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Technical Program

December 7, 2016

S1a: Engineering Education Reform 1

SESSION CHAIR: SYED KHALEEL AHMED

11:00 Effectiveness of Open-Ended Learning Method in Fluid Mechanics Laboratory Course

Siti Sarah Ain Fadhil, Muhammad Fairuz Abdul Jalal and Nuraslinda Anuar (Universiti Tenaga Nasional, Malaysia).

11:15 Observation of Hands-on Education Implementation At Kanazawa Technical College, Japan

Norhidayah Mohamad Yatim (Universiti Teknikal Malaysia Melaka (UTeM), Malaysia); Norlida Buniyamin (Universiti Teknologi MARA, Malaysia); Akio Imazawa and Nobuyuki Naoe (Kanazawa Technical College, Japan).

11:30 Integrating Programming with BeagleBone Black for Undergraduate's "Programming for Engineers" Syllabus

Nurul Asyikin Mohd. Radzi, Aiman Ismail and Sarveswaren Karunanithi (Universiti Tenaga Nasional, Malaysia); Leong Yeng Weng (Universiti Tenaga Nasional, Japan); Pin Jern Ker (University Tenaga Nasional, Malaysia); Jehana Ermy Jamaluddin (Universiti Tenaga Nasional, Malaysia).

11:45 Engineering Through a Technological Design Context

Tiju Mathew Thomas (University of Waikato, New Zealand).

12:00 Linking Knowledge and Industry Needs Through Problem-based Learning in Power Electronics Course

Ida Hussain and Sabarina Jaafar (Universiti Tenaga Nasional, Malaysia).

12:15 A Comparison Between CDIO and EAC Engineering Education Learning Outcomes

Muhamad Hazwan Abdul, Halim (Universiti Teknologi MARA Malaysia, Malaysia); Norlida Buniyamin (Universiti Teknologi MARA, Malaysia).

12:30 Implementation of Vocational Training Into TVET's Teacher Program for National Core Standard

Affero Ismail (Universiti Tun Hussein Onn Malaysia, Malaysia); Razali B Hassan (UTHM, Malaysia); Alias Masek (Universiti Tun Hussein Onn Malaysia, Malaysia); Norhasyimah Hamzah (Universiti Teknologi Malaysia, Malaysia); Tamil Selvan Subramaniam and Irwan Mahazir Ismail (UTHM, Malaysia).

12:45 Implementation of Quadcopter as a Teaching Tool to Enhance Engineering Courses

Mohamad Faizal Abd Rahman (Universiti Teknologi MARA Penang & Universiti Teknologi Mara Malaysia, Malaysia); Adi Izhar Che Ani and Saiful Zaimy Yahaya (Universiti Teknologi MARA, Malaysia); Zakaria Hussain (Universiti Teknologi MARA Pulau Pinang, Malaysia); Rozan Boudville and Adizul Ahmad (Universiti Teknologi MARA, Malaysia).

S1b: Measurement and Evaluation

SESSION CHAIR: NAZLINDA ABDULLAH

11:00 The Correlation Between Creativity and Engineering Knowledge Among Engineering Undergraduate Students

Badaruddin Ibrahim (University Tun Hussein Onn Malaysia Malaysia, Malaysia); Michael DeMiranda (Texas A& M University, USA); Thomas Siller (Colorado State University, USA).

11:15 Using Board Game Design and Animation Creation for Assessment - A Case Study in a Subject of Information Systems Audit and Control

Cheuk Hang Au (The Chinese University of Hong Kong, Hong Kong); Walter Fung and Xin Xu (The Hong Kong Polytechnic University, Hong Kong).

11:30 Engineering Education in Shaqra University Between Theory and Application

Abdulaziz Alsayyari (Shaqra University, Saudi Arabia); Ahmed Hafez (Assiut University, Egypt).

11:45 A Survey on Engineering Ethics and Technological Advancement Among Malaysian Public University Students

Zambri Harun (Universiti Kebangsaan Malaysia, Malaysia); Hashimah Hashim (Universiti Teknologi MARA, Malaysia); Shuhaimi Mansor (

‡ Head of Aero Lab, Malaysia); Zamri Mohamed (Universiti Malaysia Pahang, Malaysia); Kamarul Arifin Ahmad (Universiti Putra Malaysia, Malaysia); Abdus S Mahmud (Universiti Sains Malaysia ‡ School of Mechanical Engineering, Malaysia).

