EKC 2023 동반성장 세션 안내

EKC는 해마다 유럽 도시에서 열리는 Europe-Korea Conference로 올해에는 독일 뮌헨에서 8/14-18 (https://ekc2023.org) 개최됩니다.

저희 아이드림에서 동반성장 세션을 여는 것이 확정되어 이렇게 안내드립니다. 특별히 이번에는 저희 아이드림과 인연이 많으신 포항공대 산업경영학과 장수영 교수님과 서강대 화학과 신관우 교수님 (국경없는과학기술자회 회장)께서 함께 해주실 예정입니다.

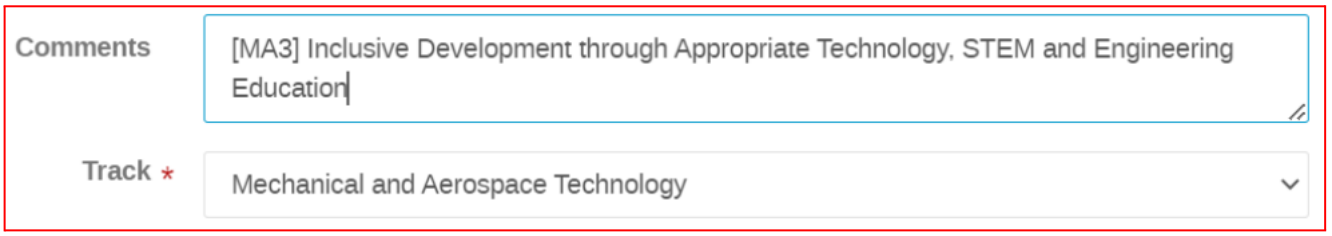
저희 세션 프로포절 및 EKC 세션 리스트를 공유해드립니다. 저희 세션 이외에도 다양한 과학기술 분야 세션이 마련될 예정이오니 좋은 교류의 시간이 되리라 생각됩니다.

현재 EKC https://ekc2023.org 에 안내된 key dates는 아래와 같습니다.

- Abstract Submission 01 April ~ 15 May, 2023
- Early-bird Registration 01 May ~ 31 May, 2023
- General Registration 01 June ~ 30 June, 2023

동반성장 세션에서 발표하기를 원하시기 원하시거나 포스터 발표를 하기 원하시는 분은 위 홈페이지에서 4/1-4/30까지 초록 등록 (링크: https://indico.vekni.info/event/12/)

- 동반성장 세션은 Track: Mechanical and Aerospace Technology 에서 진행됩니다.
- 초록을 제출하실 때는(1) Track에서 Mechanical and Aerospace Technology를 클릭하시고 (2) Comment에 [MA3] Inclusive Development through Appropriate Technology, STEM and Engineering Education를 추가해 주세요.



아무쪼록 오랜만에 열리는 동반성장 세션에 아이드림 회원님들의 많은 관심 부탁드립니다.

동반성장 세션 참여 관련 질문이 있으시면 제게 언제든지 연락주시기 바랍니다.

(Contact: *byoungyoon.kim@gmail.com, +33 6 75 35 18 48, 카카오톡 아이디: bykim73*)

감사합니다!

아이드림 회장, 김병윤 드림

Appendix: Session Proposal

Session title: Inclusive Development through Appropriate Technology and STEM Education

Session description

The proposed session on "Inclusive Development through Appropriate Technology, STEM and Engineering Education" aims to address various appropriate technologies for promoting inclusive growth such as smart factories, intelligent manufacturing, and robotics for their applications in areas such as ODA, SMEs, vulnerable populations, and regional development. It will also focus on the integration of STEM and engineering education.

This session will provide a platform to showcase the latest advancements in these fields and real-world examples of how these technologies can help address global challenges such as climate change, humanitarian aid, ESG, etc.

The goal is to facilitate knowledge exchange and encourage international and interdisciplinary collaborations among speakers and participants. The session will be co-organized with Scientists and Engineers Without Borders (www.sewb.org) and I-DREAM (www.idream4all.org) and will cover the following topics for presentation and discussion.

- Appropriate Technology, Smart Manufacturing Technology and Intelligent Manufacturing System for ODAs and SMEs
- Advancements in Products and Robotics Technology for Sustainability and Support for Vulnerable Groups"
- Innovative Designs and Technologies Integrating IT with Various Science and Engineering Fields for ODA and Regional Development
- The Importance of Integrated STEM and Engineering Education

Session organizer:

