Plenary Keynote Speakers for IMCIC 2022 and its collocated events

Schedule: Time slots of presentations

The time zone indicated in the table is: (GMT-5:00) Eastern Time (US and Canada)

Speaker(s)	Time slot	Keynote Address
Professor Shigehiro Hashimoto, Japan Kogakuin University	Tuesday, March 8, 2022 8:00 AM - 8:35 AM	*Multidisciplinary Learning for Multifaceted Thinking in Globalized Society*
Prof. Florent Pasquier, France Sorbonne University	Tuesday, March 8, 2022 8:40 AM - 9:15 AM	*Contribution of transdisciplinary approaches to complex education - Concrete contributions for an ontological pedagogical paradigm*
Dr. Pawel Poszytek, Poland Foundation for the Development of the Education System	Tuesday, March 8, 2022, 9:20 AM - 9:55 AM	*Digital transformation of educational institutions – are we ready for effective and sustainable functioning in the post COVID-19 pandemic world?*
Professor Hong Qin, USA University of Tennessee at Chattanooga	Tuesday, March 8, 2022 1:00 PM - 1:35 PM	*Enhancing Student Learning Experience with Interdisciplinary Computing Projects, Data Science, and Student-led Videos*
Professor Richard Segall, USA Arkansas State University	Tuesday, March 8, 2022 1:40 PM - 2:15 PM	*Recent Advances for using Artificial Intelligence for COVID-19 and other Interdisciplinary Applications*
Professor Marta Szabo White, USA Georgia State University	Tuesday, March 8, 2022 2:20 PM - 2:55 PM	*Academic Globalization and Academic Ethos, Pathos and Logos*
Dr. Rusudan Makhachashvili and **Dr. Ivan Semenist, Ukraine** Borys Grinchenko Kyiv University	Wednesday, March 9, 2022 8:00 AM - 8:40 AM	*Transdisciplinarity and Meta-disciplinarity of Digital Education*
Emeritus Professor Jean-Luc Patry, Austria Paris-Lodron University Salzburg	Wednesday, March 9, 2022 8:40 AM - 9:15 AM	*Practicing Transdisciplinarity and Trans-Domain Approaches in Education: Theory of and Communication in Values and Knowledge Education (VaKE)*
Dr. Wendy M. Kropid, USA University of Wisconsin, Assistant Dean	Wednesday, March 9, 2022 9:20 AM - 9:55 AM	*The Place of Thievery in Trans-Disciplinary Communication: Collaborative Interdisciplinary Integration*
Professor Maria Grazia Albanesi, Italy University of Pavia	Wednesday, March 9, 2022 1:00 PM - 1:35 PM	*Reflexive Practice for Inter and Trans Disciplinary Research in the Third Millennium: Are You Ready for It?*

Professor Mohammad Ilyas, USA Florida Atlantic University	Wednesday, March 9, 2022 1:40 PM - 2:15 PM	*Emerging Role of Artificial Intelligence*
Professor John Coffey, USA University of West Florida	Wednesday, March 8, 2022 2:20 PM - 2:55 PM	*Advancing Technology and Complexity: Historical Antecedents and Effects on Modern Life*
Jeong Ok Jeon, MFA, South Korea/Indonesia, Jakarta State University **Dr. Indro Moerdisuroso, Indonesia,** Jakarta State University	Thursday, March 10, 202 8:00 AM - 8:35 AM	*Hybrid Curating for the Resilient Future of Art Experience in the Post-Pandemic Era*
Dr. Areej, ElSayary, United Arab Emirates Zayed University	Thursday, March 10, 2022 8:40 AM - 9:15 AM	*A Reflective Practice Framework for Developing Students Cognitive, Emotional, and Functional Innovation Using Design Thinking*
Dr. Justyna Pokojska, Poland University of Warsaw	Thursday March 10, 2022 9:20 AM -9:55 AM	*Transdisciplinary communication as a key academic challenge in the XXI century*
Dr. Eleni Tsami, Greece Piraeus University	Thursday March 10, 2022 1:00 PM - 1:35 PM	*Differentiated Learning – Digital Game Based Learning*
Dr. Lorayne Robertson and **Dr. William Muirhead, Canada** Ontario Tech University	Thursday March 10, 2022 1:40 PM - 2:15 PM	*Critical policy analysis in the post-digital era: The uncharted future*
Professor Alexander G. Yushchenko, Ukraine National Technical University "Kharkiv Polytechnic Institute"	Thursday, March 10 2022 2:20 PM - 2:55 PM	*Evolutionary Theology as Synthesis of Science and Religion*

Plenary Keynote Addresses Program

Tuesday, March 8, 2022

Multidisciplinary Learning for Multifaceted Thinking in Globalized Society

Tuesday, March 8, 2022 / 8:00 AM - 8:40 AM

Professor Shigehiro Hashimoto, Japan

President of the Society of Life Support Engineering (Japan), Professor of Kogakuin University, Former Councilor and Former Dean, Faculty of Engineering, Former Associate to the President, Doctor of Engineering and Doctor of Medicine, Research Area: Biomedical Engineering.

Dr. Shigehiro Hashimoto now is a professor of Biomedical Engineering, Councilor, and Dean, 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.

Hewas 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 at Kogakuin University, Tokyo (2012-2018). 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 Polydimethylsiloxane, Structure and Applications (1996 2020)", "Introduction to Biomedical Measurement Engineering (2000)", and "Introduction to Biomechanical Engineering (2013)". His present researches focus on bio- cellular mechanics using micro-machined flow channel. shashimoto@cc.kogakuin.ac.jp http://www.mech.kogakuin.ac.jp/labs/bio

Abstract

Multifaceted thinking is essential to address global proposal. Learning experience in multidisciplinary fields is useful. Following steps are important: multifaceted understanding the purpose of instructions to society, considering advantages and disadvantages, considering options, and considering relationship between individual behavior and society. As a multidisciplinary field, Biomedical Engineering has been applied to the present study. As a topic of case study, COVID-19 has been selected. While answering the questions, the students (in Japan, and in Thailand) noticed the multifaceted problem and the diversity of related disciplines. The education system provided the experience of linking biomedical engineering learning (statistics, biomeasurement, cellular mechanics, micromachining, designing, immunology, artificial organs) to the proposal of the solution to the global problem.

