

Contents

Contributions in: Software Architecture, Chemical Engineering, STEM, Internet of Things, Industry 4.0, Mathematics, Material Science, Mechanical Engineering, Civil Engineering, Industrial Engineering, Assessment, Doctoral Students, Engineering Ambassadors, Leadership, Team-Based Learning, PBL, Postdoctoral Training, Engineering Identity, Research Assistants, Remote Labs, Study Habits, Advisory Board, Distance Learning, Motivation, Problem Solving, Self-Regulated Learning, Gamification, Active Learning

Editorial	1181
<i>Ahmad Ibrahim</i>	
Application of Voice Assistant Technology to Teaching Software Architecture Design: A Case Study of Amazon's Alexa	1182–1200
<i>Miloš Milić, Dušan Savić, Ilija Antović, Vojislav Stanojević and Siniša Vlajić</i>	
Impact of Customized Exercises on Homework Copying Among Undergraduate Engineering Students	1201–1211
<i>Min Zhang, Xiaoying Zhu, Shi Wang, Yuling Fan and Xiangfu Meng</i>	
Choosing a Doctoral Advisor: A Study of Chemical Engineering Students' Perspectives Using Basic Needs Theory	1212–1222
<i>Mayra S. Artilles and Holly M. Matusovich</i>	
Validation of the Ambassador Questionnaire for Undergraduate Students Conducting Engineering Outreach	1223–1242
<i>Melissa G. Kuhn, Shanan Chappell Moots and Joanna K. Garner</i>	
Development and Assessment of Transformational Leadership Skills Through Team-Based Learning	1243–1256
<i>Wenfang Liu, Haiyan Xie, Raja R. A. Issa and John Awaitey</i>	
The Design of a Postgraduate Vocational Training Programme to Enhance Engineering Graduates' Problem-Solving Skills Through PBL	1257–1273
<i>Ourania Miliou, Andri Ioannou, Yiannis Georgiou, Ioannis Vyrides, Nikos Xekoukoulotakis, Søren Willert, Andreas Andreou, Panayiotis Andreou, Konstantinos Komnitsas, Panayiotis Zaphiris and Stylianos Yiatros</i>	
Postdoctoral Supervisors' Expectations of the Knowledge, Skills, and Attributes Required for and Developed During Postdoctoral Training	1274–1290
<i>Matthew Bahnson, Catherine G. P. Berdanier and Monique Ross</i>	
Applying Project-Based Learning and an Integrated Laboratory Platform to Teach Internet of Things	1291–1306
<i>Liang Zhao, Shaocheng Qu and Shuifa Sun</i>	
The Many Roles of an Engineering Graduate Student: Exploring How Graduate Students Identify with the Multiple Roles They Assume	1307–1327
<i>Anne M. McAlister, Sarah Lilly, Reid Bailey and Jennifer L. Chiu</i>	
Technical and Vocational Education Strategy to Prepare Qualified Professionals for Industry 4.0 – A Case Study	1328–1339
<i>Kung-Jeng Wang and Shu-Hua Yang</i>	
Application of Learning Analytics in a Remote Lab Context: A Systematic Literature Review	1340–1353
<i>Carinna Nunes Tulha, Marco Antonio Garcia de Carvalho and Leandro Nunes de Castro</i>	
Engineering Students' Mathematical Self-Concept and its Dependence on Their Study Habits and Views about Mathematics	1354–1365
<i>Timo Tossavainen, Peter Wall and Marcus Sundhäll</i>	
Leveraging a Board of Advisors for Continuous Interaction and Improvement: Study of U.S. Military Academy's Environmental Engineering Major	1366–1376
<i>Michael A. Butkus, Andrew R. Pfluger, Jean M. Andino, Jeffrey A. Starke, Gregory W. Harrington, Philip Dacunto and Jeffrey Cunningham</i>	
Project-Based Learning in a Virtual Setting: A Case Study on Materials and Manufacturing Process and Applied Statistics	1377–1388
<i>Mary Foss, Yucheng Liu and Shantia Yarahmadian</i>	
Intersections Between Entrepreneurial Minded Learning, Identity, and Motivation in Engineering	1389–1407
<i>Renee M. Desing, Rachel L. Kajfez, Krista M. Kecskemety and Deborah M. Grzybowski</i>	
Applying TRIZ to Enhance Civil Engineering Students' Ability to Solve Complex Engineering Problems	1408–1421
<i>Li Mao-Guo, Ma Yi-Dan, Zhu Zheng-Wei, Jia Chuan-Guo and Gan Min</i>	
Investigating Engineering Students' Experiences of Self-Regulated Learning in Project-Based Learning Activities	1422–1433
<i>Rongrong Liu, Jiabin Zhu, Wanqi Li, Tongjie Ju and Leyi Chen</i>	
Impact of a Gamification Learning System on the Academic Performance of Mechanical Engineering Students	1434–1442
<i>Rosa Pàmies-Vilà, Albert Fabregat-Sanjuan, Joan Puig-Ortiz, Lluïsa Jordi Nebot and Antoni Hernández Fernández</i>	

Making the Abstract Concrete: A Project-Based Laboratory Activity on Concrete Manufacturing for Civil Engineering Students <i>Enrique del Rey Castillo and Claire Donald</i>	1443–1457
Industry 4.0 Technologies in Industrial Engineering Courses: A Faculty Survey in Brazil <i>Mary Anny M. S. Lemstra, Eric Alberto Quinaglia and Marco Aurélio de Mesquita</i>	1458–1469
Guide for Authors	1470