12:00 The Implementation of Key Course Concept in the Evaluation of BEEE Programme in UNITEN

Farah Hani Nordin and Fazrena Hamid (Universiti Tenaga Nasional, Malaysia).

12:15 Overview and Interim Evaluation of the Project ROBIN: Robotics for Integration

Lisa Vittori, Lisamarie Schuster, Nicole Weinert, Gottfried Koppensteiner and Wilfried Lepuschitz (Practical Robotics Institute Austria, Austria).

12:30 Computer-Based Laboratory Exercises: Assessing Lab Practice Preferences Among Computer Engineering's Students and Lecturers

A Hafizah (UITM, Malaysia); Nur Athiqah Harron and Siti Azura Ramlan (UiTM, Malaysia); Shahidah Sadimin (Universiti Teknologi Mara, Malaysia); Faridah Abdul Razak (UiTM, Malaysia).

12:45 An Effective Approach to Improve Students' Grade Point Average

Hashimah Hashim (Universiti Teknologi MARA, Malaysia); Nur Ashida Salim (University Teknologi Mara, Malaysia); Hanim Hussin (UiTM ‡ University of Malaya, Malaysia); Ahmad Asari Sulaiman (Universiti Teknologi MARA, Malaysia); Hj Ir Harizan Che Mat Haris (UiTM, Malaysia).

S2a: Engineering Education Reform 2

SESSION CHAIR: NORLIDA BUNYAMIN

14:15 Changes and Challenges in Sustainability of Technical and Vocational Education and Training - Teacher Education Programme: A Case Study

Nor Hidayah Hamdan (Faculty of Technical and Vocational Education, University of Tun Hussein Onn Malaysia ‡ Faculty of Technical and Vocational Education, Malaysia); Chee Sern Lai (Universiti Tun Hussein Onn Malaysia, Malaysia); Jailani Md Yunos (University Tun Hussein Onn Malaysia, Malaysia).

14:30 “Made in China 2025” and Experimental Platform Development of High-end Equipment Manufacturing Virtual and Simulation Experiment Teaching Center

Xudong Pan, Jihong Yan and Wentao Huang (Harbin Institute of Technology, P.R. China).

14:45 Distribution TUA Element in Learning Outcome (LO5-LO9) for Engineering Subjects

Bulan Abdullah, Kausalyah Venkatason and Mohamad Ali Ahmad (Universiti Teknologi MARA, Malaysia); Baljit Singh (Universiti teknologi MARA, Malaysia); Abdul Halim Abdullah (Universiti Teknologi MARA Malaysia & Borad of Engineer Malaysia, Malaysia); Nor Hayati Saad (UiTM, Malaysia); Salmiah Kasolang (Universiti Teknologi MARA, Malaysia).

15:00 Research Skills and Conference Papers as Part of the Undergraduate Engineering Programs

Victor Murray (Universidad de Ingenieria y Tecnologia & University of New Mexico, Peru); Cecilia Matsuno (Universidad de Ingenieria y Tecnologia & UTEC, Peru).

15:15 Development of Hand Therapy Device for Cerebral Palsy in FKE-UiTM Capstone Design Subject

Muhammad Zaim Rusli, Ahmad Zakwan Rodzuan, Ahmad Safuan Che Mat Som, Nurhafizah Omar and Yusnira Husaini (Universiti Teknologi MARA, Malaysia).

15:30 Exploring Ways to Enhance Students’ Internship Experience

Pei Cheng Ooi (The University of Nottingham Malaysia Campus, Malaysia).

15:45 An Open Coworking Space to Allow Engineering Students to Develop Innovative Competences: UTEC GARAGE

Victor Murray (Universidad de Ingenieria y Tecnologia & University of New Mexico, Peru); Alberto Bejarano (Universidad Cientifica del Sur, Peru); Cecilia Matsuno (Universidad de Ingenieria y Tecnologia & UTEC, Peru).

S2b: New Technologies in Education 1

SESSION CHAIR: HASHIMAH HASHIM

14:15 Integration of Traditional Music Through Mobile Game in Inspiring Malaysian Youths' Enthusiasm

Fatimah Zahra Ros Azman and Fairus Kamaruzaman (Universiti Teknologi MARA, Malaysia).

14:30 A Review of the Use of Smart Boards in Education

Soh Hon Mun (University Technology Malaysia, Malaysia); Abdul Halim Abdullah (Senior Lecturer and Academic Manager (Research), Malaysia).

