

General Framework and Plenary Keynote Speakers of the Collocated Conferences
The 25th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2021
The 15th International Multi-Conference on Society, Cybernetics and Informatics: IMSCI 2021
The 20th Ibero-American Conference on Systems, Cybernetics, and Informatics
Vigésima Conferencia Iberoamericana en Sistemas, Cibernética e Informática: CISCi 2021

Virtual Conference based at Orlando, Florida USA – July 18-21, 2021

General Overview

Time Zone: (GMT-4:00) Eastern Time (US and Canada)

Sunday, July 18, 2021:

- **Morning:** 8:00 AM – 10:00 AM – Plenary Keynote Addresses
10:00 AM – 12:00 AM – Parallel Sessions for peer-reviewed presentations
- **Afternoon:** 1:00 PM – 3:00 PM – Plenary Keynote Addresses
3:00 PM – 5:00 PM – Parallel Sessions for peer-reviewed presentations

Monday, July 19, 2021:

- **Morning:** 8: 00 AM – 10:00 AM – Plenary Keynote Addresses
10: 00 AM – 12:00 AM – Parallel Sessions for peer-reviewed presentations
- **Afternoon:** 1: 00 PM – 3:00 PM – Plenary Keynote Addresses
3: 00 PM – 5:00 PM – Parallel Sessions for peer-reviewed presentations

Tuesday, July 20, 2021:

- **Morning:** 8: 00 AM – 10:00 AM – Plenary Keynote Addresses
10: 00 AM – 12:00 AM – Parallel Sessions for peer-reviewed presentations
- **Afternoon:** 1: 00 PM – 3:00 PM – Plenary Keynote Addresses
3: 00 PM – 5:00 PM – Parallel Sessions for peer-reviewed presentations

Wednesday, July 21, 2021:

- **8: 00 AM – 4:00 PM:** Virtual Presentations related to the Special Track on “*The North Star of Research (NSR 2021)*”
- **8: 00 AM – 4:00 PM:** Virtual Presentations related to the Special Track on “*The North Star of Research*” (*Education, Learning, Training, and e-Learning (ETeEL 2021)*)

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Virtual Conference based at Orlando, Florida, USA – July 18 - 21, 2021

PLENARY KEYNOTE ADDRESSES

Sunday, July 18, 2021

Time Zone: (GMT-4:00) Eastern Time (US and Canada)

Time Slot	Plenary Keynote Speakers	Plenary Keynote Addresses
8:00 AM – 8:35 AM	Professor Shigehiro Hashimoto , Japan, Kogakuin University, Dean, Faculty of Engineering	Interdisciplinary Background Helps Communication in Pandemic: Learning Multidisciplinary Field of Biomedical Engineering
8:40 AM – 9:15 AM	Mario LaManna , Italy/USA Evoelectronics	The Role of Human in the Loop in Threat Recognition in Homeland Protection Systems
9:20 AM – 9:55AM	Dr. Rusudan Makhachashvili , Ukraine, Borys Grinchenko Kyiv University and Professor Ivan Semenist , Ukraine, Borys Grinchenko Kyiv University	“Interdisciplinarity and Universality of Foreign Languages Education”
1:00 PM - 1:35 PM	Risa Blair Grantham University, USA and Marcia Williams Post University, USA	What is Underrstood by Higher Education is Dead and Training Endures
1:40 PM - 2:15 PM	Dr. Russell Jay Hendel Towson University, USA	Benefits Expected from Computer Assisted Software and Minimum Requirements
2:20 PM – 2:55	Dr. James Lipuma . USA, New Jersey Institute of Technology	Moving Beyond Disciplinarity: Communication, Collaboration, Leadership and Convergence

PLENARY KEYNOTE ADDRESSES

Monday, July 19th, 2021

Time Zone: (GMT-4:00) Eastern Time (US and Canada)

Time Slot	Plenary Keynote Speakers	Plenary Keynote Addresses
8:00 AM - 8:35 AM	Dr. Steve Dixon , Singapore LASALLE College of the Arts,	Discovering Patterns across Disciplines: Cybernetics, Existentialism and Contemporary Arts
8:40 AM - 9:15 AM	Dr. Rosella Marzullo , Italy Mediterranea University of Reggio Calabria, Italy	The Family Role in Ethics and Morals Education: Extent and Limits of Educational Freedom
9:20 AM - 9:55 AM	Pawel Poszytek , Poland Foundation for the Development of the Education System,	The Role of Interdisciplinarity in the Future World of Work
1:00 PM - 1:35 PM	Richard S. Segall Arkansas State University, United States	Advances Made in 2021 Using Artificial Intelligence for Overcoming COVID-19
1:40 PM - 2:15 PM	Dr. T. Grandon Gill , USA University of South Florida, United States	The Predatory Journal: Victimizer or Victim
2:20 PM - 2:55 PM	Professor Thomas Marlowe , USA, Seton Hall University, and Dr. Fr. Joseph Laracy , USA, Seton Hall University,	A Cybernetic View of Agile (and an Agile View of Cybernetics)

PLENARY KEYNOTE ADDRESSES

Tuesday, July 20th, 2021

Time Zone: (GMT-4:00) Eastern Time (US and Canada)

Time Slot	Plenary Keynote Speakers	Plenary Keynote Addresses
8:00 AM - 8:35 AM	Emma Almingfeldt , Sweden University of Borås,	Why Are Not All Teachers Doing This? – Equal Assessment and a Tool for Improvement of Speech
8:40 AM - 9:15 AM	Elīna Gaile-Sarkane , Latvia Riga Technical University,	The Evaluation of Economic Impact of Higher Educational Institutions on National Economy
9:20 AM - 9:55 AM	Ekaterini Nikolarea , Greece University of the Aegean,	To Use or Not to Use AI When Communicating Inter-Disciplinary Research Worldwide? That's the Question!
1:00 PM - 1:35 PM	Robert Cherinka , USA MITRE Corporation, Joseph Prezzama , USA MITRE Corporation,	Understanding Why Many Agile Transformations Fail and Whether Agile 2 and Multidisciplinary Teams Can Help Turn Failure Into Success
1:40 PM - 2:15 PM	Fr. Joseph Laracy , USA Seton Hall University Thomas Marlowe , USA Seton Hall University,	A Second-Order Cybernetic Analysis of Hypothesis-Driven Development
2:20 PM - 2:55 PM	Jeremy Horne , USA Southwest Area Division, American Association for the Advancement of Science (President-Emeritus),	What is Experience?

JUST FOR VIRTUAL PRESENTATIONS

Accepted abstracts (not in the proceedings of the full papers)

Wednesday, July 21st, 2021

Time Zone: (GMT-4:00) Eastern Time (US and Canada)

For the Special Invited Tracks

- *“The North Star of Research” (NSR 2021)*
- *“Education, Learning, Training, and e-Learning” (ETEeL 2021)*

Special Track on “The North Star of Research” (NSR 2021)

8:00 AM – 8:30 AM: **Dr. Karen WOODMAN, Australia**, Sydney Catholic Schools, *“Teachers of the Future: A comparative study”*

8:30 AM - 9:00 AM: **Dr. Jan MEHLICH, Taiwan**, International School of Technology and Management, Fengchia University, *“Save the Expert: A Noocratic Understanding of Normative Scientific Policy-Advise”*

9:00 AM - 9:30 AM: **Professor Andrey REZAEV, Russian Federation**, St Petersburg State University, *“Artificial Sociality as a Field of Research in the time of Artificial Intelligence and Online Culture”*

9:30AM - 10:00AM: **Dr. Sonja EHRET, Germany**, Heidelberg University, Institute of Gerontology, *“A meta-conception on the ethics of technical forms of life in oldest age”*

10:00AM -10:30AM: **Professor Jean-Luc PATRY, Austria**, Paris-Lodron University Salzburg, *“Theory-practice transfer for education for responsibility”*

10:30AM -11:00AM: **Dr. Laszlo Z. KARVALICS, Hungary**, Institute of Advanced Studies, University of Szeged, *“Science Reconsidered - Through Understanding the Origins of Information Behavior”*

