## Technical Sessions Table of Contents

### Wednesday, October 21

<table>
<thead>
<tr>
<th>Workshop</th>
<th>Time</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1A: Pre-Conference Workshop: Integrating Service-Learning into Engineering and Computing Education</strong></td>
<td>1:00 PM - 4:00 PM</td>
<td>Brahma Room</td>
</tr>
<tr>
<td>INTEGRATING SERVICE-LEARNING INTO ENGINEERING AND COMPUTING EDUCATION</td>
<td>William C. Oakes (Purdue University, USA) Carla B. Zoltowski (Purdue University, USA)</td>
<td>1</td>
</tr>
<tr>
<td><strong>1B: Pre-Conference Workshop: Teaching and Assessment Strategies that Value Innovative Thinking</strong></td>
<td>1:00 PM - 4:00 PM</td>
<td>Angus Room</td>
</tr>
<tr>
<td>TEACHING AND ASSESSMENT STRATEGIES THAT VALUE INNOVATIVE THINKING</td>
<td>Şenay Purzer (Purdue University, USA) Todd Fernandez (Purdue University, USA)</td>
<td>4</td>
</tr>
<tr>
<td><strong>1C: Pre-Conference Workshop: Process to Draft the Program Educational Objectives for Undergraduate Engineering Degree Programs</strong></td>
<td>1:00 PM - 4:00 PM</td>
<td>Santa Fe Room</td>
</tr>
<tr>
<td>PROCESS TO DRAFT THE PROGRAM EDUCATIONAL OBJECTIVES FOR UNDERGRADUATE ENGINEERING DEGREE PROGRAMS</td>
<td>Ramakrishnan Sundaram (Gannon University, USA)</td>
<td>6</td>
</tr>
<tr>
<td><strong>1D: Pre-Conference Workshop: Agile Way of Educating</strong></td>
<td>1:00 PM - 4:00 PM</td>
<td>Pancho Villa Room</td>
</tr>
<tr>
<td>AGILE WAY OF EDUCATING</td>
<td>Gerald Gannod (Miami University - Oxford, USA) Douglas Troy (Miami University - Oxford, USA) Jerome Luczaj (Miami University - Middletown, USA) Diane Rover (Iowa State University, USA)</td>
<td>10</td>
</tr>
<tr>
<td><strong>2A: Pre-Conference Workshop: Encouraging Information Rich Engineering Design</strong></td>
<td>5:00 PM - 8:00 PM</td>
<td>Brahma Room</td>
</tr>
<tr>
<td>WORKSHOP: ENCOURAGING INFORMATION-RICH ENGINEERING DESIGN</td>
<td>Michael Fosmire (Purdue University, USA) Amy Van Epps (Purdue University, USA) Laura Hanlan (Worcester Polytechnic Institute, USA)</td>
<td>13</td>
</tr>
</tbody>
</table>
2C: Pre-Conference Workshop: Agile Teaching and Learning
5:00 PM - 8:00 PM
Room: Santa Fe Room

PRE-CONFERENCE WORKSHOP: AGILE TEACHING AND LEARNING.............................................................. 15
Kevin Gary (The Ira A. Fulton Schools of Engineering, USA)
Sohum Sohoni (The Ira A. Fulton Schools of Engineering, USA)
Suhas Xavier (The Ira A. Fulton Schools of Engineering, USA)

2D: Pre-Conference Workshop: How to Select an Area of Scholarship and Address the Applicable Review Criteria to Publish a Paper in the IEEE Transactions on Education
5:00 PM - 8:00 PM
Room: Pancho Villa Room

HOW TO SELECT AN AREA OF SCHOLARSHIP AND ADDRESS THE APPLICABLE REVIEW CRITERIA TO PUBLISH A PAPER IN THE IEEE TRANSACTIONS ON EDUCATION .................................................................. 17
Jeffrey E. Froyd (Texas A&M University, USA)
Thursday, October 22

T1A: Special Session: Connecting and Expanding the Emerging Engineering Education Research & Innovation (EER&I) Communities
Chair: Sohum Sohoni (Arizona State University, USA)
11:00 AM - 12:30 PM
Room: Kohlberg Room

CONNECTING AND EXPANDING THE EMERGING ENGINEERING EDUCATION RESEARCH & INNOVATION (EER&I) COMMUNITIES
Karl Smith (Purdue University & University of Minnesota, USA)
Ruth Streveler (Purdue University, USA)
Rocio C. Chavela Guerra (American Society for Engineering Education, USA)

T1B: Special Session: Movin' Along: Investigating Motion and Mechanisms Using Engineering Design Activities
Chair: Eric Durant (Milwaukee School of Engineering, United States)
11:00 AM - 12:30 PM
Room: Pancho Villa Room

