Ţ	🔈 Con	feren	ce Regis	tration and Fees		Particular		Early Bird	Normal Rate (After 15 August 2019)		
Participants (paper presenters and non-paper presenters) may register online at http://cosmed.iconf.me/. The Early Bird rate only applies if registration form and payment are received before or by 15 August 2019. The registration fee will cover costs for admittance to the conference, keynotes, parallel sessions, workshops, poster presentations, conference kit and materials, certificates, facilities, lunches, refreshments, conference banquet and tour during the conference. Payment can be made by bank draft/ telegraphic transfer/ local order payable to the following address: SEAMEO RECSAM						Paper presenter-Professional Additional paper – Professional Note: Additional paper presenter can present up to maximum 4 of papers. Paper presenter – Student* Additional paper – Student Note: Additional paper presenter can	Non-SEAMEO Countries SEAMEO Countries Malaysian Non-SEAMEO Countries Malaysian Non-SEAMEO Countries SEAMEO Countries Malaysian Non-SEAMEO Countries SEAMEO Countries Malaysian Non-SEAMEO Countries SEAMEO Countries Malaysian Non-SEAMEO Countries/ SEAMEO Countries Malaysian Malaysian	USD 335.00 USD 315.00 MYR 850.00 USD 50.00 MYR 150.00 USD 295.00 USD 275.00 MYR 750.00 USD 40.00 MYR 130.00	USD 385.00 USD 365.00 WYR 950.00 USD 50.00 USD 345.00 USD 345.00 USD 325.00 MYR 850.00 USD 40.00 MYR 130.00		
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 50% refund for cancellation received not later than 15 September 2019. No refund for cancellation received after 15 September 2019. Substitutions will be allowed if authorised in writing by the original registrant and MYR 50.00 will be paid as administrative charges. The ergeniser receives the right to enseed an exchange the conference. 						Paper presenters/author in the conference. Hor participate in the Best P evaluated by a panel o guidelines on paper sub	nters/authors need to send Abstract only (Paper & Poster) to join ference. However, if paper presenter/author is interested to in the Best Paper Award , he/she needs to submit Full paper to be by a panel of paper review committee. Please see the link of on paper submission.				
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Ro	Single (Per night) Twin Sharing Triple Sharing (Extra Mattress) (Including Broakfact) (Per night) Twin Sharing Triple Sharing (Extra Mattress)					If the authors, wish to organisers will recom- corresponding publication	If the authors, wish to publish their full papers in a Scopus/ISI journal, the organisers will recommend available publishers for them with their corresponding publication fee to be paid by the authors.				
Su	perior	MY	R 120.00	MYR 60.00	MYR 47.00	The organisers may in	ay invite authors to publish their full papers in a				
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Southeast Asian Ministers of Education Organization Regional Centre for Education in Science and Mathematics

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International Conference on Science and Mathematics Education

http://cosmed.iconf.me/

2019

11 - 15 November 2019 SEAMEO RECSAM, Penang, Malaysia

Aligning STEM Education with Education 4.0 and Sustainable Development Goals





🔊 Rationale

The ubiquitous nature of the Internet ushered in the fourth Industrial Revolution (IR 4.0). Connectivity between systems has made remote working and collaboration a possibility, allowing education to become global to expand internationally. Society has adapted to be more social, more knowledgeable, and many believe the world is a far smaller place than ever before. It is time to bring Education 4.0 into the 21st Century landscape. In order for this to happen, we must revisit the educational paradigms, and focus on the areas that need rethinking. With Education 4.0, it will bring in today, a new world of fast changing technology and information overload. Students need to be trained and not to be taught. Information needs to be made accessible and students need to learn how to find it rather than the teacher offering it to them in a rigid structure. We now understand that students are not alike, do not have the same starting point, can learn and absorb various areas of focus differently and need to be guided to develop their skills rather than taught a set of predefined data points. Education 4.0 needs to prepare students for the next Industrial Revolution which will happen in their lifetime. Flexible, tailor-made curricula, taught by teachers who become mentors and who treat students as individuals is the least that today's students deserve. Giving the workforce of tomorrow the tools to become active lifelong learners can create a diverse and pluralistic society where every person understands and plays to his or her strengths, building a fair and self-sustaining model for education. Addressing the need of science, technology, engineering and mathematics (STEM) education has become an important education agenda in many countries around the world. Examining the content of the Sustainable Development Goals more closely in an educational context can help to further understand the vast impact education can have on the development of sustainable communities. Likewise, aligning STEM Education with Education 4.0 and Sustainable Development Goals is imperative for students' success in schooling for their career and total well-being.

🚴 Conference Theme

Aligning STEM Education with Education 4.0 and Sustainable Development Goals

🔊 Objectives

- To provide a forum to deliberate issues and share experiences on the development of science and mathematics education at all levels.
- To exchange ideas on continuing professional development programmes as a means to sustain the preparation of high quality science and mathematics educators.
- To strengthen collaborations and networking among experts, science and mathematics educators, organisations and educational institutions locally and globally to sustain science and mathematics education reforms in teaching, learning and assessment.
- To discuss developments in information and communication technology (ICT) integration to improve learning of science and mathematics.
- To share knowledge, skills and experiences on high-quality formal, non-formal and informal learning related to STEM education towards future career choices and personal development.