14:45 The Effect of Joint Role of Creative Analogy and Concept-in-Context Map on the Learning Interest and Performance of First Year Mechanical Engineering Undergraduates

Amrita Kaurwar (Indian Institute of Technology, Jodhpur, India); Anand Plappally (IIT Jodhpur, India).

15:00 The Impacts of Infusing Game Elements and Gamification in Learning

Mageswaran Sanmugam, Zaleha Abdullah, Hasnah Mohamed, Norasykin Mohd Zaid and Baharuddin Aris (Universiti Teknologi Malaysia, Malaysia); Henny van der Meijden (Radboud University, The Netherlands).

15:15 Using Computer-based Scaffolding to Improve Students' Reasoning Skills in Collaborative Learning

Ana Haziqah A Rashid, Nurbiha A Shukor and Zaidatun Tasir (Universiti Teknologi Malaysia, Malaysia).

15:30 A Proposal of Educational Model for Research Incubators in Technological Programs of Electronics

Carlos Herazo and Jonathan Alvarez (Universidad Minuto de Dios, Colombia).

15:45 Embedded C Programming Using FRDM

Mohamad Taib Miskon (MARA University of Technology (UiTM), Malaysia); Nur Hafizah Rabi'ah Husin (UiTM, Malaysia); Zulzilawati Jusoh (Universiti Teknologi MARA, Malaysia); Suziana Omar (Fakulti of Electrical Engineering, Malaysia); Rosheila Darus (UNSW, Malaysia).

S3a: Distance, E Learning & Industrial Collaboration

SESSION CHAIR: JULIANA JOHARI

16:15 Students' Feedback on Implementing Blended Learning in Semiconductor Devices

Hashimah Hashim (Universiti Teknologi MARA, Malaysia); Zambri Harun (Universiti Kebangsaan Malaysia, Malaysia).

16:30 Opportunities for Industry-University Collaboration: A Case Study From Mozambique

Márcia Juvane (Technische Universitt Wien, Austria); Andreas Mauczka (Vienna University of Technology, Austria); Paul Spiesberger (Technische Universitt Wien, Austria); Thomas Grechenig (Vienna University of Technology, Austria).

16:45 Humanitarian Approach in Final Projects of Undergraduate Engineering Students in Peru

Anthony Bacilio Ruiz (Pontificia Universidad Catolica del Per, Peru); Diego Guilln Rosaprez (Pontificia Universidad Catlica del Per & The Mars Society Peru, Peru); Alfredo Rosales Treyes and Josseph Huaraca (Pontificia Universidad Catlica del Per, Peru); Andree Euribe Vargas (Pontificia Universidad Catolica del Peru, Peru); Eduardo Temoche, Solano and Joao Carrion Quinde (Pontificia Universidad Catlica del Per, Peru); Italo Amez and Michel Siguenza (Pontifical Catholic University of Peru, Peru); Dante Arroyo (University of Tsukuba, Japan & Pontificia Univesidad Catolica del Peru, Peru).

17:00 University-Industry Collaboration Through Engineering Final Year Project

Ibrahim Alhamrouni (Universiti Kuala Lumpur, Malaysia); Mohammad Saad and Norida Kamaruddin (Universiti Kuala Lumpur British Malaysian Institute, Malaysia); Iskandar Hack (Universiti Kuala Lumpur, Malaysia).

17:15 Enhancing Students Engagement Through Blended Learning Satisfaction and Lecturer Support

Idaya Mohd (Universiti Teknologi MARA, Malaysia).

S3b: New Technologies in Education 2

SESSION CHAIR: XUDONG PAN

16:15 Development of a Project/Problem Based Learning Body of Knowledge (PBLBOK)

Yoshiki Sato, Atsuo Hazeyama and Youzou Miyadera (Tokyo Gakugei University, Japan).

16:30 Enhancing Students' ICT Problem Solving Skills Using Flipped Classroom Model

Swee Wen Ang (University of Technology Malaysia, Malaysia); Norasykin Mohd Zaid and Jamalludin Harun (Universiti Teknologi Malaysia, Malaysia).

16:45 Vocabulary Problems Phenomenon Among Malaysian Technical Students: Developing AMIT (Aplikasi Mudah Istilah Teknikal) as a Solution

Kamisah Ariffin (Universiti Teknologi MARA Pahang, Malaysia); Nur Asmaliza Mohd Noor (Universiti Teknologi Mara (PAHANG), Malaysia); Asmidar Alias (Universiti Teknologi MARA & UiTM Pahang, Malaysia); Anis Hasliza Abu Hashim (Universiti Teknologi MARA Pahang, Malaysia).