11:00AM -11:30AM: **Professor Bernard POTTIER, France**, Université de Bretagne Occidentale, CNRS; **Professor Traoré Mamadou**, Senegal, Université Gaston Berger; **Professor Vincent Rodin**, France, University of Brest; **Professor Ousmane Thiaré**, Senegal, Université Gaston Berger, *“Computing is a real world activity”*

11:30AM - 12:00 M: **Professor Arkadiusz LIBER**, Poland, Wrocław University of Science and Technology, *“Is meta-research of quantum nature, and do indeterminacy and entanglement lie in its nature?”*

12:00 M - 12:30 PM: **Dr. Anna E. BOBKOWSKA, Poland.** University of Technology, Faculty of ETI, *"Researching Limits to the Knowledge"*

12:30 PM - 1:00 PM: **Professor Maurício VIEIRA KRITZ, Brazil,** National Laboratory for Scientific Computation, MCTI, BR and Faculty of Biology, Medicine, and Health, University of Manchester, UK, *"Unknown-known borderline, North Stars, and Perception-windows"*

1:00 PM - 1:30 PM: **Ms. Theresa MORGAN, United States,** Wudang Research Association, *"What are the underlying assumptions?"*

1:30 PM - 2:00 PM: **Dr. Maria JAKUBIK, USA/Finland,** Ronin Institute, *"Journey to a better world with educational research"*

Special Track on "Education, Learning, Training, and e-Learning" (ETeL 2021)

8:99 AM – 8:30 AM: **Professor ChienChing LEE, Singapore,** Singapore Institute of Technology, *"Coaching in communication skills: Online learning using micromodules"*

8:30 AM - 9:00 AM: **Professor Pradeep Kumar MISRA, India,** Chaudhary Charan Singh University, *"Emerging threats of digital dictatorship and teaching community"*

9:30 AM - 10:00 AM: **Dr. Khulod ALJEHANI, Saudi Arabia,** King Abdulaziz University, *"Relationships between Culture and English language learner community of practice"*

10:00 AM -10:30 AM: **Professor Oleg REDKIN, Russian Federation,** St Petersburg State University, *"New realities of life and academic curricula"*

10:30 AM -11:00 AM: **Dr. Olga BERNIKOVA, Russian Federation,** Saint Petersburg State University, *"Teaching in the Post-Covid Realities"*

11:30 AM - 12:00 M: **Dr. Kay MADDOX-DAINES, United Kingdom,** Arden University, UK, *"A comparative case study analysis of how institutions 'educate' through technology across the private training and university sector in the UK"*

12:30 PM - 1:00 PM: **Professor Abdelfattah MAZARI, Morocco,** Mohammed I University, Faculty of Sciences, Laboratory of Applied Communication in Context "LACC", *"Distance education during the covid 19 pandemic"*

1:30 PM - 2:00 PM: **Professor Adrian S PETRESCU, USA,** Midland University; Saved Yates/Yates Illuminates, *"Should Parents help Young Wheels Learn to Squeak—To Get Grease? Equity Considerations in the US Public Education System: Past, Present and Prospects for Improvement--Case Study from a Midwest School District and Responding to a Global Pandemic."*

2:30 PM - 3:00 PM: **Professor Jorge FRANCO, Brazil**, Universidade Presbiteriana Mackenzie, *"Computational Practices Inspiring Transdisciplinary Techno-literacy Skills and Scientific Knowledge Enhancements through Coding, Building and Visualizing Web3D-based Virtual Reality Spaces at K-12 Levels"*

3:00 PM - 3:30 PM: **Dr. Ageleo JUSTINIANO TUCTO, Peru**, University Cesar Vallejo, Ambassador Scientix in The Community for Science education in Europe, and Director of the Educational Institution "Milagro de Fátima", *"Strengthening capacities in the use of ICT for virtual teaching"*

3:00 PM - 3:30 PM: **Dr. Alejandro PADRON-GODINEZ, Mexico**, Universidad Nacional Autónoma de México, Instituto de Ciencias Aplicadas y Tecnología, *"Review and reformulation of subject objectives to face change a remote education: e-Learning"*

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Plenary Keynote Addresses – Sunday, July 18th, 2021

8:00 AM – 8:35 AM



Professor Shigehiro Hashimoto, Japan, Kogakuin University, Faculty of Engineering, Former Dean, Former Associate to the President, Doctor of Engineering and Doctor of Medicine, Research Area: Biomedical Engineering

Professor Shigehiro Hashimoto Dr. Shigehiro Hashimoto now is a professor of Biomedical Engineering, Faculty of Engineering of Kogakuin University, Tokyo, Japan. He got his Bachelor of Engineering in Mechanical Physics (1979), and Master of Engineering at Tokyo Institute of Technology (1981), Tokyo, Doctor of Medicine at Kitasato University (1987), Sagamihara, and Doctor of Engineering at Tokyo Institute of Technology (1990), Tokyo. He was Research Associate in School of Medicine (1981-1989), and Assistant Professor in School of Medicine (1989-1994), at Kitasato University, Associate Professor in the Department of Electronics (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 was Associate to President and Dean of Admissions Center (2012-2018), and Dean (2019-2021) at Kogakuin University, Tokyo. He experienced internship in Research Center for Artificial Heart in Free University in Berlin (1977). He is the author of the books of “Introduction to Biosystems Engineering (1996)”, “Introduction to Biomedical Measurement Engineering (2000)”, and “Introduction to Biomechanical Engineering (2013)”. His present researches focus on bio- cellular mechanics using micromachined flow channel.
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Plenary Keynote Address: “Interdisciplinary Background Helps Communication in Pandemic: Learning Multidisciplinary Field of Biomedical Engineering”

Abstract: The global community has accelerated the spread of the virus. Medicine alone cannot solve the pandemic. Understanding information from specialists is not easy. Information is overflowing due to the progress of networks. Individuals are required to have the ability to sort huge information. How do you use information for your personal behavior? Following social campaign can lead to inconsistencies in individual behavior. The field of biomedical engineering is not limited to the fusion of medicine and engineering, but is a complex field including various

fields: biology, informatics, etc. In the courses, students have the opportunity to learn pandemic-related techniques: air purification techniques (clean room), sterilization techniques (cell culture). Multi-disciplinary fields supply education to understand complex issues. They improve communication skills on global problems.

Keywords: Multidisciplinary Field, Biomedical Engineering, COVID-19, Communication and Statistics.

8:40 AM – 9:15 AM



Dr. Mario LaManna, Italy/USA, Evoelectronics (Italy), and Selex-SI (USA), Senior Scientist and Project Leader, Projects in the fields of defense and security.

Dr. Mario LaManna received the degree in Electronic Engineering (summa cum laude) from the University of Pisa, Italy. He is working with EVOELECTRONICS in Rome, Italy as Senior Scientist and Project Leader. He has taken part in a number of projects in the fields of defense and security. He is leader of a number of international cooperative projects and has participated in more than 100 international conferences

as paper author, session chairman and forum moderator. He is a Member of the IEEE and IIIS and a CapTech Expert of the EDA IAP02 (Sensor Systems).

Plenary Keynote Address: *The role of Human in the Loop in Threat Recognition in Homeland Protection Systems*

Abstract: Threat Recognition is a primary task in Homeland Protection systems. When performing this task, Human in the Loop is the main part of a multidisciplinary reasoning process, that allows to achieve a high probability of correct classification. This reasoning process relies on two important factors, namely the past recognition history and the threat scenario. The Human in the Loop agent contributes both in controlling the automated process and in acting as a decision support system in different situations, such as dynamic changes in the scenario and occurrence of anomalous conditions. A multidisciplinary threat recognition process uses a combination of a multisensory classification algorithm and a multidisciplinary fusion rule. This fusion rule combines the decisions coming from different channels with the reasoning process of a Human in the Loop agent. The performance evaluation of the multidisciplinary threat recognition system is carried out by considering different case studies. The evaluation demonstrates that a multidisciplinary system with a Human in the Loop agent can classify different threats, by using a set of methods and algorithms, with a high probability of correct classification, when compared to a completely automated recognition criterium.