Contribution of Transdisciplinary Approaches to Complex Education – Concrete Contributions for an Ontological Pedagogical Paradigm

Tuesday, March 8, 2022 / 8:40 AM - 9:20 AM

Professor Florent Pasquier, France

Sorbonne University, Paris and Senior Lecturer in Education and Training Sciences.

Dr. Florent Pasquier's approaches to personal, professional and collective development led him to develop an integral humanistic paradigm - body, emotion, thought and mind, linked to the group dimension - which is based on the contributions of transpersonal psychology (Pierre Weil, Marc-Alain Descamps), complex and transdisciplinary thinking (Edgard Morin, Basarab Nicolescu) and which takes into account the axiological and existential dimensions (Gaston Pineau, René Barbier). He involves transversal processes ranging from digital tools to the dimension of consciousness. As a teacher-researcher at the Sorbonne University, he builds and practices from these foundations an "Integrative Methodology for an Implicative and Integrated Pedagogy", in line with the cooperative and participative pedagogies of the "new school". These developments are fully concerned with the spiritual dimension both in the practices and in the educational and formative purposes. His current work develops the concept of technontology (technology+ontology).

Following his university studies in social and human sciences, Dr. Florent Pasquier specialised in communication sciences, new technologies and educational sciences. This interdisciplinary approach facilitates his current global analysis of contemporary issues, including digital media creation and related teaching methods. After several years spent in consulting and research engineering activities, he is now Associate Professor at Sorbonne University (Paris, France) and particularly involved in the formation of future teachers. His current research emphasises transdisciplinarity, transpersonal psychology, and digital humanities.

Following several years of involvement in the fields of popular education, social intervention, and with citizen movements; his work opens up to alternative pedagogies, alternatives to education and situations which place the child and the adult really at the heart of learning systems.

This leads him to study and experiment with holistic approaches to the educational act (education), which he crosses with the epistemologies of classical disciplines - philosophy (Husserl, E.), psychoanalysis (Jung, CG), logic (Lupasco, S.), psychology (Maslow, A.) – while integrating contemporary scientific advances – neurosciences (Houdé, O.), digital humanities (Bourgatte et al.), artificial intelligence (Marquis et al.). He designed and deepened his work and practices in "integrative and implicative pedagogy" (P2i); which continues and updates the cooperative and participatory pedagogies of the "new school" and which integrates digital tools into its practices. He, then, realizes a synthesis of his approaches in personal, professional and collective development by developing an integral educational paradigm (body-emotion-thought-spirit, in connection with the group dimension) which is based on the contributions of transpersonal psychology (Weil , P., Descamps, A.), complex and transdisciplinary thought (Morin, E., Nicolescu, B.) and which takes into account the axiological and existential dimensions (Barbier, R., Pineau, G.). This research then directs him towards the question of technontologies (technologies and ontology) in the sciences of education and training.

Abstract

Education sciences face the challenge of complexity according to the work of Edgar Morin in the search for a new educational paradigm better adapted to the individual, collective and global evolutions of our time. Transdisciplinary and transpersonal present a contribution to complex thinking and in the applications that can be made of it in teaching contexts.

Epistemological foundations of transdisciplinary and transpersonal approaches are based on classical disciplines: philosophy (Husserl), psychoanalysis (Rojas), psychology (Maslow), logic/mathematics (Lupasco)... They have evolved regularly since these bases to integrate contemporary scientific contributions such as those of neuroscience (Sander), digital technology (Wallenhorst) or those of quantum physics (Nicolescu).

Can these two “trans” approaches, which seek to approach these extremely varied and sometimes distant disciplinary horizons in a unified logic, participate in a path of simplicity (Valabrègue) to the understanding and effective realization of a complex new educational paradigm? Would the conceptualization of a pedagogy with an ontological aim be a congruent proposition?

Taking interest in the contribution of transdisciplinary and transpersonal work, both of which study what is common, connecting, through and beyond disciplines and people (going beyond integrating the notions of intrapersonal and interpersonal) by seeking to apply them to educational issues related to the question of the ontological would perhaps provide an opportunity to get out of a backward-looking and sclerotic image sometimes reproached to the training institutes and their practitioners.

This article aims to present the work of three teacher-researchers-practitioners whom knew Basarab Nicolescu and were influenced by his thought. They synthesize transversal and global approaches to operate some of the concepts of complexity in their professional practices: Pierre Weil through peace culture; René Barbier by the sensitive approach and Florent Pasquier with an “integrative and implicative pedagogy” and a "transformative workshop" linked with the ontological dimension.

Digital Transformation of Educational Institutions – Are We Ready for Effective and Sustainable Functioning in the Post COVID-19 Pandemic World?

Tuesday, March 8, 2022 / 9:20 AM - 10:00 AM

Dr. Paweł 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.

Paweł 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.

Abstract

According to various models, digital transformation can be defined on the basis of three pillars: (1) the use of information and communication technologies (ICT) within an organization – both for more effective and smooth operations as well as for the comfort of work of employees; (2) implementation of new business models based on ICT – in the case of educational institutions, especially higher education institutions, it is a blended learning model that comprises in a proper balance traditional approach and distance learning mode where applicable in order to achieve reasonable cost reduction and address ecological issues such as paperless work or excessive travel, as well as to make educational process more attractive and innovative; (3) introducing new services for clients, which means here, for example, creating virtual campuses or software and applications for education. Virtual campuses at universities are already priority for the European Commission as key elements for the development of networks of the so-called 'European Universities'. These are alliances of a few, or several, universities which tend to function as one organization maintaining at the same time identity of each partner institution and concentrating on a specific area such as cybersecurity, societal inclusion or cosmos, for example. Their aim is to provide a more flexible platform for educating students who will be able to use all the resources of partner universities within an alliance. With such geographically dispersed units which are complementary in relation to knowledge and expertise they represent, digital campuses are a necessary tool to provide a platform to make the networks of 'European Universities' a functional reality. The idea of creating 'European Universities' alliances does not refer only to enhancing educational and research potential of these alliances but also to organizational one. Thus, they are a good example that embodies all the three pillars of digital transformation mentioned above.

