Contents

Contributions in: Taxonomy of Keywords, Student Misconceptions, Presentation Slides, Design Projects, Innovation, Critical Thinking, System Thinking Skills, Empathic Design, Assessment, Blended-Learning, E-Learning, Gender, Diversity, STEM, PBL, Laboratory Capacity, Engineering Mechanics, Thermodynamics, Mathematics, Neural Networks, Aerospace, Marine Engineering, Software Engineering, Industrial Engineering, Laboratory Capacity, Simulators

Ahmad Ibrahim	1	Editorial
Cynthia J. Finelli, Maura Borrego and Golnoosh Rasoulifar	2–18	Development of a Taxonomy of Keywords for Engineering Education Research
Gang Liu and Ning Fang	19–29	Student Misconceptions about Force and Acceleration in Physics and Engineering Mechanics Education
Bill J. Brooks, Dedra N. Demaree and Milo D. Koretsky	30–38	Student Response Times to In-Class Thermodynamics Concept Questions: A Window into Students' Thinking Processes
Joanna K. Garner and Michael P. Alley	39–54	Slide Structure Can Influence the Presenter's Understanding of the Presentation's Content
Gregory M. Mocko and Blake J. Linnerud	55–63	Measuring the Effects of Goal Alignment on Innovative Engineering Design Projects
Jessica Menold, Kathryn W. Jablokow, Daniel M. Ferguson, Şenay Purzer and Matthew W. Ohland	64–83	The Characteristics of Engineering Innovativeness: A Cognitive Mapping and Review of Instruments
Lynnette M. Michaluk, Jon Martens, Rebecca L. Damron and Karen A. High	84–99	Developing a Methodology for Teaching and Evaluating Critical Thinking Skills in First-Year Engineering Students
Aharon Gero and Ofer Danino	100-110	High-School Course on Engineering Design: Enhancement of Students' Motivation and Development of Systems Thinking Skills
Diana Bairaktarova, William Z. Bernstein, Tahira Reid and Karthik Ramani	111–122	Beyond Surface Knowledge: An Exploration of How Empathic Design Techniques Enhances Engineers Understanding of Users' Needs
Inbal E. Flash Gvili, Marc J. Weissburg, Jeannette Yen, Michael E. Helms and Craig A. Tovey	123–135	Development of Scoring Rubric for Evaluating Integrated Understanding in an Undergraduate Biologically-Inspired Design Course
Antonio Miguel Cruz, Adriana Rios Rincon, William Ricardo Rodríguez Dueñas, Nestor Florez Luna and Daniel Alejandro Quiroga Torres	136–149	The Impact of an Introductory Biomedical Engineering Course on Students' Perceptions of the Engineering Profession
Jordi Poch, Imma Boada, Josep Soler and Ferran Prados	150–162	Automatic Creation and Correction of Mathematical Problems
Jennifer D. Cribbs, Cheryl Cass, Zahra Hazari, Philip M. Sadler and Gerhard Sonnert	163–171	Mathematics Identity and Student Persistence in Engineering
Mary Kathryn Thompson, Christina Espensen and Line Harder Clemmensen	172–184	An Optimized Outlier Detection Algorithm for Jury-Based Grading of Engineering Design Projects
Utku Kose and Ahmet Arslan	185–198	Intelligent E-Learning System for Improving Students' Academic Achievements in Computer Programming Courses
Hei-Chia Wang, Yi-Jung Hsieh and Wei-Fan Chen	199–208	The Effect of Online Peer Assessment in Engineering Education: A Quasi-experimental Study
Kàtia Gaspar, María Amparo Núñez-Andrés, Juan José Rodríguez and Francesc Jordana	209–218	Influence of Admission Marks on the Academic Performance of Technical Architecture Students
Anthony J. Petrosino, Katherine A. Gustafson and Prateek Shekhar	219–229	STEM Integration: A Study examining the enactment of prescribed Research Based Engineering Curriculum
Nicola Marsden, Maren Haag, Louisa Ebrecht and Franziska Drescher	230–245	Diversity-Related Differences in Students' Perceptions of an Industrial Engineering Program
R. M. Gella-Marín, C. García-Hernández, J. L. Huertas-Talón and P. Kyratsis	246–251	Increasing Laboratory Capacity of a Gear Measurement Practical Session using Freeware Applications
Mark G. Turner, Rory A. Roberts, Markus P. Rumpfkeil, James T. Vankuren, Jeffrey Bons, Timothy B. Smith, Joseph K. Ausserer and Paul J. Litke	252–271	Thrust Vectoring Design Project at Six Universities
Jaime Cifuentes-Rodríguez, Ramon-Angel Fernández, Manuel Castejón-Limas and Javier Alfonso-Cendón	272–277	Impact of Flight Simulators on Teaching and Learning Simulink in an Aerospace Engineering Course

Viljan Mahnič and Anže Časar

José Antonio Pérez, José Antonio Orosa and Rebeca Bouzón

278–293 A Computerized Support Tool for Conducting a Scrum-Based Software Engineering Capstone Course

- 294–302 A New Approach to Develop Marine Power System Simulators for Marine Engineers Teaching and Professional Training
 - 303 Guide for Authors