Contents

Section I

Special Issue Research in Engineering Education

Guest Editors

Robin Clark—Aston University, Birmingham, UK Khairiyah Mohd Yusof—Universiti Teknologi Malaysia Mohd Fadzil Daud—Universiti Teknologi Malaysia

Section II

Contributions in: Transfer Students, Motivation, First-Year Students, Psychometric Analysis, Epistemic Cognition, Interactive Physical Models, Physical Laboratories, Experiential Learning, PBL, Virtual Laboratories, LabVIEW Applications, Technology Enhanced Learning, Global Learning, Plagiarism, Conceptual Learning, Electric Circuits, Computer Networks, Structural Engineering, Mechanical Engineering, Fluid Mechanics, Thermodynamics, Chemical Engineering, Sustainability, Physics

Ahmad Ibrahim	2329	Editorial
Robin Clark, Mohd Fadzil Daud and Khairiyah Mohd-Yusof	2330-2331	Guest Editorial

Section I

Anne Gardner and Keith Willey	2332–2351	Framing the Academic Identity of Emerging Researchers in Engineering Education
Junaid A. Siddiqui, Cheryl Allendoerfer, Robin S. Adams and Bill Williams	2352–2377	Integration of Scholarship: Interconnections among Three Studies on Becoming an Engineering Education Researcher
Jonte Bernhard and Caroline Baillie	2378-2394	Standards for Quality of Research in Engineering Education
Elliot P. Douglas, Jack Vargas and Claudia Sotomayor	2395–2400	Student Construction of Knowledge in an Active Learning Classroom
Syed Ahmad Helmi, Khariyah Mohd- Yusof and Fatin Aliah Phang	2401–2414	Enhancement of Team-based Problem Solving Skills in Engineering Students through Cooperative Problem-based Learning
Jane Andrews and Robin Clark	2415-2425	A Community Based Participatory Research Study into Why Some Girls Don't 'Do' Engineering
Aini Nazura Paimin, Roger G. Hadgraft, J. Kaya Prpic and Maizam Alias	2426–2433	An Application of the Theory of Reasoned Action: Assessing Success Factors of Engineering Students
Soheila Firouzian, Hamidreza Kashefi, Yudariah Mohammad Yusof, Zaleha Ismail and Roselainy Abdul Rahman	2434–2445	Mathematical Competencies as Perceived by Engineering Students, Lecturers, and Practicing Engineers

Section II

Catherine E. Brawner and Catherine Mobley	2446–2459	Advising Matters: Engineering Transfer Students' Transition Experiences at Five Institutions
Aharon Gero, Yinnon Stav and Netanel Yamin	2460-2469	Increasing Motivation of Engineering Students: Combining "Real World" Examples in a Basic Electric Circuits Course
Kenneth J. Reid, P. K. Imbrie, Joe J. J. Lin, Teri Reed and Jason C. Immekus	2470-2486	Psychometric Properties and Stability of the Student Attitudinal Success Instrument: The SASI-I
Courtney Faber, Penelope Vargas and Lisa Benson	2487-2500	Engineering Students' Epistemic Cognition in a Research Environment
Jacqueline K. Burgher, David M. Finkel, Bernard J. Van Wie and Olusola O. Adesope	2501–2516	Implementing and Assessing Interactive Physical Models in the Fluid Mechanics Classroom
Zeljko Stojanov, Dalibor Dobrilovic and Tamara Zoric	2517-2530	Solving Problems in a Physical Laboratory for Computer Networks and Data Security: A Conceptual Framework with Students' Experiences

K. Giridharan and R. Raju

Loralyn Greene, Kimberly Ellis, Dale Masel, Leily Farrokhvar, Michael Ogle and Eileen Van Aken Enrique Justo, Antonio Delgado, Manuel Vázquez-Boza and

Luis A. Branda D. Fernández, F. J. Ruiz, L. Bellido,

E. Pastor, O. Walid and V. Mateos Stanislaw Jerzak and M. C. George

Yun Dai, Ang Liu, James Morrison and Stephen Lu Hoda Baytiyeh

Brad Stappenbelt, Senevi Kiridena, David Hastie and Abheek Basu Carla M. Firetto, Peggy N. Van Meter, Stephen R. Turns and Thomas A. Litzinger

Chiong Kai Shing, Zeeda Fatimah Mohamad and Abdul Aziz Abdul Raman

- The Impact of Experiential Learning Methodology on Student Achievement 2531-2542 in Mechanical Automotive Engineering Education A Program to Engage College Students in the Material Handling and 2543-2555 Logistics Industry 2556-2568 Implementation of Problem-Based Learning in Structural Engineering: A Case Study Enhancing Learning Experience in Computer Networking through a 2569-2584 Virtualization-Based Laboratory Model 2585-2596 LabVIEW for Data Acquisition and Instrument Control in an Introductory Physics Laboratory for Engineering Undergraduates Systemic Design of Interactive Learning Environment for Global 2597-2611 Engineering Courses Toward the Formation of Competitive Global Engineers: The Challenges 2612-2620 Facing Engineering Education in Lebanon 2621-2634 An Investigation of International Postgraduate Engineering Students' Attitudes and Abilities Related to Avoiding Plagiarism The Validation of a Conceptual Reasoning Inventory for Introductory 2635-2652 Thermodynamics 2653-2664 Integrating Components of Sustainability into Chemical Engineering Curricula 2665 Guide for Authors