- Name and affiliation: Byoung Yoon KIM, ITER Organization, Mechanical Responsible Officer (www.iter.org), President, I-DREAM (www.idream4all.org)
- Short bio and main R&D fields: Dr B.Y. Kim is the mechanical responsible officer of the Test Blanket Module (TBM) port plug design and manufacture at ITER Organization since Jan 2012. He has developed the Finite Element Method (FEM) based shakedown analysis for plasma facing components to predict safety limit during his PhD in Max-Planck-Institute for Plasma Physics (IPP). Before joining ITER Organization, he worked for R&D center of Hyundai-Kia Mortors (2005-2008) as senior research engineer to develop new materials and processing. After he joined National Fusion Research Institute (2008-2011) as technical responsible officer for ITER blanket first wall and neutral beam duct liner, and vacuum vessel support. He has extensive experience on the design and engineering of fusion components. Since 2008, he has been actively involved with the CFSE and Sharing and Technology Inc. (STI, www.stiweb.org) sharing his knowledge and expertise on appropriate technology. He has undertaken the Chad Dried Mango and Sugarcane Charcoal Project and was responsible for its registration with the Patent Office. He has also supervised the publication of the book "Appropriate Technology: 36.5 Degrees of Science and Technology." In 2013, he became a founding member of the I-DREAM association (www.idream4all.org) and currently serves as its President of the association.
- Recent publications in the field of the session (book, journal paper, conference proceeding, patent, project): https://orcid.org/0000-0001-8323-2744

Invited speaker 1

- Tentative title of the talk: Vertical Integration Approach for Engineering Education
- Name and affiliation (with current position and e-mail address): Soo Young Chang (Professor, Postech, syc@postech.ac.kr)
- Abstracts: We propose a new approach to Engineering Education based on the concept of the vertical integration. The approach can be seen as a variant of the problem based learning (PBL). Through the use of vertical integration concept, we can develop a new way to motivate students to acquire meta-knowledge that is becoming evermore important for the successful professional practices in the 21st century. Under this scheme, students in wide range of disciplines, that are not necessarily limited to science and technology, can actively collaborate to define appropriate problems and formulate proper solutions to them. The concept of vertical integration opens up a possibility of producing a brand new learning environment where professors in the academia, professionals in the real world, undergraduate students as well as masters and PhD students are actively work together to acquire knowledge and apply their professional skills. We try to clarify what we mean by "meta-knowledge" and discuss the philosophy behind the idea of vertical integration. Also, we present some of the actual cases that are attempted at Pohang University of Science and Technology in Korea as well as some of the universities in Nepal, Mongolia and Philippines.
- Short bio and main R&D fields: Professor Soo Young Chang is a Ph.D. in Industrial Engineering at the University of Michigan, a professor at the Department of Industrial Management Engineering at Pohang University of Science and Technology, majoring in Optimization, Christian Worldview Academic Partnership, Christian Science and Technology Forum, Sharing and Technology, (corporate) Scientists and Engineers Without Borders, (g) Promote the use of appropriate technology in appropriate technology society activities, CSR, CSV, ESG, social enterprises, and overseas official aid (ODA) from the Korean government, and participate in projects in Nepal, Mongolia, Laos, Myanmar, etc.

Invited speaker 2

- Tentative title of the talk:Appropriate Technology, Seeking local solutions for global problems
- Name and affiliation (with current position and e-mail address): Kwanwoo Shin (Professor of Sogang University, President of Scientists and Engineers Without Borders, kwshin@sogang.ac.kr)
- Short bio and main R&D fields: 신관우 교수는 현재 서강대학교 화학과교수이며, 바이오계면연구소장(www.nano-bio.com)으로 재임하고 있다. 현재 (사단법인) 국경없는과학기술자회 (Scientists and Engineers Without Borders)의 회장으로 재직중이다. 2000년 재료공학 박사학위를 취득 후, 미국표준기술연구원 연구원, 2002년 광주과학기술원 신소재공학과 조교수를 거쳐, 서강대학교 화학과에 2006년에 부임하였다. 2021년과 2020년 미국 하버드대학교 SEAS의 Bioengineering학과에 방문교수로 파견되어 바이오공학관련 연구활동을 수행하였다. 2018년 세계에서 최초로 인공광합성을 하는 인공세포를 만들어 Nature Biotechnology의 표지논문을 발표하고, 상처를 치료하기 위해 세포를 직접 이식하는 "세포스티커", 그리고 잉크젯 프린터로 다양한 질병 진단을 할 수 있는 종이 전자칩의 연구등을 유수의 학술지에 발표하였다. 최근 로봇팔을 이용한 화학-생물학 자동화기술 개발 연구를 하고 있다. 지난 2018-2020년 동안, "빈곤을 이겨낼 수 있는 포용적인 과학기술"을 연구 보급하는 한국 적정기술학회 회장을 맡아 과학기술을 이용한 개발도상국 지원과 협력, 그리고 지속가능한 과학기술을 통한 지역의 문제와 기후문제를 해결하기 위한 연구와 협력활동도 수행하고 있다. 2019년 대학생들을 위한 "적정기술" 교과서인 "적정기술의 이해"를 대표집필하고 2019년 우수과학도서에 선정된 바 있다. 최근 중고등학생을 위한 "10대를 위한 적정기술콘서트"를 발간하였다. 지난 10년간 캄보디아, 베트남, 인도네시아등지에서 개발도상국 과학기술 지원 사업에 참여하여, 대학실험실 개설, 현지 기초과학 강의, 현지 중고등학교 과학교사 연수 및 지원활동에 적극적으로 참여하고 있으며, 2022년 국내 과학기술자들의 NGO인 국경없는과학기술자회 회장으로 선임 활동하고 있다.