Enhancing Student Learning Experience With Interdisciplinary Computing Projects, Data Science, and Student-Led Videos

Tuesday, March 8, 2022 / 1:00 PM - 1:40 PM

Professor Hong Qin, USA

University of Tennessee at Chattanooga, Department of Computer Science and Engineering and Department of Biology, Geology, and Environmental Sciences.

Dr. Hong Qin has 15 years of teaching and research experience in computational biology and data science. Dr. Qin currently works at the Department of Computer Science and Engineering and the Department of Biology, Geology and Environmental Science at the University of Tennessee at Chattanooga since 2016. Dr. Hong Qin worked at the Department of Biology at the Spelman College from 2009 to 2016 and the Tuskegee University from 2007 to 2009. Dr. Qin is a recipient of the William A Hinton Research training award from the American Society for Microbiology and a recipient of the NSF CAREER award.

Abstract

It is often challenging to provide research experiences to undergraduates in many universities and colleges, especially in the primarily undergraduate institutions (PUI) and minority serving institutions (MSI). Computational research projects typically require less infrastructural support than those projects in traditional science disciplines. Data-driven research projects can improve student learning engagement by addressing questions relevant to real-world problems. Video tutorials generated by students can provide peer support and roles models, and can potentially encourage broader participation in the learning process. I had the opportunities to integrate interdisciplinary computational, data science, and student-led videos to enhance undergraduate learning experiences at two institutions, one is an MSI, and the other is a PUI. I also had the chance to teach both R and Python based data analysis to students in the biology majors or the computer science majors. I integrated computational data analysis in a variety of courses, including microbiology, genetics, molecular biology, bioinformatics, computational genomics, and data science. I encouraged students to generate video tutorials on a variety of computational and data science projects. Recently, I led a group of high-school students and undergraduate students to analyze COVID-19 data using R and CoLab, and present their findings in videos. Over the years, hundreds of students have learned basic data analytics and coding skills and many presented their experience in tutorial videos. I believe that the availability of cloud computing platforms provides a great opportunity for PUIs and MSIs to enhance the student learning experience, and student-led videos could effectively encourage broader participation in computing and data science.

Recent Advances for Using Artificial Intelligence for COVID-19 and Other Interdisciplinary Applications

Tuesday, March 8, 2022 / 1:40 PM - 2:20 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 Information Systems and Business Analytics at Arkansas State University in Jonesboro, AR where he also taught for ten years in the College of Engineering & Computer Science Master of Engineering Management (MEM) Program and is 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*: *TheInternational 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 5 published books: Biomedical and Business Applications using Artificial Neural Networks and Machine Learning published by IGI Global in 2022, 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 Awards 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.

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 first provides 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-19in years 2021 and 2020 that utilize Artificial Intelligence.

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 timeline of these and other rapidly developing applications of AI (Artificial Intelligence) to COVID-19 is presented as well as visualization plots such as bubble graphs.

Other interdisciplinary applications of Artificial Intelligence to be discussed include those for predicting spending of mall customers, restaurant sales, Uber traffic, and churn model for bank losing customers.

Academic Globalization and Academic Ethos, Pathos and Logos

Tuesday, March 8, 2022 / 2:20 PM - 3:00 PM

Dr. Marta Szabo White, USA

Georgia State University, Department of Management. Former Director, Robinson College of Business Honors Program, and former Director, Study Abroad Programs: Transition Economies and Business Mediterranean Style.

Dr. Marta Szabo White is Clinical Associate Professor in the Department of Management at Georgia State University and holds a Ph.D. from Florida State University. She has lectured internationally at forty distinguished teaching invitations across eighteen global venues, among them, the Ronald H. Brown institute for Sub-Saharan Africa, the Universitié Panthéon-Sorbonne, the National Management School in Chennai, India, and the Budapest University of Technology and Economics. Dr. White is the recipient of several teaching awards, including the Outstanding Teacher at Georgia State University, the RCB Faculty Recognition Award for Outstanding Teaching, the Board of Advisors Teaching Excellence Award, the International Education Excellence Award, the Master Teacher Certificate Award and the GSU Faculty Award for Global Engagement – Teaching, Service, and Outreach. Dr. White directed the signature RCB Honors Program for fourteen years and has successfully led 36 study abroad programs. Her collaborations with the Duke CIBER resulted in several Cross-Cultural Negotiation Simulations and the implementation of the Albion in China simulation in Singapore, detailed in a Special Issue of Global Business Languages. Her scholarship of teaching interests center on cross-cultural case studies, learning mode differences, virtual exchange teams and strategy/structure/performance linkages. Born in Budapest, she was a Hungarian Language Agent for Games of the XXVI Olympiad in Atlanta, 1996.

Abstract

Academic globalization is manifested via higher education internationalization, which drives and is driven by a world-wide system of political, economic, social, cultural, and technological forces, according to Lee (2004)[1] causing and resulting in globalization. A reciprocal relationship exists between cultural context and academic globalization. Different cultures embrace different modes of communication; drive innovation and entrepreneurship to varying degrees. Ethos, pathos, and logos provide the platform for positive feedback loops created by and resulting in innovation and entrepreneurship. This model captures the dominant positioning of sociocultural, as the major driver of the other macro- forces, with economic and political/legal defining the platform for innovation and entrepreneurship, which are enabled by positive feedback loops, and a function of cultural ethos, cultural pathos, and cultural logos. Culture propels the intersection of ethos, pathos, and logos with innovation and entrepreneurship as dictated by economic/political context.

[1] Lee 9200) Globalization and Higher Education: A South Korean Perspective, Globalization, 4 (1) June. Accessed on February 20th, 2016 at http://globalization.icaap.org/content/v4.1/lee.html and at http://files.eric.ed.gov/fulltext/ED490410.pdf.

Wednesday, March 9, 2022

Transdisciplinarity and Meta-Disciplinarity of Digital Education

Wednesday, March 9, 2022 / 8:00 AM - 8:40 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 GrinchenkoKiyv 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), Digital Distance And Blended Learning Quality Assessment In Oriental And European Languages University Programs: Regions Of Ukraine Survey Study (Japan, 2021).

Professor Ivan Semenist, Ukraine

Borys Grinchenko Kyiv University, Head of Oriental Languages and Translation Department.

