

2017 IEEE Global Engineering Education Conference (EDUCON 2017)

**Athens, Greece
25-28 April 2017**

Pages 1-620



**IEEE Catalog Number: CFP17EDU-POD
ISBN: 978-1-5090-5468-8**

**Copyright © 2017 by the Institute of Electrical and Electronics Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP17EDU-POD
ISBN (Print-On-Demand):	978-1-5090-5468-8
ISBN (Online):	978-1-5090-5467-1
ISSN:	2165-9559

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Contents

Title	Page range
IT on Engineering Pedagogy 2017 (ITEP'17)	1–1
Skill Development in the Wind Energy Sector	2–9
Developing and Implementation of Decision-Making Games for Business Education of Engineering Students	10–16
An early introduction to STEM education: teaching Computer Programming Principles to 5th graders through an e-learning platform	17–23
Work in Progress: Simulation Software Targeted to Repair Misconceptions Regarding the P-N Diode	24–30
Digital Education in the Classroom	31–32
Work in progress: Experimental set-up for the analysis of circuits with fractional order components	33–36
Motivating students with Mobiles, Ubiquitous applications and the Internet of Things for STEM (MUMI4STEM)	37–38
Work in progress: The Innovation Journey, a methodology that introduces innovation and entrepreneurship in engineering education through competition and	39–43
Business games in "Quality management" for students of technical universities	44–48
Improving Student Learning in an Introductory Programming Course Using Flipped Classroom and Competency Framework	49–55
Combo of Innovative Educational Approaches to Teach Industrial Test to Undergraduate Students	56–64
Coverage of Low-Power Electronics in Digital Design Textbooks - a Systematic Review	65–72
Nowadays Trends in Microcontroller Education: Do we Educate Engineers or Electronic Hobbyists? Recommendation on a Multi-platform Method and System	73–77
Application Building in Engineering Courses	78–85
Enhancing Learning of Engineering Students Through Self-Assessment	86–91
Ethical, Intercultural and Professional Impulses Integrated into a Transmission Systems Lecture	92–95
Application of the CAD/CAE Systems for Development of Electronic Training Courses for the Engineering Disciplines in a Research and Development	N/A
Perspectives of Science Discipline Academics Pertaining to Attributes of Successful Universities and Future Learning Environments	101–106
Concept Maps in Teaching Physics Concepts Applied to Engineering Education: An Explorative Study at the Middle East College, Sultanate of Oman	107–110
Throwing the baby out with the bathwater? the role of fundamentals in 21st century engineering education	111–118
A Problem-Solution Based Framework for Writing the Introductions of Research Articles in Electronic and Communication Engineering: Pedagogical	119–124
How to Handle Large Classrooms of Engineering Students: Two More Applied Methods/Practices with Evaluation Results and Personal Feedback	125–127
Engineering Ethics Education: A Case Study of Japan and Malaysia	128–131
Home-made Robotic Education, a new way to explore	132–136
Analysis and Evaluation of Tools, Programs, and Methods at German University, to Support the Study Skills of School Students	137–145
Practical Undergraduate Projects within the BRSU Race Academy: An example for conducting a new tutored peer-teaching learning approach	146–151
Student Learning Trends in a Freshman-level Introductory Engineering Course	152–156
OpenHardSim: An Open Source Hardware Based Simulator for Learning Microprocessors	157–160
Increasing the accessibility of measurement equipment for undergraduate courses dedicated to Embedded Systems	161–164
Analysis of Competency-Based Learning – 6 years later	165–174
Using reflective self-assessments in a learning management system to promote student engagement and academic success	175–180
Online Experimentation and Interactive Learning Resources for Teaching Network Engineering	181–188
Teaching How to Program With a Playful Approach: a Review of Success Factors	189–198
How to throw Chocolate at Students: A Survey of Extrinsic Means for Higher Audience Attention	199–203
Enhancement of IT student projects using 3D technology	204–207
Support of computer science students by practitioners from industry	208–212
Scholarly Teaching and Scholarship of Teaching and Learning in Teaching Engineering	213–218
Engineering students' visual metaphors for mentorship: Implications for the candidacy period	219–225
GoING Abroad - A Discipline-Specific Approach to Promote the Mobility of German Engineering Students	226–229
How Can We Find out what Makes a Good Requirements Engineer in the Age of Digitization?	230–238
Designing Effective Online Surveys for Engineering Study Programs Development Based on Feedback from Stakeholders	239–247
Using a social justice approach to decolonize an engineering curriculum	248–254
An Interdisciplinary Unmanned Aerial Vehicles Course with Practical Applications	255–261
Finite element analysis of rotating electrical machines - an educational approach	262–269
A course module on Green Telecommunications	270–274
Using LAMS to Support Engineering Student Learning: Two Case Studies	275–280
The effect of gender on the motivation of engineering students participating on multinational design projects	281–286
Using New Media Arts to Enable Project-based Learning in Technological Education	287–296
Supporting Learning Communities and Communities of Practice with Coursevo	297–306
Teaching Sequence Diagrams to Programming Beginners	307–310
Project management, a sociotechnical perspective in engineering education	311–311
Operational amplifiers teaching and students' understanding	312–316
Transitioning from Military Service to Engineering Education	317–322