9:20 AM – 9:55 AM



Professor Rusudan Makhachashvili, Ukraine, Borys Grinchenko Kyiv University, Head of Romance Languages and Typology Department

Professor Rusudan Makhachashvili is Doctor Habilitated, English and Spanish major, Head of Romance Languages and Typology Department of Borys Grinchenko Kiyv University, Ukraine. Editor in Chief of the Journal “Synopsis: Text. Context. Media”. Main academic interests: interdisciplinary studies in Liberal Arts, digital education, digital humanities, digital literacy development, cognitive and communicative linguistics. European Commission Horizon 2020

Grant Evaluation Expert. Exemplary published works: Linguophilosophic Parameters of English Innovations in Technosphere (UK 2015), Models and Digital Diagnostics Tools for the Innovative Polylingual Logosphere of Computer Being Dynamics (Peter Lang, Berlin, 2020), ICT Tools and Practices for Final Qualification Assessment in the Framework of COVID-19 Lockdown (Poland, 2020).



Professor Ivan Semenist, Ukraine, Borys Grinchenko Kyiv University, Head of Oriental Languages and Translation Department

Professor Ivan Semenist, PhD, is Orientologist, Head of Oriental Languages and Translation Department, Head of Ukrainian National Association of Teachers of Chinese, Borys Grinchenko Kiyv University, Ukraine. Editor in Chief of Ukrainian Journal of Sinology Studies. Main academic interests: oriental studies, interdisciplinary studies in Liberal Arts, oriental languages, cultural and linguistic-literary ties of Ukraine with the countries of the East, relations of Ukraine with the

countries of the East. Exemplary published works: Modern Chinese Society -New Perspectives: New research between China and Ukraine scientists (Social Sciences Academic Press, China 2017), Japan's New Role In The World: The Discussion Of Early 1990's (Ukraine 2016), ICT Tools and Practices for Final Qualification Assessment in the Framework of COVID-19 Lockdown (Poland, 2020).

Plenary Keynote Address: *Interdisciplinary Trends of Digital Education in the COVID-19 Paradigm: Global Event Horizon*

Abstract: Transformative shifts in the knowledge economy of the XXI century, Industry 4.0/5.0 development and elaboration of networked society, emergency digitization of all social communicative spheres due to pandemic measures have imposed pressing revisions onto interdisciplinary and cross-sectorial job market demands of university level education, curriculum design and learning outcomes.

The COVID-19 pandemic induced amplified digitalization measures in the higher education sphere, informed by the need to take quick comprehensive action in order to achieve the

overarching result to transform educational and communicative scenarios into interdisciplinary digital, remote, and hybrid formats.

The consequent functional tasks to meet this challenge in the educational sphere worldwide are estimated as 1) to adapt the existent educational scenarios to digital, remote and hybrid formats; 2) to upgrade e-competence and digital literacy of all stakeholders of the educational process and industry; 3) to activate complex interdisciplinary skillsets, otherwise latent or underutilized in the professional interaction; 4) to introduce functional technical solutions for facilitation of formal and informal educational workflow and communication.

The findings of the comprehensive framework research project ‘TRANSITION’ disclose a wide scope of generalized issues, permeating the social and educational context worldwide: global event horizon and paradigm shifts in the interdisciplinary trends of digital education in the Covid-19 timeframe and beyond; transformative changes and avenues of development of the network society and education as an interdisciplinary socio-cultural institution and industry in the digital age; global experiences, universal/generic challenges, technical advances and specific national gains in quality assurance of online and hybrid learning in the covid-19 paradigm.

1:00 PM - 1:35 PM



Dr. Risa Blair, USA, Grantham University, Academic Manager – Instructional Design, eLearning Instructional Designer, Education Management, Instructional Associates, Director of HR and Operations

Dr Risa Blair 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 has exceptional skills in facilitating content delivery to meet the needs of the client. She is a 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 trained online course reviewer



Dr. Marcia Williams, USA, Post University, Waterbury

Dr. Marcia Williams, earned a Doctor of Philosophy in Educational Human Resource Development, Texas A&M University, TX, and a Master of Education, Corporate Training & Development, Penn State University, PA. She is a specialist in designing, developing and teaching traditional face-to-face, blended, and online courses and trainings.

An author, public speaker, and educational consultant, Dr. Williams’ experience and expertise include conducting corporate-wide educational analysis, staff development, and strategic planning to ensure high quality training programs that meet corporate goals. She also conceptualizes, designs and

develops courses and programs for higher education that align with Quality Matters (QM) standards. She has spoken at conferences and consulted with universities, organizations and professions in North America, Europe, Mexico, Malaysia, Singapore and Australia.

Dr. Williams authored an Early Adopter College Textbook (1998) – *Distance Learning, the Essential Guide* (Sage Publications, <http://dx.doi.org/10.4135/9781452229140> . E-book 9781506331614).

Plenary Keynote Address: *What is understood by Education has Ended and Training Endures...*

Abstract: All of the telltale signs are now here. The precursors to this scenario are clear. They may seem subtle and disconnected, but they are not. Physical library card catalogs were replaced with online catalogs. When students physically went to the library, there was an opportunity to be sidetracked and nurture the joy of reading for the sake of learning. When physical card catalogs were abandoned, there was less of a reason to go to the library and less of a happenstance of reading for pleasure and to learn about different areas and topics. At first, since not all resources were available online, students were still required to physically go to the library to find their resources. There was a chance that students would conduct physical research and read and learn for pleasure. In the next generation of library embellishments, nearly all resources became available online. Full-text articles were able to be printed right from the desktop. This locked the front doors of the physical libraries forever. In addition, cursive writing (handwriting) was pulled from the student curriculum in favor of keyboarding. By the way, the schools needed to get creative with their naming convention. Students were learning to type. Historically, this was called typing. However, males would not sign up for typing class, so the class creatively became keyboarding, which removed all of the gender connections and biases. Pulling cursive writing from the curriculum seems like a practical move. Students are using computers for everything. Why not teach keyboarding over cursive writing? Alas, how can students take notes on what they are reading if they do not use cursive writing? Are they going to print a page of notes? If they are looking at articles online and “reading” them, are they going to use a pen and paper to print notes on what they are reading? Are they going to juggle looking at the online article and take notes in a word processor at the same time? Plagiarism and cheating have gone through the roof and are getting worse. Some students are still copying and pasting what they find as resources that cover their paper topics. There are grand tools out there like Turnitin and SafeAssign to provide plagiarism scores and details in terms of where the copied material originates. However, the more sophisticated students are simply copying and pasting the original source material into paraphrasing tools, where well-trained artificial intelligence (AI) instantly rewrites the passages for them. There is no way to track this simple practice, yet. As a professor, all one can do is take off points because something has grammatical errors and is not well-written. Many schools are quite sensitive about taking off even 20% for poorly written work, as there is a strong push to being culturally sensitive and embracing written language in a variety of forms. It is not politically correct to judge and penalize student work that is not well-written. There are no clear guidelines, markers, and expectations to teach students what the expectations are and to hold them accountable to measure up to the bar. The final nail in the education coffin occurred when the Coronavirus pandemic hit. The majority of colleges and universities were in lockdown. Students and professors instantly transitioned to an online environment. Neither was prepared. Many professors did not have the experience to teach fully

online. They asked, “What do I need to grade?” The students were not prepared to go online. They asked, “What do I need to deliver?” Education instantly flipped to training. Education is dead. Training endures. Will we ever be able to bring it back again?