FIE 2015 SPECIAL SESSION - MOVIN' ALONG: INVESTIGATING MOTION AND MECHANISMS USING ENGINEERING DESIGN ACTIVITIES
Susan Donohue (University of Virginia, USA)
Larry Richards (University of Virginia, USA)

T1C: First and Second Year Topics I
Chair: Jon Sticklen (Michigan Technological University, United States)
11:00 AM - 12:30 PM
Room: Angus Room

ALUMNI AS A RESOURCE TO INCREASE STUDENT RETENTION IN EARLY COMPUTER SCIENCE COURSES
Linda Ott (Michigan Technological University, USA)

COMPARING COMMON AND DISCIPLINE-SPECIFIC FIRST-YEAR ENGINEERING PROGRAMS: EXAMINING THE NEED AND EXPLAINING THE STUDY
Mahnas Jean Mohammadi-Aragh (Mississippi State University, USA)
Rachel L. Kajfez (The Ohio State University, USA)

AN "OBJECTS FIRST, TESTS SECOND" APPROACH FOR SOFTWARE ENGINEERING EDUCATION
Veronika Thurner (Munich University of Applied Sciences, Germany)
Axel Böttcher (Munich University of Applied Sciences, Germany)

THE IMPACTS OF PROJECT BASED LEARNING ON SELF-DIRECTED LEARNING AND PROFESSIONAL SKILL ATTAINMENT: A COMPARISON OF PROJECT BASED LEARNING TO TRADITIONAL ENGINEERING EDUCATION
Bart Johnson (Itasca Community College, USA)
Ron Ulseth (Iron Range Engineering, USA)
Crystal Smith (Itasca Community College, USA)
Derek Fox (Itasca Community College, USA)

AN EVALUATION OF HOW CHANGES TO THE INTRODUCTORY COMPUTER SCIENCE COURSE SEQUENCE IMPACT STUDENT SUCCESS
Christine Reilly (University of Texas-Pan American, USA)
Emmett Tomai (University of Texas-Pan American, USA)
Laura Grabowski (University of Texas-Pan American, USA)
**T1D: K-12 Education I**

**Chair:** David Reeping (Ohio Northern University, United States)

**11:00 AM - 12:30 PM**

**Room:** Brahma Room

---

**EMPOWERING TEACHERS TO TEACH CS - EXPLORING A SOCIAL CONSTRUCTIVIST APPROACH FOR CS CPD, USING THE BRIDGE21 MODEL**

56

J. R. Byrne (Centre for Research in IT in Education, Ireland)
L. Fisher (Centre for Research in IT in Education, Ireland)
B. Tangney (Centre for Research in IT in Education, Ireland)

---

**ENGAGE K-12 STUDENTS IN ENGINEERING: MODEL FOR ENGINEERING PROJECT ACTIVITIES TO INSPIRE K-12 STUDENTS TO PURSUE CAREERS IN ENGINEERING**

65

Ramakrishnan Sundaram (Gannon University, USA)

---

**VIEWING K-12 MATHEMATICS AND SCIENCE STANDARDS THROUGH THE LENS OF THE FIRST-YEAR INTRODUCTION TO ENGINEERING COURSE CLASSIFICATION SCHEME**

69

David Reeping (Ohio Northern University, USA)
Kenneth Reid (Virginia Tech, USA)

---

**EFFECTS OF THE BUTTERFLY DIAGRAM EDUCATION IN PRIMARY AND SECONDARY SCHOOLS ON CONTRADICTION PROBLEM SOLVING ABILITY**

75

Jung Suk Hyun (Jeju National University, Korea)
Chan Jung Park (Jeju National University, Korea)

---

**T1E: Social and Cognitive Aspects of Learning**

**Chair:** Monique Ross (Engineering Education, USA)

**11:00 AM - 12:30 PM**

**Room:** Charolais Room

---

**AN ENGINEERING STUDENT LEADERSHIP DEVELOPMENT MODEL FOR 21ST CENTURY ENGINEERING: USING SOCIOCULTURAL THEORY TO INFORM PRACTICE**

83

Elsa Villa (The University of Texas at El Paso, USA)
Alberto Esquinca (The University of Texas at El Paso, USA)
Erika Mein (The University of Texas at El Paso, USA)
Peter Golding (The University of Texas at El Paso, USA)
Sarah Hug (University of Colorado Boulder, USA)

---

**DOCUMENTING STUDENTS’ FAULTY SCHEMA AND MISCONCEPTIONS ABOUT COMBINATIONS AND PERMUTATIONS**

87

Lance Pittman (University of Illinois at Urbana-Champaign, USA)
Geoffrey Herman (University of Illinois at Urbana-Champaign, USA)