An Innovative Practice in a Graduate Course Combining Startups Evaluation and Image Processing	323–328
The Role of Local Market in Establishing Solid Master Program in Renewable Energy and Sustainability	N/A
An Innovative Approach of a Supplementary Mathematics Course in Engineering: Our Learning Experience in Guatemala.	335–339
Writing a Laboratory Report for Senior Electrical Engineering Courses: Guidelines and Recommendations	340–346
Exploring the Connection Between Students' Creativity and Summary Writing Skills	347–350
Enhancing Young Technology Entrepreneurship by Exploiting an Altered Version of Project-based Learning	351–358
STEAM WORKS: Student coders experiment more and experimenters gain higher grades	359–366
A Detailed Evaluation of the Flipped Classroom Format in a First Year Introductory Engineering Course	367–374
Graph-based Domain Model for Adaptive Learning Path Recommendation	375–380
Introducing Concepts and Methodologies of Fault Detection into Electrical Engineering Education: the Induction Machine Example	381–388
Fostering Global Learning in Engineering Education	389–394
Contemporary Collaborative Trends and their Effect in Education	395–403
Improving Student Engagement in Higher Education through Mobile-Based Interactive Teaching Model Using Socrative	404–412
ViSTPro: Spatiotemporal Processes Visualization in Engineering Education and Crisis Training	413–422
Implementing Transistor Roles for facilitating Analysis and Synthesis of Analog Integrated Circuits	423–430
Building pedagogical competence in engineering education: re-conceptualizing teaching portfolios	431–436
Work in Progress: Flipping the circuits classroom: The impact of pre-class reading and in-class active learning on student and instructor	437–440
How to Use Effectively Smartphone in the Classroom	441–447
Creating a Teaching and Learning Experience for Designing Interactive Applications-Digital Musical Instruments	448–452
Lecturers' Views on E-Learning in an Engineering Study Program for Non-traditional Students - An Online Survey	453–457
Pros and Cons of Computer Science Students' Professional Work – Research Results	458–463
Work in Progress: Project-based learning for electrical engineering	464–467
advisor – Analysis of an established soft skill program for students in the field of Electrical Engineering	468–475
Requirements analysis for the design of workplace-integrated learning scenarios with mobile devices	476–485
Teaching Enterprise Organization and Enterprise Resource Planning Systems in Schools: Playing a Serious Game with Pupils	486–495
The experience of a flipped classroom in a mechanical engineering course on Machine Design. A pilot study	496–501
Screening for Disorders of Mathematics via a web application.	502–507
An Authoring Toolkit for creating Digital Learning Board Games for Cognitive and Social Skills development	508–513
The use of LEGO Mindstorms in elementary schools	514–516
Towards Competency Based Testing and Feedback	517–526
Use of ICT Equipment by Engineer Teachers and Mentors	527–535
Mobile-learning adoption through the lens of complexity theory and fsQCA	536–541
Deployment of a Blended Learning Module in Statistics for Engineering and Computer Science Students	542–546
An Online Learning Platform for Teaching, Learning, and Assessment of Programming	547–556
Replacing the Hierarchy of Engineering Qualifications and Roles	557–563
Development and Integration of a New Electrical and Computer Engineering Program	564–569
Block-C: A block-based programming teaching tool to facilitate introductory C programming courses	570–579
Programming in Secondary Education - Applications, new trends and challenges	580–585
A Contextualized Analysis of Electrical Engineering Undergraduate Courses at Brazilian Public Universities	586–590
Evaluation of "pupils' laptop" initiative in secondary education in Greece: Analyzing the qualitative results of a survey on teachers	591–598
Improving on teaching curriculum of Calculus 2 at technical faculties	599–606
Prospective Engineers and Children Literature - an Unusual Approach to Teach Key Competencies	607–612
Application of VARK learning model on "Data Structures and Algorithms" course	613–620
Comparison of Learning Outcomes for Native and Non-Native Speakers of the Language of Instruction in a Flipped Laboratory Course	621–624
Development of an Open Multifunctional Experimental-Teaching System for Electric Power Engineering Program	625–631
An Educational Toolbox on Supervisory Control Theory using MATLAB Simulink Stateflow - From Theory to Practice in one week	632–639
Enhancement of Female Participation in Technical Study Programs – a Real Experiment or an Experienced Reality? An approach from a daily operation point	640–645
Application of Fuzzy Logic for the Assessment of Engineering Students	646–650
Using an AHP to Develop Thinking Actively in a Social Context in Mechanical Design Course	N/A
European Entrepreneurial Learning in ICT: the EU-xCEL Experience in Spain	655–659
Ethics assessment via game play?	660–666
Mobile assisted learning: designing Class Project Assistant, a research- based educational app for project based learning	667–675
A new e-Testing platform based on a grading strategy of essays	676–683
A Task is not a Task - Empirical Results about the Quality of Instructional Tasks in Higher Education	684–687