1:40 PM - 2:15 PM



Dr. Russell Jay Hendel, USA. Towson University, Dept. of Mathematics, doctoral program at the Spertus Institute for a degree in Jewish studies

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 III faculty member at Towson University, which is 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 papers for the American Mathematical Society and also reviews books for the Mathematical Association of America. Dr. Russell Jay Hendel is a current member of the American Mathematical Society, Mathematics Association of America, and AMIT. He also was Coordinator of Judges for the New York Mathematics Fair, 1995-2018, and has been listed as a noteworthy Educator by Marquis Who's Who. Dr. Russell Jay Hendel teaches actuarial mathematics at Towson University's Center for Actuarial Excellence. He hosts a website, rashiyomi.com, devoted to explaining the literary methods of Rashi a major biblical commentator. He resides in Baltimore, where he is co-president of the local AMIT chapter and is also a member of the AMIT President's Circle. AMIT was named the top educational network in Israel by the ministry of education using both quantitative and qualitative metrics for four consecutive years.

Plenary Keynote Address: *Benefits Expected from Computer Assisted Software and Minimum Requirements*

Abstract: Use of computer assisted software (CAS), typically combined with a problem-solving pedagogy, is common in 1) mathematics, 2) STEM, 3) writing, 4) certification exam preparation, and 5) business training.. Since there are many competing products; a user must know I) what benefits to expect from good CAS, and II) what the minimum requirements are. I) The benefits of good CAS are IA) increased student mastery due to increased practice leading to self-efficacy, IB) heightened awareness of objectivity, encouraging a perception that achievement is based on effort and work, thus increasing inclusion and diversity, and IC) increased outreach to weaker students who benefit from graduated levels of problem difficulty afforded by the CAS . II) The requirements for a good CAS are IIA) a large database of problems, B) classification of problems using the two-four dozen topics corresponding to the daily topics in a 15-week, course syllabus, taught two to three days a week, and IIC) at least 3 levels of graduated difficulty (easy, moderate, advanced) of practice problems for each topic. Note especially that minimally the software is exclusively used for storage implying that these ideas can be implemented manually

without using any computer. Simple implementation methods are shown for both mathematics and writing courses (both education and business oriented). The assurance that the minimum requirements enumerated lead to the benefits listed is provided by the four educational pillars of Hendel.

2:20 PM – 2:55



Dr. James Lipuma. USA, New Jersey Institute of Technology, director of the Collaborative for Leadership Education, and Assessment Research (CLEAR)

Dr. James Lipuma is a faculty member in the Humanities Department at the New Jersey Institute of Technology and director of the Collaborative for Leadership Education, and Assessment Research (CLEAR).

He holds a BS in Chemical Engineering from Stanford University, an MS in Environmental Policy Studies and a PhD in Environmental Science from NJIT, and a Masters of Education in Curriculum and Teaching focused in Science Education from Teachers College, Columbia University. He conducts extensive research in digital learning, curriculum, and instructional design and is currently piloting online converged course delivery methods.

In his role as director, Dr. Lipuma has completed curriculum development, assessment design, program evaluation, and program design and development projects for public schools, universities, the NJ Department of Education, Us Department of Education, and the National Science Foundation. He has also taught more than 5,000 students in more than 200 courses in his 25 years at the New Jersey Institute of Technology. He has completed work on nearly \$6M worth of grants including over \$2.5M as lead Pi or CoPI as well as received over \$250K worth of donations.

Legally blind since nine, Dr. Lipuma appreciates the need for positive change and works to promote broader participation for women and under-represented minorities in Science Technology, Engineering, and Mathematics (STEM) as part of STEMforsuccess.org and other STEM Literacy projects he leads.

Plenary Keynote Address: *Moving Beyond Disciplinarity: Communication, Collaboration, Leadership and Convergence*

Abstract: In 2014 NSF produced a report [1] about multi-, inter-, and trans-disciplinary research leading to new efforts termed Convergence. Key to these efforts is the ability of individuals and organizations to collaborate and share knowledge and ideas. The aim of the keynote is to discuss issues when working with others on new methodologies and negotiating understanding within this new common space being generated together. This keynote will explain this concept in the context of K-20 STEM education to understand effective collaboration and coalition building. Some key factors of collaboration at the individual, organizational, and systems levels will be

examined as they are essential for leadership and communication to allow for the effective integration of ideas applied in real-world situations. The specific examples from my research and NSF INCLUDES project award number#1744490 related to promoting broader participation in STEM by women and other traditionally underrepresented groups will be discussed. These projects utilize the idea of Co-design to engage diverse stakeholder groups in efforts to attain goals to make systems change through collective effort and impact without a prescribed treatment being tested.

¹ “Convergence: Facilitating Transdisciplinary Integration of Life Sciences, Physical Sciences, Engineering, and Beyond” (National Academy of Sciences, 2014).

KEYWORDS: Disruptive Innovation, Convergence, Collaboration. STEM Education, Broader participation

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Plenary Keynote Addresses – Monday, July 19th, 2021

8:00 AM – 8:35 AM



Professor Steve Dixon, Singapore, President of LASALLE College of the Arts in Singapore

Professor Steve Dixon is President of LASALLE College of the Arts in Singapore, one of Asia's leading arts institutions. He is an interdisciplinary researcher who has published on subjects spanning both the arts (on theatre, film and visual arts) and the sciences (on AI, VR, robotics and science fiction). He has established an international reputation for his research into the use of computer technologies in the arts, including as co-Director of the *Digital Performance Archive* and co-founder and Advisory Editor of the *International Journal of Performance Arts and Digital Media* (Routledge). His 800-page book *Digital Performance: A History of New Media in Theater, Dance, Performance Art and Installation* (MIT Press 2007) is the most comprehensive study of the field to date, and won awards including the Association of American Publishers Award for Excellence in Music and the Performing Arts. His latest book, *Cybernetic-Existentialism* (Routledge 2020) re-examines and compares the two titular disciplines, and fuses them together to propose a bold and original aesthetic theory of contemporary arts.

Plenary Keynote Address: *Discovering Patterns across Disciplines: Cybernetics, Existentialism and Contemporary Arts*

Abstract: Gregory Bateson observed that cybernetics is not essentially about “exchanging information across lines of discipline, but in discovering patterns common to many disciplines” [1]. This plenary keynote adopts his line of thought to join the dots between cybernetics and the philosophy of Existentialism, and then interconnect both with contemporary art. It demonstrates that while terminologies may differ, many of the three fields' primary concerns closely cohere. The world's most ground-breaking artists are found to apply and fuse cybernetic paradigms and Existentialist themes, from Robert Rauschenberg and Marina Abramović to Damien Hirst, Stelarc and Anish Kapoor.

The research offers the first detailed comparison between cybernetics and Existentialism, and reveals surprising commonalities. Feedback loops, circular causality and negative entropy are not only central tenets of cybernetics, but also of Existentialism. Autonomy, autopoiesis and

interactivity equally unite both fields, and each is visionary and forward looking in seeking radical change and transformations. Both explored artistic endeavours, with Existentialists Jean-Paul Sartre and Albert Camus equally renowned for their powerful novels and plays as their philosophical works, while cybernetic art became a major phenomenon in the 1960s following the landmark exhibition *Cybernetic Serendipity: the Computer in the Arts* (1968), and influenced artistic practices thereafter.

[1] G. Bateson, *Steps to an Ecology of Mind*, New York: Ballantine Books, 1971, p. 23.

8:40 AM - 9:15 AM



Dr. Rossella Marzullo, Italy, Mediterranea University of Reggio Calabria, scientific director of the II level Master on the rehabilitation of minors from deprived environments and mafia families

Professor Rossella Marzullo is Ph.D in civil law, Ph.D in humanistic studies and education, and senior researcher qualified as associate professor of General and Social Pedagogy at the Mediterranea University of Reggio Calabria. She has numerous publications in Italy and abroad on the issue of the educational rehabilitation of minors, also minors from deprived and mafia contexts. She has been speaker at international and national conferences on the theme of educational rehabilitation, which represents her main line of research.

She was a judge at Juvenile Court of Catanzaro (Italy). She was a consultant of Authority for Children and Adolescents in Calabria Region.

She is currently scientific director of the II level Master on the rehabilitation of minors from deprived environments and mafia families, at the Mediterranean University of Reggio Calabria.