Professor Ivan Semenist, Doctor Habilitated, English and Chinese major, Head of Oriental Languages and Translation Department, Head of Ukranian National Association of Teachers of Chinese, Borys GrinchenkoKiyv University, Ukraine. Editor in Chief of Ukrainian Journal of Sinology Studies. Main academic interests: oriental studies, interdisciplinary studies in Liberal Arts, digital learning, digital literacy development, oriental languages, cultural and linguistic-literary ties 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), Digital Distance And Blended Learning Quality Assessment In Oriental And European Languages University Programs: Regions Of Ukraine Survey Study (Japan, 2021).

Abstract

Dynamic transformation of the knowledge economy, enhanced by Industry 4.0/5.0 development and rise of the networked society in the Digital Age, emergency digitization of all social communicative spheres due to pandemic measures have imposed dramatic changes onto transdisciplinary overlap in different areas of human knowledge and experience, induced by the 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. This

end-to end digital shift in the educational processes (communication, content, outcomes and outputs, skills) heralded the introduction of meta-disciplinary dimensions of learning – digital, hybrid and, blended. These meta-disciplinary dimensions can be considered conduits of vertical (endocentric) and horizontal (exocentric) transdisciplinary of digital education.

The consequent functional tasks to meet this challenge in the educational sphere worldwide are estimated as 1) to adapt the existent educational scenarios to the digital meta-format; 2) to upgrade e-competence and digital literacy of all stakeholders of the educational process and industry as a way to upgrade transdisciplinary of educational outputs; 3) to activate transdisciplinary and interdisciplinary skillsets, otherwise latent or underutilized in the professional interaction; 4) to introduce digital meta-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 multi-disciplinary trends and meta-dimensions of digital education in the Covid-19 timeframe and beyond; transformative changes and avenues of development of the network society and education as transdisciplinarysocio-cultural institution in the digital meta-coordinates; global experiences, universal/generic challenges, technical advances and specific national gains in quality assurance of digital and hybrid learning in the Covid-19 paradigm.

Practicing Transdisciplinarity and Trans-Domain Approaches in Education: Theory of *and* Communication in Values and Knowledge Education (V*a*KE)

Wednesday, March 9, 2022 / 8:40 AM - 9:20 AM

Emeritus Professor Jean-Luc Patry, Austria
Paris-Lodron University Salzburg.

Dr. Jean-Luc Patry is Emeritus Professor at Paris-Lodron University Salzburg (Austria), Department of Educational Research, and has been, among others, Head of the Department and member of the Senate of the University. He holds a doctorate in science from the Swiss Federal Institute of Technology, in Zurich (Switzerland), and a teacher certificate for upper secondary schools in science (biology) from the same institution. He habilitated at the University of Fribourg (Switzerland) in educational research. His research fields and publication areas include social interaction in education, particularly situation specificity; moral education; theory of science; theory-practice transfer; research methods, etc.

Abstract

(Academic) disciplines are a means to structure science and are not appropriate for epistemic discussions. Instead, it is proposed to use the concept of Trans-Domain Approaches (TDA). A TDA typically consists in a General Theory GT that integrates and transcends the Domain-Specific Theories (DTs) referring to a research topic. The constructivist teaching-learning tool Values *and* Knowledge Education (V*a*KE) is used as a prototype to analyze different features of a TDA. First, the theoretical framework of V*a*KE is analyzed under the perspective of TDA: V*a*KE integrates several constructivist theories, particularly about moral judgment competence, constructivist knowledge acquisition, and social constructivism. Then,

the communication between stakeholders is analyzed more in detail, based on Shannon and Weaver's channel model. The analyses focus on communication among researchers, between researchers and practitioners (teachers), between practitioners and students, and among students. Several conclusions with respect to TDA can be drawn.

The Place of Thievery in Trans-Disciplinary Communication: Collaborative Interdisciplinary Integration

Wednesday, March 9, 2022 / 9:20 AM - 10:00 AM

Dr. Wendy Kropid, USA
University of Wisconsin-Superior, Assistant Dean of Educator Preparation Programs, Professor of English and English Education.

Dr. Wendy Kropid holds both master and doctoral degrees in Teaching and Teacher Education from the University of Arizona. Dr. Kropid is teaching undergraduate and graduate courses in educational foundations, human development, classroom management, literacy, middle level education, and instructional assessment practices. In January 2010, Dr. Kropid entered the World Languages, Literatures, and Cultures Department In February 2019 Dr. Kropid accepted appointment as UW-Superior's inaugural Assistant Dean of Educator Preparation Programs, providing campus-wide leadership of and support to faculty and students in all undergraduate and graduate programs leading to licensure through the Wisconsin Department of Public Instruction.

Dr. Kropid's efforts in research and scholarship focus largely the areas of literacy instruction and curriculum development. Notable projects include work as a site evaluator for the School Yard Ecology for Elementary Science Teachers (SYEFEST) project, leading a multi-year ESEA/WITQ grant supporting reading and writing to learn in the content areas, and guiding students through development of classroom curricula for the regional American Cancer Society's Relay for Life program and for The Lake Superior National Estuarine Research Reserve (LSNERR) Rivers2Lake program; which provides extended training, mentoring, and resources to teachers in order to support them in creating ***interdisciplinary inquiry-based*** and outdoor experiences for students. Dr. Kropid has also presented workshops at numerous state, national, and international education conferences in support of teachers' continued professional development.

Abstract

Looking back over my years as a student, teacher, professor and colleague I realize I have always had a natural affinity for making cognitive leaps in ways that emphasize the connection of understandings from one context to another. Dutifully following educational research I have labeled this specific applied transfer of knowledge as "interdisciplinary" or "multidisciplinary" or "cross-disciplinary" or "connective" thinking. Several years ago I began reviewing submissions for the International Institute of Informatics and Systemics and was happily inspired by the range of topics and studies and techniques and contexts that were passionately shared by the authors of these submissions and appreciated the common goal all held: to share what they had discovered to be meaningful, in their own situations, with others across the world and across disciplines, to be understood and transformed when applied in other, primarily educational, contexts. This, I have come to understand and appreciate, as Trans-Disciplinary

Communication. As you and I prepare to engage in the intellectual conversations of this conference, I ask you to open your minds and *steal something* from every session you attend; we are here to learn from one another, strengthen our ability to share our knowledge, and apply those new understandings to expand our practice.