Portable Tool for Assessing Practical Learning Outcomes	688–692
Retention of Engineering Students	693–698
Correspondence between Kolb Experiential Learning and Rigor-Relevance Framework	699–704
The Computing Professional Skills Assessment Utilized with Graduate Students	705–708
What about Misconceptions in Software Engineering?	709–713
The Effect of Sound on Haptic Fidelity Perception	714–717
Undergraduate Teaching Assistants in Computer Science: Teaching-Related Beliefs, Tasks, and Competences	718–725
Design and Evaluation of a Test for Assessing CS-First-year Students' Cognitive Competences	726–734
Programming Basics for Beginners. Experience of the Institute of Informatics at Tallinn University of Technology	735–739
E-learning Applications for Remotely Accessible Photovoltaic Array Educational Laboratories	740–745
A Case Study on Learning Through Natural Ways of Interaction	746–753
Training Scrum with Gamification	754–761
The Impact of the Innovation and Technology Support Offices (ITSOs) on Innovation, Intellectual Property (IP) Protection and Entrepreneurship in Philippine	762–770
Conceptual Analysis of Cyber Security Education based on Live Competitions	771–779
Education for Requirements Elicitation using Group-Work and Role-Play	780–783
Rethinking Educational Approaches in Product Design to Achieve Sustainability Objectives	N/A
Developing a Mutually-Recognized Cross-Domain Study Program in Cyber-Physical Systems	791–799
Capacity building through a web based Master Degree Programme in Sustainable Energy Engineering	800–805
Serious games to promote Education for Sustainable Development, a French and Swiss experimentation	806–814
A framework to promote reflective practice by undergraduate engineering students in a design-based module	815–819
The Impact of Student Unrest on Freshmen Engineering Students in South Africa	820–823
Static analysis of source code written by novice programmers	824–830
Teaching industrial design based on real projects, a Project Based Learning experience in Faculty of Engineering of University of Porto	831–837
Design and development of practical instruction for freshmen engineering students in a renewable energy course	838–843
Literature review on Educational Games for Learning Statistics	844–847
Increasing Active Learning in Programming Courses	848–851
The U-PHOS experience within the ESA student REXUS/BEXUS programme: a real space hands-on opportunity.	852–855
Fleas Caterpillars and Cockroaches. A Summer School in Bio-inspired Robotics	856–861
On possibility of prediction of academic performance and potential improvements of admission campaign at IT university	862–866
The Design and Exploration Cycle as a R&D Framework in CSE	867–876
New organizational and assessment frameworks for company internship programs	877–882
The Gamification of a MOOC Platform	883–892
Work in Progress: Extending the Application of Ontologies in the Teaching of Geometry: The Right Triangle in the Circle	893–899
Factors affecting Peer Assessment of Student Presentations	900–905
Virtual cloud network laboratory based on IaaS for university IT education	906–909
B@SE: Blocks for @rduino in the Students' Educational Process	910–915
Creation of regional center for shared access to educational software based on cloud technology	916–919
Learn by Playing - A serious war game simulation for teaching military ethics	920–925
The Mechanical Engineering Project Investigation Course at the University of Johannesburg: Supervisor Experiences	926–933
Designing Arduino electronic shields: experiences from secondary and university courses	934–937
Competitions as a Stimulating and Evaluation Method on Algorithms and Complexity Course	938–944
Cloud Incubator HUB: Startup ecosystem for Engineering Students	945–950
Robotics course – a challenge for computer science students	951–954
Lifting the Constraints – Closing the Skills Gap with Authentic Student Projects	955–960
A Modified TAM for Predicting Acceptance of Digital Educational Games by Teachers	961–968
University-Enterprise Cooperation for Talent Development: The Case of Supervised Internship in a Brazilian Engineering University	969–976
The Energy Saving Challenge in the Contemporary Formal Courses Development	977–984
CSU East Bay Hack Day: A University Hackathon to Combat Malaria and Zika with Drones	985–989
Educational data mining and data analysis for optimal learning content management	990–998
A Design and Evaluation Framework for Visual Programming Codes	999–1007
Multiplatform Development of Audiovisual Open Educational Resources for a Blended Flipped Classroom Experience	1008–1013
Sharing to learn: Examining the effects of social influence mechanism on knowledge contribution	1014–1019
Extraction and presentation of access and usage data from an e-learning platform (moodle)	1020–1026
Communication and Resource Usage Analysis in Online Environments: An Integrated Social Network Analysis Perspective	1027–1032