17:00 Efficacy of DTT by Using Touchscreen Learning Numeracy App for Children with Autism

Fairus Kamaruzaman (Universiti Teknologi MARA, Malaysia).

17:15 A Proposal for Teaching Programming Languages Through Open Hardware Tools

Jonathan Alvarez (Universidad Minuto de Dios, Colombia).

December 8, 2016

S4: Measurement and Evaluation & Quality Assurance

SESSION CHAIR: AKIO IMAZAWA

09:00 Analysis of the Learning Effects Between Text-based and Visual-based Beginner Programming Environments

Daisuke Saito, Hironori Washizaki and Yoshiaki Fukazawa (Waseda University, Japan).

09:15 Evaluating Engineering Students Performance in Physics Courses During Foundation Studies

Adzly Anuar and Zolman Hari (Universiti Tenaga Nasional, Malaysia); Mohd Zin Mokhtar (Universiti Tenaga Nasional & UNITEN, Malaysia); Roslina Mokhtar (Universiti Tenaga Nasional, Malaysia).

09:30 Electricity Performance Measurement of Engineering Students by a Rasch-based Academic Scale

Nazlinda Abdullah (University Technology MARA, Malaysia).

09:45 Semi-Automated Academic Tutor for the Selection of Learning Paths in a Curriculum: An Ontology-Based Approach

Carolina Sarmiento Gonzlez (Universidad Nacional de Colombia, Colombia); Oscar Germn Duarte Velasco (Universidad Nacional De Colombia, Colombia); Marla Barrera and Ren Soto (Universidad Nacional de Colombia, Colombia).

10:00 A Proposal for Technology-based Software Engineering Curriculum Development

Emanuel S Grant (University of North Dakota, USA).

10:15 A Study on the Awareness of Mentoring Program Amongst Lecturers: A Case Study of UNITEN

Noorazizun Mohd. Saad (Universiti Tenaga Nasional, Malaysia).

S5: Education in Other Sciences

SESSION CHAIR: BULAN ABDULLAH

10:45 Decision Making Behaviour of Malaysian Polytechnics Students and Its Relationship with Educational Choice on TVET

Jyy Wei Foo (Politeknik Kuala Terengganu, Malaysia); Hazri Jamil (Uni-

versiti Sains Malaysia, Malaysia).

11:00 The Application of Environmental Data From a Real-time Forest Monitoring System to Develop Games as an Engineering Course Teaching Aid

Amri Yusoff, Shahrizuan Shafiril and Zalina Zulkifli (Universiti Pendidikan Sultan Idris, Malaysia); Gary Wills, Lester Gilbert and Richard Crowder (University of Southampton, United Kingdom).

11:15 Health, Safety and Environment as the Basis for Innovative Education on Sustainability

Mohd Azmuddin Abdullah (Universiti Malaysia Terengganu, Malaysia).

11:30 A Review of Application of 3D Hologram Technology in Education: A Meta-Analysis

Nurul Maziah Mohd Barkhaya (University of Technology Malaysia, Malaysia).

11:45 The Effects of Mind-Mapping Technique in Engineering Mathematics

Chee Sern Lai and MingFoong Lee (Universiti Tun Hussein Onn Malaysia, Malaysia).

12:00 A Comparative Study of Problem Based Learning (PBL) on Students' Intrinsic Motivation in Polytechnic

Alias Masek (Universiti Tun Hussein Onn Malaysia, Malaysia); Nurin Asyikin Ahmad (Nurinasyikin87@gmail.com, Malaysia); Affero Ismail (Universiti Tun Hussein Onn Malaysia, Malaysia).

12:15 MINI N-TH DEGREE TRUNCATED POLYNOMIAL RING (MINI-NTRU): A Simplified Implementation Using Binary Polynomials

Juliet Gaithuru, Mazleena Binti Salleh and Ismail Mohamad (Universiti Teknologi Malaysia, Malaysia).

12:30 Software Application to Help Make Discoveries Based on Air Temperature Data

Akio Imazawa and Nobuyuki Naoe (Kanazawa Technical College, Japan); Hirofumi Hanai (TRENDY Corporation, Japan); Shinya Nakajima (Kokushikan University, Japan).