Reflexive Practice for Inter and Trans Disciplinary Research in the Third Millennium: Are You Ready for It?

Wednesday, March 9, 2022 / 1:00 PM - 1:40 PM

Professor Maria Grazia Albanesi, Italy
University of Pavia, Department of Electrical, Computer and Biomedical Engineering.

Dr. Maria Grazia Albanesi holds a Master's Degree (cum laude) in Electronic Engineering from University of Pavia (Italy), in 1986, and she got her Ph.D. in Electrical and Electronics Engineering and Computer Science in 1992 from the University of Pavia. She is currently an Assistant Professor at the Faculty of Engineering of the same University in the International Master's Degree in Computer Engineering, teaching about Image and Data analysis.

She has published more than 80 peer reviewed articles in journals and International Conferences, and she has been supervisor of more than 40 Master Thesis and Ph. D thesis. In 2014 she founded the Computational Sustainability Unit (CSU), a inter and trans disciplinary research unit, which addresses the creations and spreading of knowledge and solutions for Sustainability. The main issues addressed by CSU are in the field of Sustainable Environmental and Social Development, with the goal to improve the quality of life of persons and preserve ecosystems. The CSU includes scientists from different disciplines: Computer Science, Botany, Sociology, Geology, and Economy.

Abstract

One of the characteristics of the development of research in the third millennium is the recent complexity of the addressed problems and the need to find solutions and create knowledge that goes beyond the individual disciplines. Some well-known phenomena, such as Globalization and the ever-growing interdependence between economic, sociological, and environmental issues, stress the importance of developing real inter disciplinary or trans disciplinary research. Unfortunately, both academic education and research have always been divided into each specialized field, and specialization is steadily growing. To meet the challenges of modern and future world, it is essential to develop new perspectives for boosting the cooperation and communications among different disciplinarians. Is it possible to identify peculiar (soft) skills or predispositions that a scientist can use (or have) to facilitate this process? The topic also includes considerations about opportunities and threats coming from interdisciplinary research and how to reflect on one's own personal research experience, according to the paradigm of reflexive practice in Second Order Cybernetics.

A particular important aspect is related to communication among scientist of different disciplines. Are there methods and approaches that can improve the efficacy of communication?

The last but not the least important theme is how to effectively teach high level university or Ph.D.

students inter or trans disciplinary research approaches to prepare them to this difficult but intriguing task. The topic includes case studies and considerations coming from reflexive practice based on author's experiences in the case of Computational Sustainability, with the aim of abstracting from these experiences general considerations that can be useful in other different multidisciplinary contexts.

Emerging Role of Artificial Intelligence

Wednesday, March 9, 2022 / 1:40 PM - 2:20 PM

Professor Mohammad Ilyas, USA

Florida Atlantic University. College of Engineering and Computer Science, Former Dean of the College of Engineering and Computer Science, Member of Global Engineering Deans Council.

Dr. Mohammad Ilyas has been with Florida Atlantic University's College of Engineering and Computer Science since 1983. He has served there is various academic and administrative capacities, including Dean of the College from 2011 to 2017.

He has earned four academic degrees from four different countries; BSc in Electrical Engineering from Pakistan, MS in Electrical Engineering from Iran, PhD in Electrical Engineering from Canada, and PhD in Educational Leadership from USA.

Dr. Ilyas has over 215 publications, including one book, 26 handbooks, and over 190 research articles. He is life senior member of IEEE, member of Global Engineering Deans Council, and was on Fulbright Specialist list from 2017-2020.

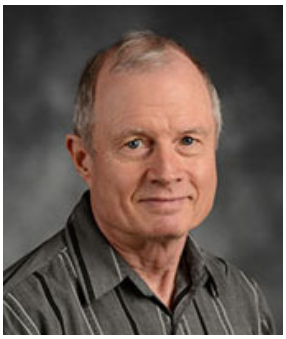
Abstract

Artificial Intelligence (AI) is considered a branch of science that deals with the process of machine learning and intelligent behavior of machines. AI is increasingly becoming involved in our existence. Many see emergence of AI as a revolution that will impact every aspect of our lives. Some see it as an evolution based on the recent advances in hardware/software technologies, powerful computational platforms, and access to massive amount of data collected through pervasive communication networks such as Internet of Things (IoT). Irrespective of these opinions, AI is expected to profoundly impact many aspects of our existence including healthcare, transportation, agriculture, energy, social life, entertainment, fighting crime, and many more.

How far AI will infiltrate in human existence is within our hands, at least, for now. We, human beings, design algorithms for AI, we restrict or relax the boundaries of their use, we benefit from the augmented intelligence that AI provides, and we deal with the consequences of decisions made by machines using AI. How far AI can go in improving our lives and how significant and deep its interference can be in our existence, remains to be seen. This talk will capture the current state of AI and discuss it potential to make human existence better.

Advancing Technology and Complexity: Historical Antecedents and Effects on Modern Life

Wednesday, March 9, 2022 / 2:20 PM - 3:00 PM



Professor John Coffey, USA

University of West Florida, Computer Science Department, Former Research Scientist at Florida Institute for Human and Machine Cognition.

Dr. John W. Coffey holds a B.S. in Psychology from the College of William and Mary (1971), a B.S. in Systems Science (1989), an M.S. in Computer Science/Software Engineering (1992), and an Ed.D. with an emphasis in Computer Science (2000) from the University of West Florida (UWF). He was one of the first members of the Institute for Human and Machine Cognition (IHMC) and he has worked with that organization for many years. He has been in the Department of Computer Science at the University of West Florida since 1992, starting as a Lecturer and working his way up to his current rank of Professor. He has published a total of more than 100 refereed journal articles, book chapters, technical reports, and conference proceedings. His research interests include knowledge elicitation and representation, web services, and Service Oriented Architecture, advanced technology for education, and computer science education.