Lines of scientific research:

- General and Social Pedagogy.
- Pedagogy of educational rehabilitation.
- Pedagogy of the family.
- Epistemological analysis of educational dysfunctions in family relationships, systems for correcting relational dysfunctions, parental responsibility and educational responsibility.
- Analysis of the relationship between the specificities of the various dimensions of educational recovery and the re-educational function of the sentence, pedagogical and constitutional profiles.
- The educational rehabilitation of the offender.
- Human rights.
- Ecofeminism.
- Education and digital environment.
- Pedagogy of gender and culture of equal opportunities.
- Right to education of the minor.

Plenary Keynote Address: *The family role in ethics and morals education: extent and limits of educational freedom.*

Abstract: The child has the right to be prepared for a responsible life in a free society, in a spirit of understanding, peace, tolerance, equality of the sexes and friendship between all peoples and ethnic, national and religious groups and people of autochthonous origin.

Parents cannot escape the educational challenge, neither from a legal point of view, nor from an ethical and moral one, because the value of education immediately evokes the relationship between the individual and his reality and therefore his ability to be in tune with himself and with others.

If education is a right, then it can and must be demanded. Consequently, in the cases where this right appears to be violated, the institutions must help children, in order to be able to replace, to some extent, the figures appointed to educate them and that have proven to be inadequate with respect to such an important task.

On the other hand, we must ask ourselves how the right to education codified and referred to in national and international laws could be considered fully realized, in contexts in which parenthood is still, in a decidedly rooted way, conceived as belonging, as a dominion over who cannot and must not, at the cost of his own life, escape the rules of the family?

And here the focus shifts to the *quomodo*, to the contents and limits of educational freedom.

Is it possible and right to educate in organized crime or in the war of religion, considering that everyone in his home can do what he wants? Is it right to educate to peddle at the age of ten or even less? Are we really free to impart precise rules, rites, unwritten codes that decree the marginality and exclusion of a human being? Can war and massacre be urged in the name of a god?

This is the big question that reflections on education generate: are there limits to the freedom to educate? And - as Bauman says - how free is freedom?

19:20 AM - 9:55 AM



Dr. Pawel Poszytek, Poland, Foundation for the Development of the Education System, General Director, Member of working groups of the European Commission and the Ministry of National Education of Poland

Pawel Poszytek, PhD, Director General of the Polish National Agency of Erasmus+ Programme. Member of several working groups by the European Commission and the Ministry of National Education of the Republic of Poland, coordinator of the Country profile Project implemented by the Council of Europe. Reviewer of the national core curriculum in foreign language teaching in 2008 and co-author of 2016/2017 curriculum update. Former member of the executive board of the European Association of Language Teaching and Assessment. Former

coordinator of Lingua, European Language Label and eTwinning programmes in Poland and member of the board of the Polish National Agency of Lifelong Learning Programme. Currently, general director of the Foundation for the Development of Education System – Polish National Agency for European Union educational programmes

Plenary Keynote Address: *The role of interdisciplinarity in the future world of work*

Abstract: The aim of the presentation is to explain the contextual terminology connected with discussions on competences 4.0 and discuss in detail the nature of interdisciplinarity as one of the key factors defining these competences and future skills in the context of the new labor market needs. The discussions on the concept of competences 4.0 in the context of 4th industrial revolution have been being growing recently and extensive analyses and researches have been being carried out by experts within various scientific disciplines such as management, economy, psychology, education, human resource, informatics and systemics. Due to the relevance of industry 4.0 concept in relation to current socio-economic challenges worldwide, the growing interest on the part of researchers and the proliferation of the above-mentioned terms in literature has formed a complicated network of patterns and relations constituting a scientific landscape of the discussions in questions with the notion of interdisciplinarity being in the very heart of it. Additionally, this presentation discusses interdisciplinarity as one of the underlying factors that constitute current paradigms in the science of management and provides practical examples.

1:00 PM - 1:35 PM



Professor Richard Segall, USA, Arkansas State University, Department of Information Systems & Business Analytics (ISBA), Neil Griffin College of Business

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 & Computer Science Master of Engineering Management (MEM) Program and Affiliated Faculty of the Environmental Sciences Program and Center for No-Boundary Thinking (CNBT). He is also Affiliated Faculty at University of Arkansas at Little Rock (UALR) where he serves on thesis committees. He has previously 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 Fog Computing (IJFC)*, *International Journal of Open Source Software and Processes (IJOSP)*, *International Journal of Information Technology and Decision Making (IJITDM)*, *International Journal of Information and Decision Sciences (IJIDS)*, *Applied Mathematical Modelling (AMM)*, *Kybernetes: The International Journal of Cybernetics, Systems and Management Sciences*, *Journal of the Operational Research Society (JORS)* and *Journal of Systemics, Cybernetics and Informatics (JSCI)*.

He has book chapters in *Research Anthology on Privatizing and Securing Data*, *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 4 published books: Open Source Software for Statistical Analysis of Big Data published by IGI Global in 2020, Handbook of Big Data Storage and Visualization Techniques (2 volumes) published by IGI Global in 2018, Research and Applications in Global Supercomputing published by IGI Global in 2015, and Visual Analytics and Interactive Technologies: Data, Text and Web Mining Applications published by IGI Global in 2011.

He was a member of the Arkansas Center for Plant-Powered-Production (P3) from 2008 to 2016, and is currently 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, 2013 and 2016 World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI) Conferences, and Faculty Award for Excellence in Research in 2015 and 2019 by Neil Griffin College of Business and University Award for Scholarship (Research) in 2020 at Arkansas State University.

Plenary Keynote Address: *Advances made in 2021 using Artificial Intelligence for overcoming COVID-19*

Abstract: Artificial Intelligence (AI) is the science of making intelligence machines that can perceive visual items, recognize voice, and make decisions and predictions, and more. Artificial Intelligence is composed of techniques that includes machine learning, computer vision, fuzzy logic, neural networks and other.

This presentation is a continuation of previous Plenary Keynote Speech and will first provide a review of what Artificial Intelligence (AI) is and an overview of its techniques and applications to multi-disciplines. This presentation will then focus on the advances that have been made in overcoming COVID-19 in year 2021 and in year 2020 after the WMSCI 2020 conference.

Artificial Intelligence tools of neural networks and machine learning are being used for countless applications for diagnosing, forecasting, statistical predictions, and detection of COVID-19 cases.

The 2021 and post WMSCI 2020 timeline of these and other rapidly developing applications of AI (Artificial Intelligence) to COVID-19 will be discussed.

1:40 PM - 2:15 PM



Professor T. Grandon Gill, USA, University of South Florida, College of Business, Director of the Doctorate in Business Administration, Editor-in-Chief of *Informing Science*, Editor of the *Journal of IT Education*

Dr. Grandon Gill holds an AB (cum laude) from *Harvard College* and an MBA (high distinction) and DBA from *Harvard Business School*. He is a professor and the Academic Director of the Doctor of Business Administration program at the *University of South Florida's Muma College of Business*. He was also recently elected president of the *Informing Science Institute*.

Dr. Gill has published more than 60 peer reviewed articles, more than 60 case studies, and has authored or edited 11 books relating to his research in the informing science transdiscipline and in the use of case studies for education and research. Over the past decade he has served as principal investigator on two grants from the National Science Foundation, completed a core faculty Fulbright in South Africa, and received the Gackowski award for his lifetime contributions to informing science research and the Ranulph Glanville award for his research activities.

T. Grandon Gill is a professor and academic director of the Doctor of Business Administration program at the University of South Florida's Muma College of Business. His research focus is on understanding the impacts of instructional technology on learning and on how complexity impacts informing processes. He received his A.B. degree from Harvard College and his MBA and DBA degrees from Harvard Business School. He has published more than 100 research articles and case studies, has authored or edited 10 books, has served as principal investigator on two National Science Foundation grants and completed a three-year core research Fulbright in South Africa in 2017. Most recently, Grandon was appointed the leader of a faculty working group whose mission is to help instructors adept to new ways of teaching mandated by the pandemic.

Plenary Keynote Address: “*The Predatory Journal: Victimizer or Victim*”

Labeling a journal as “predatory” can do great damage to the journal and the individuals that have contributed to it. This presentation considers whether the predatory classification has outlived its usefulness and what might replace it.