---

**TAXONOMY OF FACULTY ASSUMPTIONS ABOUT STUDENTS**

96

Aaron Estrada (California Polytechnic State University, USA)
Lizabeth Thompson Schlemer (California Polytechnic State University, USA)

---

**SOCIOCULTURAL APPROACHES TO TEACHING AND LEARNING IN ENGINEERING EDUCATION: RESEARCH-BASED APPLICATIONS IN A PRE-ENGINEERING COURSE**

101

Erika Mein (The University of Texas at El Paso, USA)
Christina Convertino (The University of Texas at El Paso, USA)
Angelica Monarrez (The University of Texas at El Paso, USA)
QUALITATIVE ASSESSMENT OF THE UNIVERSITY OF TEXAS SYSTEM LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION SUMMER RESEARCH ACADEMY ABROAD: AN INTERNATIONAL EXPERIENCE IN RESEARCH AND CULTURE................................. 105
Ariana Arciero-Pino (The University of Texas at El Paso, USA)
Benjamin Flores (The University of Texas at El Paso, USA)
Helmut Knaust (The University of Texas at El Paso, USA)
Lynda Gonzales (The University of Texas at Austin, USA)
Maricel Quintana-Baker (MQB-Consulting, USA)

T1F: Innovation and Entrepreneurship I
Chair: Meagan Vaughan (University of Texas at El Paso, United States)
11:00 AM - 12:30 PM
Room: Longhorn Room

LANDSCAPE ANALYSIS AS A TOOL IN THE CURRICULAR CHANGE PROCESS............................... 110
Elizabeth Nilsen (VentureWell, USA)
Victoria Matthew (VentureWell, USA)
Mary Besterfield-Sacre (University of Pittsburgh, USA)
Thema Monroe-White (SageFox Consulting Group, USA)

FOSTERING THE ENTREPRENEURIAL MINDSET IN THE JUNIOR AND SENIOR MECHANICAL ENGINEERING CURRICULUM WITH A MULTI-COURSE PROBLEM-BASED LEARNING EXPERIENCE......................................................... 117
Liping Liu (Lawrence Technological University, USA)
James Mynderse (Lawrence Technological University, USA)
Andrew L. Gerhart (Lawrence Technological University, USA)
Selin Arslan (Lawrence Technological University, USA)

ASSESSING SITUATIONAL CURIOSITY AND MOTIVATION IN OPEN-ENDED DESIGN ELECTIVES....... 122
Charles Kim (Bucknell University, USA)
Alan Cheville (Bucknell University, USA)
Katharyn Nottis (Bucknell University, USA)
Joseph Tranquillo (Bucknell University, USA)
Erin Jablonski (Bucknell University, USA)
Michael Prince (Bucknell University, USA)
Margot Vigeant (Bucknell University, USA)

"INNOVATIVE OFFICE": BUILDING FUTURE FOR YOUNG ENGINEERS............................................. 125
Melany M. Ciampi (Safety, Health and Environment Research Organization, Brazil)
Luis Amaral (Computer Graphics Center, Portugal)
Victor F. A. Barros (Science and Education Research Council, Portugal)
Claudio da Rocha Brito (Science and Education Research Council, Brazil)
Rosa Vasconcelos (University of Minho, Portugal)

T1G: Learning in Teams
Chair: Katherine Goodman (University of Colorado Boulder, USA)
11:00 AM - 12:30 PM
Room: Hereford Room

TASK CHOICE, GROUP DYNAMICS, AND LEARNING GOALS: UNDERSTANDING STUDENT ACTIVITIES IN TEAMS................................................................. 129
Laura Hirshfield (University of Michigan, USA)
Debbie Chachra (Olin College of Engineering, USA)
THE IMPACT OF A PEER LEARNING STRATEGY ON STUDENT ACADEMIC PERFORMANCE IN A FUNDAMENTAL ENGINEERING COURSE

Shaobo Huang (South Dakota School of Mines and Technology, USA)
Elizabeth Pierce (South Dakota School of Mines and Technology, USA)

T1H: Learning Analytics I
Chair: Molly Hathaway Goldstein (Purdue University, United States)
11:00 AM - 12:30 PM
Room: Rio Grande Room

CHECKABLE ANSWERS: UNDERSTANDING STUDENT BEHAVIORS WITH INSTANT FEEDBACK IN A BLENDED LEARNING CLASS

Xin Chen (Purdue University, USA)
Jennifer DeBoer (Purdue University, USA)