Abstract

In this talk, I provide a reading on some specific impacts of technological advancement on society. I first discuss the evolution of society as characterized by simple, decoupled technologies to that of complex, highly coupled technological systems. I describe Alvin Toffler's 1970 scholarly work "Future Shock," which surprisingly became a best seller. I describe how ideas presented there are part of an intellectual lineage leading to Perrow's 1984 book "Normal Accidents: Living with High-Risk Technologies," and how Perrow's seminal book gave rise to the concept of "complex socio-technical systems." I discuss research on technology impacts in the workplace and in everyday life, and how we attempt to manage complexity in the complex socio-technical systems we have created.

Thursday, March 10, 2022

Hybrid Curating for the Resilient Future of Art Experience in the Post-Pandemic Era

Thursday, March 10, 2022 / 8:00 AM - 8:40 AM

Jeong Ok Jeon, MFA, South Korea/Indonesia

Jakarta State University, Lecturer in Contemporary Art, New Media, and Art Education and Director of ARCOLABS.

Jeong Ok Jeon is a Jakarta-based Korean curator and educator who is actively engaging in Southeast Asian contemporary art, especially working on providing international exposures for regional artists in and outside of Indonesia. Jeon worked as a curator in an alternative art space called SSamzie Space in Korea in the early 2000s; after moving to the United States,

Washington D.C. Metropolitan area in 2005, she worked as an independent curator focusing on promoting Asian art and artists in the US. Since relocating to Indonesia in 2011, she has been passionately involved in both contemporary art scene and art academy for the past years. With interests in new media and interactive art, she has curated numerous sciences and technology-based art exhibitions. She earned an MFA from the Savannah College of Art and Design in the US and a BFA from Ewha Womans University in Korea. Jeon currently serves as the director at ARCOLABS–Center for Art and Community Management and a full-time lecturer at the department of Visual Art Education, Faculty of Language and Arts at Jakarta State University (UNJ) while also pursuing her doctoral degree in Arts Education from Education University of Indonesia (UPI). www.arcolabs.org / ig @arcolabs.id

Dr. Indro Moerdisuroso, Indonesia
Jakarta State University, Lecturer in Aesthetics, Visual Culture, and Art Education.

Indro Moerdisuroso received his MFA and PhD from the Yogyakarta Institute of the Arts (ISI), Indonesia. Since 1987, Moerdisuroso has been a lecturer in the Department of Visual Art Education at the Faculty of Language and Arts, Jakarta State University (UNJ), and currently, he serves as the head of the department. His area of studies are aesthetics and visual culture. The articles that he has published include "Forms and meanings of visual representation of *Batara Kala*leatherpuppet", "Sujoyono, motivator of Indonesian modern art", "The Panofskian interpretation for the architecture of Church Maria Asumpta, Gamping, Yogyakarta", "Social semiotics and visual grammar, acontemporary approach to visual text research", and "Thesis writing model of art practice". Email: indro@unj.ac.id/ indromp@gmail.com

Abstract

This research examines hybrid forms of curating conducted by art museums and art spaces in Indonesia to prepare for the post-pandemic era. Social distancing, self-quarantine and lockdown have prompted new motivations and movements towards digital activations that complement the conventional physical activities. Therefore, even if we now gradually return to the physical space, the hybrid potential of digital-physical experience of art that was developed and tested over the past two years will be further robust as it enables a new approach to curating. This research used qualitative descriptive approach that is based on case study of various hybrid methods in art curation. It is also based on the author's empirical practices of exhibition making and mediating as a curator and therefore it includes several first-hand cases initiated and practiced by the author. By analyzing the collected data, this research conclude that hybrid forms of curating is a way to create the resilient future of art experience towards the post-pandemic era.

Editorial Note: *Curation applies to Art, Science, and Technology, hence it is a trans-disciplinary topic which, as with other trans-disciplinary topics, helps in communicating different disciplinary and inter-disciplinary fields, which, in turn, is a main founding purpose of the IIIS. Hybrid Curation may trigger analogical thinking in hybrid learning in any discipline*.

A Reflective Practice Framework for Developing Students Cognitive, Emotional, and Functional Innovation Using Design Thinking

Thursday, March 10, 2022 / 8:40 AM - 9:20 AM

Dr. Areej ElSayary, United Arab Emirates
Zayed University.

Dr. Areej ElSayary completed her Ph.D in Educational Management, Leadership and Policy. Her master's degree was in Science Education with specialization in STEM education, The British University in Dubai. She is currently an Assistant Professor at the College of Education at Zayed University. She has 13 years' experience, with specific expertise in Science, Technology, Engineering, Art and Mathematics (STEAM), curriculum design and development, teaching and learning, assessment, and schools accreditation. Prior to joining Zayed University, she was working as a curriculum advisor at the Al Arabia for Education Company leading the curricula implementation in Al Ittihad schools across UAE. She was also an Adjunct Faculty at the American University in Emirates with focus on the evaluation of different educational programs.

Dr Areej is an Approved Accreditation Visitor from New England Association of School and Colleges NEASC & Council of International School CIS. Her research interests include the cognitive development, Interdisciplinary STE(A)M curriculum, instructional design and educational technology. She has published her work internationally and has presented papers at different conferences. She has an active research agenda and collaborates internationally on creative research projects.

Areej.elsayary@zu.ac.ae, https://orcid.org/0000-0002-5554-0069.

Abstract

Design thinking (DT) is a multidisciplinary human-centered innovation approach that focuses on developing individuals' mindsets to motivate, inspire, ideate, and implement new ideas that ensure sustainable development. The main idea of DT is to engage individuals in the process of determining a real-world problem, experimenting and testing, measuring impact, and co-create products to design a solution. Design thinking is a highly creative problem-solving approach that requires a specific mindset. It is the best friend of innovation that makes logical creativity. DT is an innovation-led process influenced by reflective practice that ensures continuity and reaches individuals and organizations to the highest innovation level called "*Transformation*."

Innovation is a complex and continuous process that requires learners, individuals, and organizational creativity. It is seen as a design thinking process with a professionalized version of the creative process. In order to achieve innovation, it requires process and actions where a new idea is introduced. The purpose of this presentation is to introduce a proposal model of Innovation-led design thinking integrated with a reflective practice model that can be used by organizations, teachers, learners, or workers.

Transdisciplinary Communication as a Key Academic Challenge in the XXI Century

Thursday, March 10, 2022 / 9:20 AM - 10:00 AM

Dr. Justyna Pokojska, Poland
University of Warsaw, Digital Economy Lab.