Associate Professor Donna King | Queensland University of Technology, Australia Dr. Donna King is an Associate Professor in science education at the Queensland University of Technology. Her research in science education spans four interconnecting fields: the emotional engagement of students in science in the middle years, using engineering contexts for teaching science, context-based science education and STEM-industry partnerships in schools. An outcome of this work is the development and implementation of innovative context-based units where teachers have adopted new pedagogical approaches for teaching science. She has been a chief investigator on a number of ARC projects with the most recent one focusing on students' use of data for modelling when learning STEM through an engineering context. She is the lead co-chief editor of the international journal *Research in Science Education* and the Master of Philosophy course coordinator.



Professor Zsolt Lavicza | Linz School of Education, STEM Education Centre, Johannes Kepler University, Linz, Austria After receiving his degrees in mathematics and physics in Hungary, Prof. Zsolt began his postgraduate studies in applied mathematics at the University of Cincinnati. While teaching mathematics in Cincinnati, he became interested in researching issues in the teaching and learning mathematics. In particular, he focused on investigating issues in relation to the use of technology in undergraduate mathematics teaching in a variety of classroom environments. In addition, Prof. Zsolt has greatly contributed to the development of the GeoGebra community and participated in developing research projects on GeoGebra and related technologies worldwide. Currently, Prof. Zsolt is a Professor in STEM Education Research Methods at Johannes Kepler University's Linz School of Education.



Assistant Professor Wan Wardatul Amani Wan Salim @Amani Salim | Department of Biotechnology Engineering (BTE), Faculty of Engineering, International Islamic University of Malaysia, Malaysia (IIUM). She received her B.Sc. and M.Sc. in Electrical Engineering from University of Minnesota Twin Cities in 2001 and 2003 respectively, and her Ph.D. in BioMEMS and Microelectronics from Weldon School of Biomedical Engineering at Purdue University, USA in 2009. Prior to her position at IIUM, Amani works at Purdue University and was appointed as the Principal Investigator to a NASA Small Satellite project called SporeSat; the satellite was launched on April 2014. Her research focuses on multidisciplinary approaches for the development of advanced sensor technologies, and the applications of these technologies towards answering important questions in agriculture, biology, environmental science, medicine and space biology.



Mr. Don Carlson Director - Education, Microsoft Asia Pacific, Singapore Mr. Don Carlson leads Microsoft's Education business across Asia-Pacific and is responsible for implementing the company's vision to empower students and educators to achieve more. Mr. Don and his team work closely with academic institutions, governments, partners and educators to enable the education transformation across this diverse region. He manages a team of committed individuals dedicated to implementing key programs and strategies which are aligned with the key education initiatives of Asian countries. Mr. Don's previous roles with Microsoft include responsibilities for managing Education businesses in Australia, Central and Eastern Europe and Western Europe. Before rejoining Microsoft, Mr. Carlson has been in various roles including managing global engagement teams with focus on implementing Design Thinking strategy to governments, schools and universities. He has a Bachelor's and Master's degree in education from the University of Alberta and University of Sydney respectively.



Professor Jinwoong Song | Department of Physics Education, Seoul National University, Korea After studying physics and science education for his B.Sc. and M.A. degrees at Seoul National University, Prof. Jinwoong went to King's College London to continue his doctoral course for science education under the supervision of Prof. Paul J. Black. Currently, Prof. Song is engaged with several academic and professional duties, such as the president of KASE (Korean Association for Science Education) and the director of GCER (GloCal Changes and Educational Responses). Besides his long-standing personal research interests on the history and philosophy of science and of science education, his research is also focused on several issues, including developing Korean National Science Curriculum and Korean Science Education Standards, STEAM education, science as Wisdom (SaW), science culture and communication.

Sconference Strands	Important Dates and Announcements			
 Strand 1: Teaching and Learning Innovation Innovative Pedagogical Approaches in Science and Mathematics Education STEM as Contemporary Pedagogical Approach in Science and Mathematics Teaching Promoting Education (Inductrial Paralution 4.0) 	 Strand 4: Technology as a Pedagogical Enabler Technology Enhanced Learning Tools to Promote Education/ Industrial Revolution 4.0 Digital Literacy 	1 st Announcement Deadline for submission Deadline for submission Deadline for early bird re Confirmation of attenda	2 of abstracts 3 of full papers 1 egistration 1 nce 1	2 February 2019 0 May 2019 5 June 2019 5 August 2019 5 September 2019
 Promoting Education / Industrial Revolution 4.0 Values in Science and Mathematics Education Language Issues in Science and Mathematics Education 		Linguiries	. 2010	Sessions in CoSMed 2019
Strand 2: Continuous Professional Development Professional Learning Community Lesson Study School Learning Action Cell 	Strand 5: STEM Education and Career Development • STEM Education Across Context • Entrepreneurial Skills Development	Email: cosmedrecsam@g Tel: +604 6522 700 Fax: +604 6522 737 Ms. Jenny Ong Ms. Tiana Mohamad	gmail.com : +604 6522 761 : +604 6522 764	 Keynote sessions Parallel sessions Symposia Poster precentations
 Strand 3: Alternative Assessment Large Scale Student Assessment School-based Assessment On-line Assessment 	 Life Skills Development Technical and Vocational Education and Training Gender and STEM Careers 	Ms. Ong Mei Yean Mr. Mohd Hazlie Muhamad Mr. Dominador D. Mangao	: +604 6522 763 : +604 6522 769 : +604 6522 760	presentations5. Workshops6. Roundtable Discussion and Networking