AUTOMATIC RECOGNITION OF MISCONCEPTIONS IN VISUAL ALGORITHM SIMULATION EXERCISES

Ari Korhonen (Aalto University, Finland)
Otto Seppälä (Aalto University, Finland)
Juha Sorva (Aalto University, Finland)

FORMULATION OF A PREDICTIVE MODEL FOR ACADEMIC PERFORMANCE BASED ON STUDENTS’ ACADEMIC AND DEMOGRAPHIC DATA

Sandra Milena Merchán Rubiano (Universidad El Bosque, Colombia)
Jorge Alberto Duarte García (Universidad El Bosque, Colombia)

ELICITED AND MINED RULES FOR DROPOUT PREVENTION IN ONLINE COURSES

Francisco A. de Almeida, Neto (Federal University of Amazonas, Brazil)
Alberto Castro (Federal University of Amazonas, Brazil)

XAPI-SRL: USES OF AN APPLICATION PROFILE FOR SELF-REGULATED LEARNING BASED ON THE ANALYSIS OF LEARNING STRATEGIES

Mario Manso-Vázquez (University of Vigo, Spain)
Manuel Caeiro-Rodríguez (University of Vigo, Spain)
Martin Llamas-Nistal (University of Vigo, Spain)

T1I: Software Engineering Education
Chair: Rose Gamble (University of Tulsa, USA)
11:00 AM - 12:30 PM
Room: Santa Fe Room

AN APPROACH TO ENHANCE STUDENTS’ COMPETENCY IN SOFTWARE VERIFICATION TECHNIQUES

Omar Ochoa (University of Texas at El Paso, USA)
Salamah Salamah (University of Texas at El Paso, USA)

EVALUATION AND ASSESSMENT OF EFFECTS ON EXPLORING MUTATION TESTING IN PROGRAMMING COURSES

Rafael Oliveira (University of São Paulo, Brazil)
Lucas Oliveira (University of São Paulo, Brazil)
Bruno Caféo (PUC-Rio, Brazil)
Vinicius Durelli (University of São Paulo, Brazil)

DIVERSITY AND ANXIETY: A CASE STUDY ON COLLABORATIVE TESTING

Yulei Pang (Southern Connecticut State University, USA)
Raymond Mugno (Southern Connecticut State University, USA)
Xiaozhen Xue (Texas Tech University, USA)
USABILITY CHALLENGES IN DIGITAL LEARNING SOLUTIONS ................................................................. 192
Veera Kenttälä (University of Jyväskylä, Finland)
Marja Kankaanranta (University of Jyväskylä, Finland)
Rebekah Rousi (University of Jyväskylä, Finland)
Terhi Pänkäläinen (University of Jyväskylä, Finland)

APPLYING MINDSTORM IN TEACHING AND LEARNING PROCESS AND SOFTWARE PROJECT MANAGEMENT ........................................................................................................ 199
José Augusto Fabri (Universidade Tecnológica Federal do Paraná, Brazil)
Alexandre L’Erario (Universidade Tecnológica Federal do Paraná, Brazil)
Rodrigo Henrique Cunha Palációs (Universidade Tecnológica Federal do Paraná, Brazil)
Wagner Godoy (Universidade Tecnológica Federal do Paraná, Brazil)

T2A: Special Session: Design Metaphors - Rethinking the vocabulary of design education
Chair: Colin Smith (Edinburgh Napier University, United Kingdom)
2:30 PM - 4:00 PM
Room: Kohlberg Room

SPECIAL SESSION ON DESIGN METAPHORS: RETHINKING THE VOCABULARY OF DESIGN EDUCATION ......................................................................................... 207
Stephen Frezza (Gannon University, USA)
John Krupczak, Jr (Hope College, USA)
Mani Mina (Iowa State University, USA)

T2B: Special Session: Helping Tomorrow's Engineers Ask Productive Questions
Chair: Susan Kowalski (Colorado School of Mines, United States)
2:30 PM - 4:00 PM
Room: Pancho Villa Room

HELPING TOMORROW’S ENGINEERS ASK PRODUCTIVE QUESTIONS ........................................................................ 209
Frank Kowalski (Colorado School of Mines, USA)
Susan Kowalski (Colorado School of Mines, USA)

T2C: Innovative Curriculum & Course Design I
Chair: Axel Böttcher (Munich University of Applied Sciences, Germany)
2:30 PM - 4:00 PM
Room: Angus Room

AN EXPLORATION OF BLOOM'S KNOWLEDGE, SKILLS, AND AFFECTIVE-BASED GOALS IN PROMOTING DEVELOPMENT OF FRESHMEN ENGINEERING STUDENTS' PROFESSIONAL IDENTITIES ................................................................................. 211
Idalis Villanueva (Utah State University, USA)