Dr. Justyna Pokojska is Coordinator of the "Jobs and Skills for the Future" Program at DELab UW. Assistant professor at the Faculty of Sociology of the University of Warsaw. Member of the Program Council of the Polish Civic Congress. Member of the working team at the Polish Ministry of Digitization, in which - in 2018 - she co-created "Assumptions for the AI strategy in Poland". Two-time scholarship holder of the Polish Minister of Science and Higher Education. Passionate about field research. Her research interests focus on the area of digital competences and new professions of the future. She analyzes the labor market from a female perspective and popularizes the results of her research to combat inequalities and professional stereotypes.

Since 2015, she has been associated with DELab UW, under which she implements projects for partners from the social and economic environment (including the Google, Orange, Women's Entrepreneurship Foundation, Warsaw Banking Institute) combining academic knowledge with a business approach. A host of the broadcast "Efekt Sieci" on the Radio Kampus (also available on Spotify), where she talks about digital transformation and its consequences for the labor market, interpersonal relations and the condition of an individual in the world of new technological challenges. A regular guest of radio and TV programs as well as an author in the Opinions section of Forbes Magazine.

Abstract

The presentation aims to show the new challenges for the scientific community boosted by the advancing digital revolution and global acceleration (Virilio 1983) in the third decade of the XXI st century.

The main requirement facing researchers today is the necessity to practice science in the way of transdisciplinary cooperation based on the involvement of representatives of various fields of science as well as actors and beneficiaries from so-called socio-economic environment of the academia. As stated by Gurudutta Japee - “transdisciplinarity is not a vehicle that we deploy to stay alive or accomplish our projects. It is a way of being alive” (Japee 2020: 1).

To survive, science must become inclusive and open to transdisciplinary dialogue, based on an intersubjective understanding and sharing of a common resource of cache knowledge, which provides the basis for building socially objectified meanings and interpretations (Schütz 1953).

Establishing an in-depth understanding in the framework of transdisciplinary communication - especially within truly transdisciplinary teams - demands, however, - besides a substantive consensus - a translation (mediation) between the specialized languages of individual branches, and above all - translating unique scientific knowledge into natural language, the language of recipients who become not only objects, but also subjects of scientific activities undertaken by researchers.

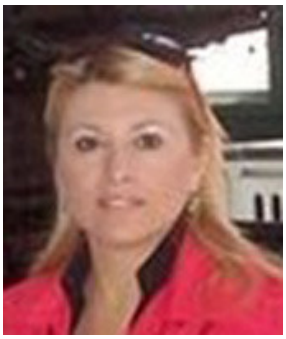
Moreover, in the face of the progressing process of globalization and shrinking of the world (Giddens 2004), a mature transdisciplinary communication must be based on an awareness of complexity of the

evolving socio-cultural context of academia. The translations carried out within the cooperation of multiple actors have to refer not only to literal understanding (and mediation between different language systems), but also to translatability of perspectives within various cultural contexts (including i.a. an ethnic and cultural diversity).

Therefore, the key challenge of the future - from the point of view of the academics - seem to be transdisciplinary communication, including the unique ability to translate perspectives and share meanings and understanding with representatives from outside the narrow research disciplines, which allow the scientific environment to establish mature transdisciplinary cooperation and disseminate the results of research to a wide audience.

Differentiated Learning – Digital Game Based Learning

Thursday, March 10, 2022 / 1:00 PM - 1:40 PM



Dr. Eleni Tsami, Greece
Piraeus University, School of Finance and Statistics.

Dr. Eleni Tsami studied Mathematics at the University of Athens and continued her studies at the graduate level at the National University of Athens in "Teaching Mathematics and Methodology" and the Greek Open University in "Banking". PhD thesis, University of Piraeus “The use of new technologies in teaching economics”. She has worked from 2000-2004 in the General Secretariat for Research and Technology, 2004 -2009 Ministry of Education, as a Special Advisor, 2010 since today at Piraeus University, she is member of the Laboratory Teaching Personnel at the School of Finance and Statistics of the University of Piraeus. Today she teaches Introduction to Computer Science and Programming Languages at the Department of Statistics and the University of Piraeus Insurance Science. She has attended numerous conferences and has made numerous announcements. She has worked as a trainer in seminars and has published papers in scientific journals.

Abstract

Mathematics curricula within the scope of secondary education are often rich in content and have traditionally been seen as a means of favoring above average students, perhaps to the detriment of the lower performing tail in the class. It is therefore no surprise that students from countries like Greece, Cyprus, Italy, Hungary, Bulgaria or even Luxembourg are consistently scoring below the OECD average scores, and substantially below the top performing nationalities in the math and science PISA tests. This systemic failure indicates that secondary education is highly segmented in many countries and it further hints that primary education, perhaps, has not been particularly successful in establishing a uniform standard with regards to mathematical aptitude.

In this context, the University of Piraeus has launched the project KIDEDU (Play Create Learn) in order to provide an engaging and creative learning framework, addressing pupils in their early stages of education. The specific project entails a series of 3D animation interactive games which seek to cultivate the "Everyday Arithmetic" skills of children between 6 and 12 years of age. This is an innovative and student-friendly mode that utilizes sophisticated digital technology—much favored by the younger generations—instead of traditional means such as books, notebooks, pencils and blackboards, in order to create an appealing environment for guided exploratory learning.

Critical Policy Analysis in the Post-digital Era: The Uncharted Future

Thursday, March 10, 2022 / 1:40 PM - 2:20 PM

Dr. Lorayne Robertson, Canada

Ontario Tech University, Former Assistant Dean in the Faculty of Education, Former Director of the Graduate Programs in Education.

Dr. Lorayne Robertson, teaches graduate and undergraduate courses in digital pedagogies, equity, leadership, and policy in the Faculty of Education at the University of Ontario Institute of Technology, Canada. She specializes in online course design, program design, and quality assurance. Other research interests include investigations of the student experience and instructor role in polysynchronous online environments with a particular focus on digital technologies and assistive technologies at the point of instruction in applied settings such as schools, colleges, and higher education. Dr. Robertson is a former school principal, school district superintendent, and education officer for the Ministry of Education, Ontario.