Constructive learning methodology for distant based online education in renewable energy technologies	1033–1041
Learning Experiences by Pilot Projects in Engineering Education	1042–1048
Open Education and Quality: The Need for Changing Strategies and Learning Experiences	1049–1053
Questioning Techniques Promote the Critical Thinking in Engineering Education	1054–1057
Designing educational tablet games with the interdisciplinary team of students: Developing university-industry partnerships	1058–1061
Moving from content-based to outcomes-based curricula: Implications for assessment, teaching, learning and throughput	1062–1069
Smart technologies and applications for visualisation in higher science and Engineering Education: Issues of Knowledge integration and virtual experimentation	1070–1077
Game-Based Learning Using a 3D Virtual World in Computer Engineering Education	1078–1083
Reconfigurable Systems in Engineering Education: Best Practices and Future Trends	1084–1088
Feedback for relatedness and competence. Can feedback in blended learning contribute to optimal rigor, basic needs, and motivation?	1089–1092
Deployment of physics simulation apps using Easy JavaScript Simulations	1093–1096
Work in Progress: Investigating the Employment Gap: What Employers Want from Engineering Graduates	1097–1100
Introducing Digital Game-Based Learning in MOOCs: What do the learners want and need?	1101–1110
Systematizing game learning analytics for serious games	1111–1118
Reengineering Engineering Education: Developing a Constructively aligned Learning by Doing Pedagogical Model for 21st Century Education	1119–1124
Lessons Learned and Post-Project Activities with Embedded Engineering Learning Platform	1125–1128
How can a simulation game support the development of computational problem-solving strategies?	1129–1136
Using Serious Games and Virtual Reality for Training in the Construction Sector	N/A
Preliminary study of Integrated Physics and Mathematics Bridging Course	1146–1151
The changing face of entrepreneurship education for engineering students in France	1152–1157
A Meaningful Discovery Learning Environment for E-book Learners	1158–1165
Pattern Oriented Card Game Development	1166–1173
Empowering Active Citizenship via BYOD-mediated Learning Activities: an Experience in Acoustics	1174–1182
Smart open online tool for adaptive education on Cloud Computing	1183–1186
Identifying Dropout Factors in Information Technology Education: A Case Study	1187–1194
Development of Virtual Reality Game-Based interfaces for Civil Engineering Education	1195–1202
An experience about the teaching coordination and results in the cross curricular subject of Introduction to Computer Science at the Public University of Navarra	N/A
UniCampus: the First Courses in a Romanian MOOC	1210–1215
On an adaptive formative assessment platform for STEM Education	1216–1224
Incorporating Jigsaw Cooperative Learning in a Signals and Systems Course	1225–1228
Analysis of Scratch Projects of an Introductory Programming Course for Primary School Students	1229–1236
Assessment of How Thai Generation-Z Students Gain Understanding in Engineering Courses	1237–1242
Educating engineer educators on Technology Enhanced Learning based on TPACK	1243–1250
Crowd Gaming: Motivating Learning with Outdoor Activities	1251–1257
The Impact of Work Intergrated Learning on Engineering Education	1258–1265
College induction through an online multiplayer game	1266–1269
Transparent Full-Two Port Network Analyzer for Microwave Lab Courses	1270–1273
Creation of Educational Games – Project Based Learning in e-Learning Systems Course	1274–1281
Teaching Computer Programming: The Macedonian Case Study of Functional Programming	1282–1289
Visualization of sentiment spread on social networked content: Learning analytics for integrated learning environments	1290–1298
The Moway mobile robot, a tool for project-based learning in Computer Science	1299–1303
Transistor Test Bench for Gummel-Poon Modeling in Circuit Technology Courses	1304–1308
A Decade of Engineering Computer Engineers	1309–1315
Recommending Open Educational Resources through a approach based-on Linked Open Data	1316–1321
Analysing and measuring students' experiences	1322–1331
A Novel Approach for Analyzing Student Interaction with Educational Systems	1332–1336
Assessing the Performance of Educational Institutions: A Multidimensional Approach	1337–1344
Gender-inclusive Laboratory Design for Teaching Electric Vehicle Components	1345–1353
Infusing an Entrepreneurial Mindset into Mechanical Engineering Courses: Two Case Studies	1354–1358
LEGO Web Laboratory At University Of Kragujevac	1359–1362
Computer Science Learning Activities Based on Experience	1363–1372
Unsupervised learning for understanding student achievement in a distance learning setting	1373–1377
Using Collegiate Competitions to Provide Enhanced Engineering Education: A Case Study	1378–1382
Explaining Multi-threaded Task Scheduling using Tangible User Interfaces in Higher Educational Contexts	1383–1390