With the advent of open access publishing, the term “predatory” has increasingly been used to identify academic journals, conferences and publishers whose practices are driven by profit or self-interest rather than the advancement of science. Absent clear standards for determining what is predatory and what is not, concerns have been raised about the misuse of the label.

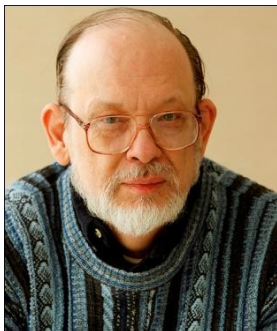
The presentation includes a brief review of the literature, some examples, and a conceptual analysis. It concludes that: a) current predatory classifications are being assigned with little or no systematic research and virtually no accountability, b) the predatory/not predatory distinction

also fails to accommodate alternative journal missions, and c) that the damage caused by Type 1 error (misclassifying a legitimate journal as predatory) is far more tangible and difficult to correct than Type 2 error (failing to identify a predatory journal as such).

After completing the analysis, recommendations for reducing the impact of illegitimate journals consist of:

1. Dropping the "predatory" and focusing on distinguishing legitimate and illegitimate journals, based on evidence of intent.
2. Requiring faculty position applicants and those seeking promotion and/or tenure to supply copies of peer reviews received for subsequently published articles to verify the quality control of the journals involved.
3. Classifying journals by mission and evaluating each journal's practices according to fit with the mission. Initially proposed categories are: competitive, developmental, exploratory and translational.
4. Encouraging institutions to develop portfolio-style targets for publications in different categories.
5. Developing a crowd-sourced site where different categories of journal can be rated by authors, reviewers and readers.

2:20 PM - 2:55 PM



Professor Thomas Marlowe, USA, Seton Hall University, Professor Emeritus, Department of Mathematics and Computer Science, PhD in Computer Science and PhD in Mathematics

Thomas J. Marlowe is Professor Emeritus in the Department of Mathematics and Computer Science at Seton Hall University, where he taught a wide variety of courses in both disciplines for almost 40 year, and where he continues to teach occasionally as an adjunct. Professor Marlowe enjoys working with students and with professional colleagues—almost all his research is collaborative. His professional interests have included, in mathematics, abstract algebra and discrete mathematics; in computer science, programming languages, real-time systems, software engineering, and pedagogy; and in information science, collaboration and knowledge management. His two PhDs are from Rutgers, The State University of New Jersey. He has over 100 publications in refereed conferences and journals in mathematics, computer science and information science, and has been a member on more than 10 Ph.D. thesis and 5 M.S. thesis committees, a member of more than 25 conference program committees, and a reviewer for numerous conferences, journals, and grants. He is the founder of an ongoing professional conference, and has been active with the IIIS and the WMSCI multiconference since 2008.



Fr. Dr. Joseph R. Laracy, USA, Seton Hall University, Department of Systematic Theology & Department of Mathematics and Computer Science

Father Laracy is a priest of the Roman Catholic Archdiocese of Newark and assistant professor at Seton Hall University. He earned a doctorate from the Pontifical Gregorian University in Rome. Within the field of systemics, Laracy is interested in systems theory (e.g., cybernetics), applied dynamical systems (e.g., modeling with differential equations), and systems engineering (e.g., safety & security engineering). Laracy's

principal theological interests are in the intersection of faith & reason and theology & science. A significant part of his research and teaching is focused on placing the Catholic Intellectual Tradition, especially theology, in dialogue with the sciences: formal science (e.g., logic & mathematics), natural science (e.g., astrophysics & evolutionary biology), applied science/engineering (e.g., cybernetics), and medicine (e.g., psychiatry). Laracy's early career interests as a graduate student at the Complex Systems Research Laboratory at MIT concentrated on uncertainty and dynamics in large-scale, complex engineering systems. He looked at key sources of uncertainty, ways to model and quantify uncertainty, and ways to maintain properties such as safety and security as systems change over time. His work was supported by a NASA Ames Research Center Grant (Model-Based Hazard Analysis Research) and an NSF Grant (A Socio-Technical Approach to Internet Security). As an undergraduate engineering student at the University of Illinois, he pursued research to develop a scalable RSA cryptographic co-processor supported by an NSF VIGRE Grant, worked on a software pattern-based fly-by-wire aircraft control system, and served as a teaching assistant for a course on the Physics of Nuclear Weapons, Warfare, and Arms Control. In the course of his studies, he held engineering positions with Lucent Technologies (Wireless Terminal Interoperability Laboratory), Ball Aerospace and Technologies (NASA Deep Impact Mission), and Light Source Energy Services.

Plenary Keynote Address: *A Cybernetic View of Agile (and an Agile View of Cybernetics)*

Abstract: Software engineering, with its focus on modeling, communication, and explicit measures of success, has a clear resemblance to second-order cybernetics, and the modern Agile approach, which emphasizes in addition a culture of autonomous teams, periodic reflection, and feedback-driven iterative and incremental delivery, even more so.

Drawing on prior presentations at WMSCI 2020 and IMCIC 2021, we home in on the implicit connections between Agile and cybernetics. We consider Agile software engineering as a cybernetic process, deriving insights and possible refinements. We also look briefly at the converse—does Agile as a standard software engineering and management approach offer any suggestions or advantages for second-order cybernetics as a practice or as a discipline?

- Marlowe, Laracy, Fitzpatrick. Implicit Cybernetic Systems: A Controlling Metaphor or a Metaphor out of Control?. IMCIC, March 2021; to appear JSCI, December 2021.
- Marlowe, Kirova, Hashmi, Chang, Masticola. Development and Evolution of Agile. WMSCI, July 2020, and JSCI, December 2020

General Framework and Plenary Keynote Speakers of the Collocated Conferences
The 25th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2021
The 15th International Multi-Conference on Society, Cybernetics and Informatics: IMSCI 2021
The 20th Ibero-American Conference on Systems, Cybernetics, and Informatics
Vigésima Conferencia Iberoamericana en Sistemas, Cibernética e Informática: CISC 2021

Plenary Keynote Addresses – Monday, July 19th, 2021

8:00 AM – 8:35 AM



Mrs. Emma Almingefeldt, Sweden, The University of Borås, Faculty of Library- Information- Education and IT

Mrs. Emma Almingefeldt is teachers' representative at The Governing Board at the University of Borås. She is a university lecturer in Swedish as a second language and ICT at Faculty of Education and Higher Education at University of Borås- Sweden Presenter in international and national conferences (2019): Praxis symposium in higher education Next generation teaching in higher education

These are some of the courses she is responsible for:

- Academy of International Academics
- Swedish as a foreign language
- The role of the mother tongue teacher in the students' language and knowledge development
- Activity Inspirer Project (Inheritance Fund Project - Education for People with Intellectual Disabilities) - Paused

Her focus areas are: study cultures, language and knowledge development methods, assessment and literacy.

Plenary Keynote Address: *Why are not all teachers doing this? - Equal assessment and a tool for improvement of speech*

Abstract:

Students: Can you please explain to me why I didn't pass the oral examination?

Teacher: I couldn't understand what you said.

Student: What didn't you understand?

Teacher: The thing is since I didn't understand what you said. I am sorry to say that I can't tell you where you went wrong.

