

## Contents

### Section I

#### Special Issue

#### Case-Based Learning in Engineering and Applied Science Education

#### Guest Editors

**Faiez Alani – McMaster University, Hamilton, Ontario, Canada**

**Gabriel Acien – University of Almeria, Almeria, Spain**

<b>Editorial</b>	459
<i>Ahmad Ibrahim</i>	
<b>Guest Editorial</b>	460
<i>Faiez Alani and Gabriel Acien</i>	
<b>Case-based Learning in Artificial Intelligence Course – A Case Study Using Microsoft Azure in University Course</b>	461–471
<i>Wen-Chih Chang and Moocharoen Charoenwat</i>	
<b>Guiding Global Innovation Teams on their Exploration Journey: Learning from Aspiring Engineering Students</b>	472–490
<i>Jenny Elfsberg, Christian Johansson Askling, Andreas Larsson Tobias Larsson and Larry Leifer</i>	
<b>Amalgamation of Research-, Case-, Project-, and Video-based Learning in Teaching Engineering and Computing Ethics</b>	491–498
<i>Riadh Habash</i>	
<b>Comparison Between In-person Versus Virtual Case-based Learning for an Upper Year Course in Engineering Technology Education</b>	499–510
<i>Faiez Alani and Rehmat Grewal</i>	
<b>A Work-based Project Practice Motivated by Problem-Solving in Software Engineering</b>	511–519
<i>Ga Xiang, Lei Wang, Xuan Sun and Weiran Tang</i>	
<b>The Effects of Online Project-based Learning with Real Enterprise Data in Two Interdisciplinary Courses</b>	520–530
<i>Kim Moon-Soo</i>	

### Section II

#### Contributions in: Entrepreneurship, Assessment, Team-Based Learning, STEM, Graphics Interpretations, Student Engagement, Student Outcomes, Modeling, Visual Patterns, Eye-Tracking, Industry 4.0, Self-Efficacy, Competence Development, Career Path, Life-Satisfaction, Race & Gender, Choice of Major

<b>Assessment of Student's Entrepreneurial Self-Efficacy in Entrepreneurship Courses: A Latent Mean Analysis</b>	531–542
<i>Heydi Dominguez and Prateek Shekhar</i>	
<b>Evaluation of Bias in Peer Assessment in Higher Education</b>	543–556
<i>Jacklin H. Stonewall, Michael C. Dorneich and Jane Rongerude</i>	
<b>Perceptions of Engineering and Technology High School Teachers and Policymakers towards 21st Century Skills</b>	557–571
<i>Amona Abu-Younis Ali, Shahaf Rocker Yoel and Yehudit Judy Dori</i>	
<b>How Engineering Students Understand and Interpret Graphics Using Spreadsheets an Empirical Study in Physics Courses</b>	572–582
<i>Daniel Sánchez Guzmán and Erika Cervantes Juárez</i>	
<b>Analysis of First-Generation Engineering Students Engagement and its Relation to their Academic Performance</b>	583–590
<i>Abigail Lehto and Ning Fang</i>	
<b>Design and Implementation of a Comprehensive Platform to Assess Students' Outcomes</b>	591–605
<i>E. M. Shaban, Abdullateef H Bashiri, Waleed Zakri, Anil Kumar Deepati and Farooque Ahmad</i>	

<b>A Perspective on Micro-Courses and Building Information Modeling for Enhanced Teaching and Learning</b> <i>Liting Bai and Qi Chai</i>	606–613
<b>Academic Performance and Visual Patterns in Reading Technical and Design Articles among Industrial Design Students</b> <i>Yongchun Mao and Guolin Zhang</i>	614–623
<b>Readiness to Teach Industry 4.0 among University Lecturers in Malaysian Urban Universities</b> <i>Zariv Long-Kwan Chew, Ananda Kumar Palaniappan and Chooi-Seong Lai</i>	624–638
<b>Perceived Benefits of a STEM Intervention Program and Engineering Self-Efficacy: A Multi-Method Investigation</b> <i>Selyna Pérez Beverly, Christina S. Morton and Lisa R. Lattuca</i>	639–655
<b>Reconstruction of a Curriculum Framework in Vocational Colleges for Comprehensive Competence Development</b> <i>Lizhi Tao, Prasert Ruannakarn, Hengliang Cheng, Fei Luo, Xuyun Peng and Zhongbao Ma</i>	656–668
<b>Beyond the GPA: Factors Influencing Life Satisfaction of Engineering Undergraduates</b> <i>Dragan Lj. Bjelica, Dejana Pavlović and Luka Petrović</i>	669–677
<b>Examining the Role of Race, Gender, and Major in Engineering Major Selection Through Ecological Systems Theory Perspective</b> <i>Sinan Onal and Ezra Temko</i>	678–701
<b>Guide for Authors</b>	702