Remote Labs and Problem Oriented Engineering Education	1391–1396
Using Open Source Software In Engineering Studies To Teach Water Operation & Management	1397–1404
Student Perspectives on the Use of a Java Library for Novices	1405–1410
Teaching Spatial Geometry in a Virtual World: Using Minecraft in Mathematics in Grade 5/6	1411–1418
Developing personnel competencies for explosive atmospheres: Implications for engineering education	N/A
Work in Progress: Educating Engineers in MEMS Sensors; A Case Study in Wireless Barometers	1421–1425
Analysing Student Behavior in CS Courses	1426–1431
Teaching reliability assessment of smart grid protection systems	1432–1437
Projecting Computing History: A Hybrid Live-Virtual Visit to The National Museum of Computing	1438–1442
MAPILS: Mobile Augmented Reality Plant Inquiry Learning System	1443–1449
Learning Scrum by doing real-life projects	1450–1456
The effect of instant emotions on behavioral intention to use a computer based assessment system	1457–1462
CAPELLA: A Conceptual Framework for Adaptive Life-Long Learning	1463–1472
Augmented Reality in Laboratory-based Education	1473–1476
E-ducAtion: Multidisciplinary Platform to Support the Teaching/Learning Process in Portuguese 1st cycle Schools	1477–1481
Technology and Special Educational Needs: Let's Play "Doing Good Deeds!"	1482–1487
Software in the loop – A window lifter model to guide students through the software development process	1488–1493
Work in Progress: MicroElectronics Cloud Alliance	1494–1497
Haptic Interaction with Virtual Interface to Learn Strength of Materials	1498–1501
Work in Progress: Towards a Generic Platform for Implementing Gamified Learning Arrangements in Engineering Education	1502–1505
Sharing educational experiences from in-person classroom to collaborative lab environments	1506–1512
Student Perceptions on the Benefits and Shortcomings of Distributed Pair Programming Assignments	1513–1521
Mobile-based Assessment: Towards a Motivational Framework	1522–1526
Developing Experimental Development Ecosystem to serve ICT Education - A follow-up Study of Collaboration possibilities between Stakeholder Groups	1527–1532
Head-Heart-Hands-Habit Approach for Integrating Science Teaching into Engineering Curriculum	1533–1542
Enhancing the Student's Logical Thinking with Gherkin Language	1543–1547
Work in Progress: Semantic Annotations and Teaching Analytics on Lecture Videos in Engineering Education	1548–1551
Active learning in sustainable energy master degrees: a multiple challenge approach	1552–1560
Exploring the Joint Use of Educational Theories and Information Technology to Improve CS Courses	1561–1570
Augmented Reality EVAR Training in Mixed Reality Educational Space	1571–1579
Evaluation of PILeT: Design Guidelines, Usability and Learning Outcomes Results	1580–1584
The Effect of Personality and Learning Styles on Individual and Collaborative Learning: Obtaining Criteria for Adaptation	1585–1590
Automated system for matching scientific students to their appropriate career pathway based on science process skill model	1591–1599
An exploratory analysis of why a person enrolls in a Massive Open Online Course within MOOC Knowledge data collection	1600–1605
Designing educational scenarios to teach network security	1606–1610
Measuring academic research impact based on open data: a case of engineering faculties	1611–1618
Standards-based tools and services for building lifelong learning pathways	1619–1621
The Challenges of Gamification in the Age of Industry 4.0	1622–1630
Work in Progress: Teaching-Obstacles in Higher Software Engineering Education	1631–1635
Introducing the Practices for Adopting the Constructivist Teaching in Game Engineering	1636–1643
Planetary Marching Cubes for STEM Sandbox Game-based Learning: Enhancing Student Interest and Performance with Simulation Realism Planet Simulating	1644–1653
Gamification in MOOCs to enhance users' goal achievement	1654–1662
Work in Progress: Teaching an introduction to computer science course using a Python-based experiential approach	1663–1666
Work in Progress - Smart Schoolhouse as a Data-Driven Inquiry Learning Space for the Next Generation of Engineers	1667–1670
Proposal of a gamified virtual learning environment for computer programming courses	1671–1675
An Interactive Web-Based Circuit Design and Analysis Interface for Disabled Students by Using Speech Recognition Technology	1676–1682
Virtual and Augmented Reality game-based applications to Civil Engineering Education	1683–1688
A Case Study of Software Engineering Methods Education Supported By Digital Game-Based Learning	1689–1699
Questionnaires and artificial neural networks: a literature review on modern techniques in education	1700–1704
Critical Computational Empowerment: Engaging Youth as Shapers of the Digital Future	1705–1708
Computational Thinking as Springboard for Learning Object-Oriented Programming in an Interactive MOOC	1709–1712
The quality of Open Education: Towards a Reference Framework for MOOCs	1713–1716
Task-Based Internships: Fostering Ideal Learning through Focused Experience	1717–1722
A Data Smoothing App	1723–1726