This conversation with one of my second language students made me think that if I would have filmed the oral examination I could have gone through the examination together with my student

and I could have been able to point out exactly what is needed to improve when it comes to pronunciation, vocabulary, and grammar, etc. To be able to see if the video would be a good tool to implement for language teachers when it comes to making sure that exams are conducted fairly and in accordance with guidelines surrounding students' rights (Universitetskanslerämbetet, 2020) and that all students are and feel they have been assessed equally I and my co-workers began to film students attending second language classes at the University of Borås arranged for international students and for academic immigrant students. We filmed the students during their oral exams. Depending on the exam sometimes it was done individually and sometimes in small groups. Before we could start filming, we had to make sure it was done according to GDPR and that we had good and safe equipment. GDPR was solved by letting the students signing a document and before doing so they had been very well informed of what they signed. Five out of over 200 students have turned down the offer of being filmed during their oral examinations. A few have said no at the beginning of the exam but when it is their turn, they have changed their mind. Later GDPR has been solved by writing in the course plan that the examination might be filmed by this no documents need to be signed and archived. For filming, we needed a tool that had a very good microphone that wouldn't disturb and be in the way for the students and especially since we were mostly interested in being able to go back and listen again we needed a microphone with a good sound quality. We also needed a tool that would let us save our recordings for many years since there is no limit of time when a university student in Sweden can appeal a grade (Universitetskanslerämbetet, 2020). Swivl (www.swivl.com) was found to be a tool that met all our requirements. Over 200-second language students have been asked about their experiences of being filmed. The result shows that 93 % of the students reported positive or neutral feelings about the recordings. Very specific and detailed feedback can be given about a word, sentence, or utterance and this one can be revised both by the student and the examiner immediately after, but also years after.

Students themselves are able to listen to what they actually said and reflect upon what they did well and what they have to focus on to do better. -When I watched my film and read the comments I totally understood why I didn't pass (Student A). The results also indicate that students find oral examinations to have a higher status if they are filmed and are fairer when it comes to assessment and grading. -I think it is needed for perfect scoring (Student B). Six teachers have been interviewed and the finding that has been shown is that the teacher can focus on the examination/presentation/discussion instead of taking notes and it easier for the examiner to get a second opinion from another teacher. -I feel less stressed when I know I can go back and listen once more. It seems like less students question my assessment compared to when I didn't film my students (Student B). The finding shows that video is a useful tool, that benefits both students and teachers, when it comes to fair assessment and speech training in language education.



Professor Elina Gaile-Sarkane, Riga Technical university, Latvia, Dean of the Faculty of Engineering Economics and Management (FEEM)

Dr. Elina Gaile – Sarkane, is a dean of the Faculty of Engineering Economics and Management (FEEM), Riga Technical University (RTU) (<http://www.rtu.lv/en/>). As professor, she is teaching variety of courses in organization management and new product development. Dr. Gaile-Sarkane focuses her research on topics of management, innovation and technology transfer, entrepreneurship and various aspects of business. Elina Gaile-Sarkane have more than 150 scientific publications in management, economics and the related fields, and more than 35 of them

published at internationally recognized journals or conference proceedings with indexing at international data basis (such as Thomson and Reuter, SCOPUS, EBSCO etc.). Dr. Gaile-Sarkane is an author and/or co-author of 4 text books, 3 monographs, 2 patents. She had been a supervisor of many PhD students, contributed as the expert in promotional procedure of new doctors and as the consultant in doctoral thesis development in Latvia and abroad. ORCID: 0000-0002-7509-527

Plenary Keynote Address: *The Evaluation of Economic Impact of Higher Educational Institutions on National Economy*

Abstract: There is a need to provide universities with estimates of the impact of their existence on the local economy using standard methods of regional economics is growing year by year. Question about the best approach is for this evaluation have always been interesting for all stakeholders – academia, business and society. Group of researchers at Riga Technical University have analyzed and compared existing methods for evaluation of economic impact of Higher Educational Institutions on national economy and came up with calculations based on publicly available statistics and allows to calculate the static, demand-driven impact (expenditure) of the university as well as dynamic, supply-side effects (investment in increasing the productivity of the national economy through the development of human capital and innovation). Research results confirmed that investments in higher education have extremely high multiplier effect

8:40 AM - 9:15 AM



Dr. Ekaterini Nikolarea, Greece, University of The Aegean, Lesvos, School of Social Sciences, Department of Geography.

Dr. Ekaterini Nikolarea got her BA in English Studies from Greece and her MA and PhD in Comparative Literature from Canada. She was awarded major Canadian Fellowships, Prizes and a Post-Doctoral Fellowship for her contribution to Translation Studies.

Ekaterini has published articles on theatre translation (the most known being “*Performability versus Readability: A Historical Overview of a Theoretical Polarization in Theatre Translation.*” *Translation Journal* 6.4 (October 2002; it can

be viewed at <http://translationjournal.net/journal/22theater.htm>), reviewed books and articles and authored two Studies Programs for Applied Linguistics. She taught World Literature, English and Greek (*Koine* and Modern Greek) at Canadian and US Universities, while being in North America.

Since she came back to Greece, Ekaterini has been appointed an ESP (: English for Specific Purposes) and EAP (: English for Academic Purposes) teacher in the School of Social Sciences, and has been teaching ESP and EAP in the Departments of: Geography, Social Anthropology and History, Cultural Technology and Communication, Sociology and Marine Sciences of the respective university.

In her spare time, she does research both on teaching foreign languages (especially, English) at a university level and on theatre translation, publishes articles, reviews articles for international journals, and works as a freelance bi-directional translator and interpreter, when her services are required.

Plenary Keynote Address: *To Use or not to Use AI¹ when communicating Inter-disciplinary Research worldwide? That's the Question!*

Abstract: The presenter will, first, start this presentation with “**think only in English**”, a past Anglo-centric approach to teach and learn English to non-English speakers which prohibited the use of any bilingual or multilingual dictionaries. Then, she will expose the underlying ideology and its consequences on non-English learners (HIs - *noes*)², that is, their difficulty with using “properly” electronic dictionaries and any other form of AI (i.e., word forums, corpora)

The presenter will show how a non-English *nous* (who can be a student, a researcher or an academic) can use to his/her advantage AI (in the form of electronic dictionaries, word forums and corpora) and communicate successfully his/her own research internationally, using English as *lingua franca*.

The presenter will give specific term from various scientific discourses -- such as: (1) grid, affinity (cases of *inter-scientificity*) and (2) σχήμα (lit. scheme – a case of *faux-amis* [: false friends]³), κορυφή (a Greek noun that can be translated into English in, at least, three or four different ways depending on the context) (cases of *reverse interscientificity*) – just to show how the correct use of AI tools can help a non-English *nous* communicate his/her interdisciplinary research globally.

Finally, the presenter will insist on the fact that only when a *nous* is trained properly is the only one who can assess the correctness or not AI provides him/her with.

Keywords: *nous*, AI, dictionaries, language forums, corpora, *inter-scientificity*, *reverse interscientificity*.

¹ AI: Artificial Intelligence

² HIs: Human Intelligences; *noes* plural of *nous*: mind, intelligence.

³ In Translation Studies, *faux-amis* (: false friends) a word or expression in one language that, because it resembles one in another language, is often wrongly taken to have the sa

1:00 PM - 1:35 PM



Dr. Robert Cherinka, USA, MITRE Corporation, Chief Engineer, Software Engineering Technical Center at MITRE.

Dr. Robert Cherinka is the Chief Engineer of the Software Engineering Innovation Center for the MITRE Corporation. His expertise is in software, systems and process engineering, with a focus toward software quality and agile development technologies. Bob earned a Ph.D. and M.S. in Computer Science from Old Dominion University, Norfolk, Virginia, and a B.S. in Computer Science in 1987 from the University of Pittsburgh. Bob served 6 years as a software engineer in the US Air Force, before joining MITRE in 1993.



Mr. Joseph Prezzama, MSc., USA, MITRE Corporation, Group Leader for the Joint Operations Southeast, Tampa office of the MITRE Corporation, MS Software Engineering. 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.

Plenary Keynote Address: *Understanding why many agile transformations fail and whether Agile 2 and multidisciplinary teams can help turn failure into success.*

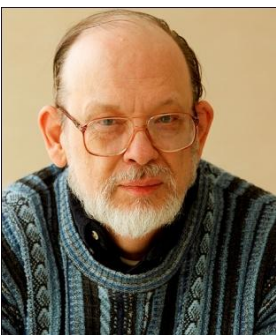
Abstract: Research shows that over half of agile transformations undertaken by organizations are failing. It is important to understand why this is the case and to consider how agile can be effective. Recent work by several Agile founders and leading experts have recently been published and referred to as the “Agile 2 Movement.” This movement addresses several problems and pitfalls with the way agile practices have been implemented since the publication of the agile manifesto and its adoption into widespread practice. In this presentation, we will examine the motivation for the agile 2 movement, compare it to our experience working agile transformation across the Public Sector, and discuss key points to consider to help make agile an effective multidisciplinary team sport.

