Contents

Contributions in: Research Experiences for Undergraduates, Motivation, Persistence,
Learning Patterns, Learning Styles, Blended Learning, Conceptual Learning,
Epistemological Beliefs, Assessment, Engineering Design, Creativity, Practical Abilities,
Interdisciplinary Programs, Entrepreneurship, Internationalization, Marine Virtual
Learning, Simulators, Learning Technologies, Capstone Courses, Mechatronics,
Mechanical Engineering, Electrical Engineering, Computer Engineering,
Computer Networks

Ahmad Ibrahim 1835 Editorial Ning Fang, Oenardi Lawanto, A Research Experiences for Undergraduates (REU) Site Program on 1836-1846 Wade Goodridge, Idalis Villanueva Engineering Education Research and Kurt Becker Anastassis Kozanitis and 1847-1858 Canadian Engineering Students' Motivation in the Context of a Shift Jean-François Desbiens Toward Student-Centered Teaching Methods in an Outcome-Based Education J. C. Cuevas-Martínez, A. Triviño-Two-Tier Assessment Based on Collaboration and Competition to Enhance 1859-1866 Cabrera, M. D. Molina-González and **Engineering Students** A. J. Yuste-Delgado Nichole Ramirez, Sally Smith, From Interest to Decision: A Comparative Exploration of Student 1867-1878 Colin Smith, Tessa Berg, Beata Strubel, Attitudes and Pathways to Co-op Programs in the United States and the Matthew Ohland and Joyce Main United Kingdom Factors Affecting Persistence of Undergraduate Engineering Students: Matthew Meyer and Ning Fang 1879-1887 A Quantitative Research Study Using Institutional Data Linda Stern, Colin Burvill, 1888-1902 Metrics to Facilitate Automated Categorization of Student Learning John Weir and Bruce Field Patterns while using Educational Engineering Software Nissim Sabag and Elena Trotskovsky 1903-1910 An Examination of the Relationship between Instructional Strategies to Learning Styles Distance and Students' Achievements Push or Pull Students into Blended Education: a Case Study at Delft A. Cervone, J. A. Melkert, 1911-1921 L. F. M. Mebus and University of Technology G. N. Saunders-Smits Fabricio Kurman Merlin, Vera Lúcia 1922-1934 Applying Piaget's Equilibration Theory to Understand Conceptual Duarte do Valle Pereira and Waldemar Learning in Engineering Education Pacheco Júnior Pao-Nan Chou and Wei-Fan Chen 1935-1941 Epistemological Beliefs of Electrical Engineering: A Case Study Sarah E. Zappe, Kirsten S. Hochstedt, 1942-1959 Development and Implementation of Quantitative Methods to Study Dan Merson, Lindsey Schrott and Instructional Practices in Engineering Programs Thomas A. Litzinger Kerrie A. Douglas, Anastasia Rynearson, 1960-1971 Reliability, Validity, and Fairness: A Content Analysis of Assessment Senay Purzer and Johannes Strobel Development Publications in Major Engineering Education Journals Camilo Vieira, Roberto Aguas, Molly 1972-1983 Assessing the Impact of an Engineering Design Workshop on Colombian Hathaway Goldstein, Şenay Purzer and Engineering Undergraduate Students Alejandra J. Magana Shawn S. Jordan, Nielsen Pereira and 1984-1998 The Impact of Design Swapping on Student Design Sketch Quality Odesma Dalrymple Dragan Vasiljević, Biljana Stošić and 1999-2015 Invention Reasoning Scheme Based on Workshop Design Konstruktion Branislav Popkonstantinović (WDK) Artefact Models and its Application in the Patent Search Wesley Carpenter 2016-2024 Engineering Creativity: Toward an Understanding of the Relationship between Perceptions of Creativity in Engineering Design and Creative Performance Haifeng Liu, Xili Ding, Gang Zhou, 2025-2032 Developing Practical Abilities through a Teaching Reform of Tissue Xiaoming Li, Ping Li, Xianghui Gong, Engineering Course for Undergraduates Xuenan Gu, Fang Pu, Haijun Niu, Deyu Li and Yubo Fan Andrés Iborra, Bárbara Álvarez, ICT Entrepreneurial Ecosystem for Engineering Education 2033-2047 Pedro Sánchez, Juan A. Pastor and Tanya Suárez Shannon K. Gilmartin, Angela Shartrand, 2048–2065 Investigating Entrepreneurship Program Models in Undergraduate Helen L. Chen, Carolyn Estrada and Engineering Education Sheri Sheppard Closing a Theoretical-Methodological Gap in the Internationalisation of Andrei N. Fedorov 2066-2082

Engineering Curricula

Haosheng Shen, Jundong Zhang and Hui Cao	2083–2097	Marine Engineering Virtual Training and Evaluation System: A Learning Tool for Marine Engineers
Nenad Jovanovic, Zoran Jovanovic and Aleksandar Jevremovic	2098–2106	Evaluation of Simulators for Teaching Computer Networks
David M. Bourrie, L. Allison Jones- Farmer and Chetan S. Sankar	2107–2120	Learning Technologies: Bridging the Gap between Intention, Adoption and Routine Use
Viljan Mahnič and Tomaž Hovelja	2121–2133	The Influence of Diffusion of Innovation Theory Factors on Undergraduate Students' Adoption of Scrum
John R Haughery and D. Raj Raman	2134–2150	Influences of Mechatronics on Student Engagement in Fundamental Engineering Courses: A Systematic Review
	2151	Guide for Authors