Collaborative Teaching Environments	1727–1730
Teaching Computational Thinking to Entry-level Undergraduate Engineering Students at Amrita University	1731–1734
Business Intelligence in a Higher Educational Institution The case of University of Nicosia	1735–1746
Virtual Worlds as a Platform for Learning: The Case of the Transmission System Operator	1747–1754
uAdventure: The eAdventure reboot	1755–1762
Boosting Interaction with Educational Technology	1763–1767
A rating system that open-data repositories must satisfy to be considered OER: Reusing Open Data resources in teaching	1768–1777
Spatial Visualization Skills in Courses with Graphics or Solid Modeling Content	1778–1781
Teaching Psychological Principles to Cybersecurity Students	1782–1789
A Computing Education Approach for Geography Students in Context of GIS	1790–1796
Scilab Based Interactive Online Application for 1st Order Plant Control	1797–1801
Teaching Network Security Through a Scavenger Hunt Game	1802–1805
Local communities of Computing Education in Norway	1806–1810
Reviewing the Affordances of Tangible Programming Languages: Implications for Design and Practice	1811–1816
An Instructional Design Process for Creating a U-Learning Ecology	1817–1823
Exploring Ways to Exploit UMI Technologies in STEM Education: Comparison of Secondary Computer Science Curricula of Greece, Cyprus and England	1824–1830
Science, Technology, Engineering and Mathematics (STEM) for Vocational Education in Greece	1831–1836
A Case for Open-Source Surveys (for Assessing Security Literacy)	1837–1842
Fostering an Entrepreneurial Mindset in “Computer Architecture and Organization” Class through a Producer-Customer Model	1843–1850
Have You Ever Wondered Why? Qualitative Research Methods to Investigate Engineering Education	1851–1853
Work in Progress: First steps to university metaevaluation: Research, academy, outreach, innovation, and management	1854–1857
FGAWeb: A Web Platform For Administrating Flexible Games In Education	1858–1862
Work in Progress: Combining active learning methods in engineering education	1863–1867
Oxford-Style Debate as a Tool of Engineering Learning in the Teachers Practice	1868–1870
Design studio education in the online paradigm: Introducing online educational tools and practices to an undergraduate design studio course	1871–1875
Development and Implementation of Multi-Disciplinary Renewable Energy Course at Habib University	1876–1880
Teaching and Learning Analytics to support Teacher Inquiry	1881–1884
The Special Track 'Games Engineering' at EDUCON 2017	1883–1884
Teaching Conceptual Modelling: the OMiLAB Best Practice	1885–1886