1:40 PM – 2:15 PM



Fr. Dr. Joseph R. Laracy, USA, Seton Hall University, Department of Systematic Theology & Department of Mathematics and Computer Science

Father Laracy is a priest of the Roman Catholic Archdiocese of Newark and assistant professor at Seton Hall University. He earned a doctorate from the Pontifical Gregorian University in Rome. Within the field of systemics, Laracy is interested in systems theory (e.g., cybernetics), applied dynamical systems (e.g., modeling with differential equations), and systems engineering (e.g., safety & security engineering). Laracy's principal theological interests are in the intersection of faith & reason and theology & science. A significant part of his research and teaching is focused on placing the Catholic Intellectual Tradition, especially theology, in dialogue with the sciences: formal science (e.g., logic & mathematics), natural science (e.g., astrophysics & evolutionary biology), applied science/engineering (e.g., cybernetics), and medicine (e.g., psychiatry). Laracy's early career interests as a graduate student at the Complex Systems Research Laboratory at MIT concentrated on uncertainty and dynamics in large-scale, complex engineering systems. He looked at key sources of uncertainty, ways to model and quantify uncertainty, and ways to maintain properties such as safety and security as systems change over time. His work was supported by a NASA Ames Research Center Grant (Model-Based Hazard Analysis Research) and an NSF Grant (A Socio-Technical Approach to Internet Security). As an undergraduate engineering student at the University of Illinois, he pursued research to develop a scalable RSA cryptographic co-processor supported by an NSF VIGRE Grant, worked on a software pattern-based fly-by-wire aircraft control system, and served as a teaching assistant for a course on the Physics of Nuclear Weapons, Warfare, and Arms Control. In the course of his studies, he held engineering positions with Lucent Technologies (Wireless Terminal Interoperability Laboratory), Ball Aerospace and Technologies (NASA Deep Impact Mission), and Light Source Energy Services.



Professor Thomas Marlowe, USA, Seton Hall University, Professor Emeritus, Department of Mathematics and Computer Science, PhD in Computer Science and PhD in Mathematics

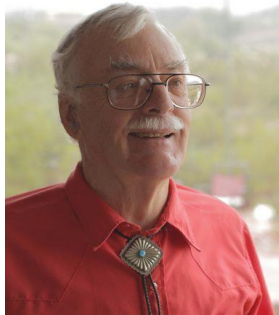
Thomas J. Marlowe is Professor Emeritus in the Department of Mathematics and Computer Science at Seton Hall University, where he taught a wide variety of courses in both disciplines for almost 40 year, and where he continues to teach occasionally as an adjunct. Professor Marlowe enjoys working with students and with professional colleagues—almost all his research is collaborative. His professional interests have included, in mathematics, abstract algebra and discrete mathematics; in computer science, programming languages, real-time systems, software engineering, and pedagogy; and in information science, collaboration and knowledge management. His two PhDs are from Rutgers, The State University of New Jersey. He has over 100 publications in refereed conferences and journals in mathematics, computer science and information science, and has been a member on more than 10 Ph.D. thesis and 5 M.S. thesis committees, a member of more than 25 conference

program committees, and a reviewer for numerous conferences, journals, and grants. He is the founder of an ongoing professional conference, and has been active with the IIS and the WMSCI multiconference since 2008.

Plenary Keynote Address: *A Second-Order Cybernetic Analysis of Hypothesis-Driven Development*

Abstract: Hypothesis-driven development or design (HDD) is a new approach to software engineering that prioritizes the use of “hypotheses,” as opposed to “requirements,” to achieve customer goals. Software engineers who adapt HDD embrace continuous experimentation and adaptation throughout the software lifecycle. HDD can be understood as second-order cybernetic loop, with the users of an application as the system to be controlled/modified, the developers as the controller, the application as the control mechanism, and desired customer behavior as metrics. The fact that it is second-order entails questions of both effectiveness and ethics. In this presentation we examine the good, bad, and ugly aspects of HDD.

2:20 PM - 2:55 PM



Dr. Jeremy Horne, USA, President-emeritus of the Southwest Area Division, American Association for the Advancement of Science (AAAS)

Dr. Jeremy Horne is President-emeritus of the Southwest Area Division of the American Association for the Advancement of Science (AAAS). He currently is writing a book explicating a philosophical system based on his research and writing in the areas of logic as the language of innate order in the Universe, an ongoing 40-year project.

His areas of specialization are binary logic (with course work in symbolic logic, philosophy of computers, set theory, ontology, dynamic validation, social and political philosophy, political economy, history of philosophy, and philosophy of education. His ongoing research interests are in the philosophy of organicity, recursion in three-dimensional binary space, autonomous hybrid systems, the ontology of number and time, and states of life and consciousness. Present work is writing a book describing the philosophical system embracing explanations of cosmological and quantum semantics of binary logic, consciousness studies, paradoxes, systems theory, and organicity.

Dr. Horne taught many courses in philosophy (including his specialty logic), political science, and technology, having delivered many presentations on the philosophy of scientific methods for the American Association for the Advancement of Science (AAAS), the IIS, and quantum mind conferences. He has been a peer reviewer for various journals about the structure and process in binary space, consciousness studies, systems theory, and philosophy of science. For "bread and butter" work, he was a documentation systems developer for the White Sands Missile Range in New Mexico, a culmination of some twenty years' work in the field of documentation. His recent publications include a book *Philosophical Perceptions on Logic and Order*, chapters of

several books released by IGI Global Press, and a "kernel" chapter, "Philosophical foundations of the Death and Anti-Death discussion", appearing in the Vol. 15, *Death And Anti-Death* set of anthologies by Ria Press (2017).

He is searchable under his name, the more academic entries appearing by using the academic degree suffix. His document repository may be accessed at <https://sites.google.com/site/yourmindshomepage/project-documents?authuser=0> and on <https://www.academia.edu/>

Plenary Keynote Address: *What is experience?*

Abstract: We "experience" the world about us. What does that mean? The answers are not satisfying, because they describe effects only, not existence. Only philosophy will help, in this case, ontology – what exists - and epistemology – how we know. Hegel with his idealism seems to say the essence of experience is a process or is teleological, i.e., purpose-driven. J.T. Creighton's "The Standpoint of Experience" admirably describes effects and functions of experience, but still mysterious is the ontology. John Dewey carried forth 19th-century organic thinking, primarily marked by Hegel, but said the essence of experience is teleologically-directed. Yet, a substantial reading of Dewey will answer many of our questions and concerns raised in current dialogues, his *Experience in Education* an excellent orientation. Besides thinking interdisciplinary, you also learn by doing the same way.

Many barriers prevent our "really" knowing anything, mainly ontology - so we have to "bootstrap" by assuming, just like mathematicians and logicians. I set forth some phenomenological foundations, such as the most fundamental law, the unity of difference, from which emerge duals. Something exists because of an other, like mental-physical, particle-wave, infinitesimal-infinity, and so forth.

I come to epistemology. Empiricism is an epistemology, understanding through the senses (the physical), and "experience", combined as "sensory experience". Experience needs interpretation, requiring another epistemology, rationalism (reason). However, neither can exist by itself, again the most fundamental law. Physically, our sensors (5 senses) detect, send photons to the brain, and evoke responses ("knowledge"). Missing is how we process, "consciousness". Neurocorrelational artifacts (from brain imaging), work in artificial mentation, and even cosmology offer substantial physical tools and methods in "consciousness" studies, but "It's a long way to Tipperary".

I end with recursion, solipsism, and the philosophical fishbowl (which you should have detected by now). Oh yes, we have the proverbial tortoise holding up the Earth – ethos which colors Dewey's teleology - what kind of experience.