacionales: Red Iberoamericana de Pedagogía (REDIPE) y Red Internacional de Filósofos de la Educación (RIFE).

Nacionales mexicanas: Association Francophone Internacional de Recherche Scientifique en Educación, Sección Mexicaine (AFIRSE); Red Mexicana de Investigadores de la Investigación Educativa (REDMIE); Red Nacional de Investigadores en Educación y Valores (REDUVAL); Asociación Nacional de Asesores, Consultores e Instructores Independientes (ANACI); Ilustre y Benemérita Sociedad de Geografía y estadística del Estado de México (SMGEEM).

Forma parte del Comité Científico de REDIPE, Comité Editorial de la tercera publicación conjunta de la UAEMEX-Instituto Tecnológico de Mérida, Consejo Editorial Consultivo de Revista (RISCI), Miembro del Registro CONACyT de evaluadores acreditados (RCEA) y árbitro del Congreso Internacional d Innovación Educativa, Evaluación de las Propuestas Académicas para la integración del Catálogo de Formación Continua y Superación Profesional de Maestros en Educación Básica en Servicios, Simposio Iberoamericano en Educación, Cibernética e Informática (SIECI) y Conferencia Iberoamericana en Sistemas, Cibernética e Informática (CISCI).

Ha participado como TESTIGO DE CALIDAD de Carrera Magisterial 18ª Etapa, Departamento de Educación Preescolar en el Valle de Toluca, Ciclos Escolares 2008-2009 y 2006-2007, Toluca, México.

Ha recibido los reconocimientos siguientes: Premio al Mejor Artículo de Sesión de CISCI 2015, 2014, 2013, 2010 y 2008; Diploma destacada trayectoria en el estudio e investigación en las Ciencias de la Educación. Sociedad Mexicana de Geografía y Estadística del Estado de México (2015); Mención de honor al mérito educativo y ciudadano REDIPE, Marco del Simposio Internacional de Educación, Pedagogía y Formación Docente (2014); Exaltación al mérito investigativo y a la producción intelectual. REDIPE, Marco del Simposio Internacional de Educación, Pedagogía, Investigación y Diversidad (2014); Mención de honor al Mérito a la labor Pedagógica y la producción intelectual. En el marco del Simposio Internacional de Educación (2013); Participación en la conferencia plenaria Séptima Conferencia Iberoamericana en Sistemas, Cibernética e Informática (CISCI 2008).

CISCI/SIECI 2015 Plenary Session (In Spanish)

The 15th Ibero-American Conference on Systems, Cybernetics and Informatics: CISCI 2016
Décima Quinta Conferencia Iberoamericana en Sistemas, Cibernética e Informática: CISCI 2016

Sesión Plenaria – Miércoles 6 de Julio, 2016, 10:20 AM – 12:20 PM



Professor Andres Tremante

Florida International University, USA
The Mechanical & Materials Engineering (MME) Department

Profesor titular Jubilado de la Universidad Simón Bolívar, Venezuela

Ponencia Plenaria

***“Integración de la Investigación, la Educación y
la Solución de Problemas de la Vida real”***

Breve Resumen

Existe una creciente necesidad académica y social en cuanto a la integración de las actividades académicas entre ellas mismas y con la sociedad, incluyendo el sector público y privado. Un número creciente de académicos ha venido notando y haciendo notar la necesidad de integrar la investigación, la educación y la solución de problemas entre ellas mismas y con los problemas sociales, industriales y organizacionales. Esta integración es especialmente importante y urgente en los países en vías de desarrollo para ir alcanzando un desarrollo suficientemente sustentable para los efectos de mejorar la calidad de vida dentro y fuera del mundo académico. En este sentido las Tecnologías de Información y Comunicación proveen un adecuado soporte conceptual, metodológico e instrumental para los efectos de una mayor efectividad y eficiencia en la mencionada doble integración. Las llamadas "*Informing Sciences*" son parte importante del soporte de los procesos de integración de la investigación, la educación y la extensión universitaria (incluyendo la consultoría y la solución de problemas de la vida real). En ese contexto, profesor Andrés Tremante presentará un ejemplo de una organización que se creó en Venezuela hace cerca de 40 años y que viene cumpliendo adecuadamente esa función, a pesar de la situación del país en los últimos años.

Breve CV

El Dr. Tremante es profesor titular jubilado de la universidad Simón Bolívar. Fue Presidente de la Fundación de Investigación y Desarrollo de la misma universidad, jefe del laboratorio de Conversión de Energía Mecánica. Los cursos que dio en la Universidad Simón Bolívar fueron en las áreas de Termodinámica, Mecánica de Fluidos y Transferencia de calor, Sistemas

energéticos, Generación de Energía Hidráulica y Térmica, Energía renovable y fósil, Producción Petrolera y Flujo Multifase.

Actualmente da clases y hace investigación y Desarrollo en la International Florida University. Recibió el título de Ingeniero mecánico, y de maestría en la Universidad Simón Bolívar. Así mismo obtuvo su doctorado en ENSAM en Paris, Francia, donde permaneció para estudios post-doctorales. Actualmente enseña cursos de mecánica de fluidos en el programa BSME (Bachelor of Science in Mechanical Engineering).

En el pasado reciente ha sido miembro editorial de 23 revistas y ha publicado más de 125 artículos en sus áreas de experiencia. Es co-autor del libro “¿Norte o Sur?: Una historia de ficción basada en hechos reales.” Y co-editor, desde el año 2000, de memorias de conferencias organizadas por el International Institute of Informatics and Systemics (IIS), de las cuales ha sido co-presidente de sus respectivos Comité de Organización.