Dr. William Muirhead, Canada

Ontario Tech University, founding researcher of the EILAB in the UOIT Faculty of Education. Former Associate Provost, founding academic administrator of the university.

Dr. Muirhead was the Associate Provost, Academic and Information Technology. As a founding academic administrator of the university, Bill has been responsible for developing Canada's largest Technology Enriched Learning Environment, the Teaching and Learning Center, the Academic Success Center, the Health Education Technology Research Unit and is currently a founding researcher of the EILAB in the UOIT Faculty of Education. Dr. Muirhead has overseen the development of university policies and governance structures pertaining to all aspects of undergraduate curriculum and quality assurance. Prior to the University of Ontario Institute of Technology, Bill was the founding Executive Director of the Alberta Online Consortium (AOC) and served as a senior advisor to Alberta Learning in areas of e-learning, professional development, and all aspects of policy involving online learning, virtual schooling and emerging information and communications technologies (ICT) in public and postsecondary education sectors. Dr. Muirhead's research interests included professional practices in online education; design of hybrid learning environments; policy support for developing and implementing learning object repositories; and the development and management of technological infrastructures in postsecondary institutions. An internationally recognized speaker, Bill has been the recipient of numerous awards for leadership and innovation in e-learning.

Abstract

Policy solutions in education can either support existing practices and paradigms, or challenge and re-vision education. Critical policy analysis research examines educational policy solutions systematically. Digital technology's power to connect people across time and space has exposed widespread calls for purposeful engagement in online spaces. While the digitalization of life accelerated during the pandemic, including technology-enabled education, education policy responses have been glacially slow to respond to new privacy concerns and presence online. Technology affordances can contribute to solutions but also exacerbate divides, impacting students on journeys to reach their potential. Social media has

revolutionized communication, allowing pervasive sharing of personal information, sometimes with profoundly negative effects on the health of young followers. Influential platforms are being re-purposed to spread disinformation, indicating a need for education to address how to navigate ubiquitous access to content: both curated and unfiltered. Digital tools available to youth provide ease of use while aggregating data and surveilling vulnerable populations for profit. Educational policy responses can range from cookie-cutter to transformational. Critical policy analysis examines educational technology directions and offers recommendations for the post-digital era.

Evolutionary Theology as Synthesis of Science and Religion

Thursday, March 10, 2022 / 2:20 PM - 3:00 PM

Professor Alexander G. Yushchenko, Ukraine
National Technical University "Kharkiv Polytechnic Institute", Multi-science investigator & Head.

Dr. Alexander G. Yushchenko at National Technical University "Kharkiv Polytechnic Institute" (Ukraine) is a multi-science investigator and an international reviewer. He is NATO Manfred Worner Fellow in Artificial Intelligence and Information Technology (2000), Inventor of the USSR (1989). Fields of interest are Artificial intelligence, Telecommunication, Computing in Social science, Arts and Humanities, Theory of Creative Processes, Evolutionary Theology, Bio-ethics, etc. He has published about 200 scientific papers, has 12 patents of the USSR, Russia, and Ukraine. His principal scientific achievements and CV have been listed in international directories. Supervisors: Academician M. Ye. Ilchenko, Igor Sikorsky Kyiv Polytechnic Institute. e-mail: Alexander.G.Yushchenko@ntu.kharkiv.edu

Abstract

One can distinguish two meanings of the term “evolutional theology”: a theology that accepts evolution theory and theology that admits its own evolution on the way to God-knowledge. The most consistent theology based on both evolutional principles is evolutional Christianity. Its paradigm has been enunciated in the doctrine of Jesuit Pierre Teilhard de Chardin and was further developed in the works of orthodox priest Alexander Men. Now we know that neurobiological properties of the left and right hemispheres of an average man consist in different methods of information processing: logical and analytic – in the left hemisphere, parallel and synthetic – in the right one. So the objective equality of the two cognitive styles – and hence of the two cognitive methods: scientific and religious – follows from the very nature of human thinking. As far as the information revealed to prophets needs conceptual interpretation, its explanation naturally depends on the level of development of civilization forming their individual intelligence. So the interpretation of certain messages from Holy Writ can be clarified by discovering new facts including scientific ones. World religions are far older than modern science is, and it causes additional difficulties for their dialog. Science is anthropocentric; it originates as the theoretic basis for modern “nature conquering civilization” while religion is cosmic. Most religiously biased contemporary people understand the creation of the world and life literally as it is stated in the Bible while those with a scientific world outlook see it as a lucky realization of the nonzero probability of an accidental event that has given rise to spontaneous biologic evolution. Neo-Darwinism is perceived as an ideological banner of science, opposing so-called “religious ignorance”. Maybe one would rather learn the "anthropic principle" more deeply and answer the question "why was evolution ever possible?”. Evolutionary-theology human thought can be characterized as a synthesis of science and religion that is

carried out despite their historic opposition. From this point of view we consider the mega synthesis as universal spiritual matter that evolves according to anthropic principles and synchronously prepares a) huge energy sources – stars surrounded with planetary "eggs" comprising the initial organic "soup" as well as b) germs of life – proto-DNAs (or RNAs), elementary replicators, in which – according to the cosmology principle – the replication property of the Universe is informationally reproduced in the current psycho-physical cycle. Evidently, the conditions leading to the development of new species occur when intra-species competition exceeds the inter-species one. That all resembles an archive file self-extracting to some media for which the archive can even adapt. The chemical basis of life on Earth (namely, gene replication and gene-guided synthesis of protein "suits", i.e. organisms) – as has been already noticed long ago – is in its essence a system of complex programs In spite of the random character of mutation, crossover, and inversion – the genetic operators creating new information structures of DNA and hence the protein structures synthesized by the latter -, the pronounced regular nature of evolution is ensured by natural selection granting survival to the "most fit" individuals. The most adapted biological form turns out to be the most cephalized one: Homo sapiens along with some higher Cetaceans. This means that intelligence is the most perfect mechanism for survival since it accelerates the search for favorable "informational mutations" in psychic reality. This was an outline of the mechanism of God's technology for creating a living being "in the image and likeness of" the creator, endowed with a soul, intelligence, and creative abilities, i.e., capacity to change the world.