BUILDING INFORMATION MODELING LABORATORY EXERCISES IN A CONSTRUCTION SCIENCE AND MANAGEMENT BUILDING SYSTEMS COURSE ......................................................... 216
Rogelio Palomera-Arias (University of Texas at San Antonio, USA)

HOW THE WEB WAS WON: KEEPING THE COMPUTER NETWORKING CURRICULUM CURRENT WITH HTTP/2 ................................................................................................. 222
Colin Allison (University of St Andrews, United Kingdom)
Hussein Bakri (University of St Andrews, United Kingdom)

UNDERSTANDING THE PROTOTYPING STRATEGIES OF EXPERIENCED DESIGNERS ........................................ 231
Ethan Hilton (Georgia Institute of Technology, USA)
Julie Linsey (Georgia Institute of Technology, USA)
Joseph Goodman (Georgia Tech Research Institute, USA)
STEM LITERACY: CHALLENGES IMPLEMENTING 'E' IN LOCAL TEXAS-STEM ACADEMIES ......................... 239
Michele C. Williams (University of Texas at El Paso, USA)

MODELING: A COMPUTER SCIENCE CONCEPT FOR GENERAL EDUCATION ......................................................... 244
Barbara Sabitzer (Alpen-Adria-Universität Klagenfurt, Austria)
Stefan Pasterk (Alpen-Adria-Universität Klagenfurt, Austria)

DISSECT: EXPLORING THE RELATIONSHIP BETWEEN COMPUTATIONAL THINKING AND ENGLISH LITERATURE IN K-12 CURricula ........................................................................ 249
Natasha Nesiba (New Mexico State University, USA)
Enrico Pontelli (New Mexico State University, USA)
Timothy Staley (Las Cruces Public Schools, USA)

USING LIFE COURSE THEORY TO FRAME WOMEN AND GIRLS' TRAJECTORIES TOWARD (OR AWAY) FROM COMPUTING: PRE HIGH-SCHOOL THROUGH COLLEGE YEARS ................. 257
Corey Schimpf (Purdue University, USA)
Kelly Andronicos (Purdue University, USA)
Joyce Main (Purdue University, USA)

MOTIVATIONAL FACTORS PREDICTING STEM AND ENGINEERING CAREER INTENTIONS FOR HIGH SCHOOL STUDENTS ........................................................................................... 266
Daniel Mangu (Arizona State University, USA)
Andrew Lee (Arizona State University, USA)
James Middleton (Arizona State University, USA)
Jill Nelson (George Mason University, USA)

TARGETED BLENDED LEARNING THROUGH COMPETENCY ASSESSMENT IN AN UNDERGRADUATE INFORMATION SYSTEMS PROGRAM ........................................................................... 274
Joelle Ducrot (Singapore Management University, Singapore)
Venky Shankararaman (Singapore Management University, Singapore)

INSTRUCTOR AND GRADUATE TEACHING ASSISTANT DEVELOPMENT AND TRAINING FOR A BLENDED LINEAR CIRCUITS AND ELECTRONICS COURSE ............................................................................. 281
Bonnie Ferri (Georgia Institute of Technology, USA)
Wendy Newstetter (Georgia Institute of Technology, USA)
David Majerich (Georgia Institute of Technology, USA)

A FEEDBACK-BASED APPROACH FOR EVOLVING A BLENDED CLASS MODEL FOR LARGE ENROLLMENT, MULTIPLE SECTION CIRCUITS COURSES ................................................................. 285
Bonnie Ferri (Georgia Institute of Technology, USA)
Joyelle Harris (Georgia Institute of Technology, USA)
Mary Ann Weitnauer (Georgia Institute of Technology, USA)
David Majerich (Georgia Institute of Technology, USA)
IMPROVING THE LEARNING OF PHYSICS CONCEPTS BY USING HAPTIC DEVICES .............................................. 293
Luis Neri (Humanidades y Ciencias Sociales Tecnologico de Monterrey, Mexico)
David Escobar-Castillejos (Humanidades y Ciencias Sociales Tecnologico de Monterrey, Mexico)
Julieta Noguez (Humanidades y Ciencias Sociales Tecnologico de Monterrey, Mexico)
Uzma Shaikh (Purdue University, USA)
Alejandra J. Magana (Purdue University, USA)
Bedrich Benes (Purdue University, USA)

EXPRESSION TASKS FOR NOVICE PROGRAMMERS:
TURNING THE ATTENTION TO OBJECTIVITY, RELIABILITY AND VALIDITY ......................................................... 300
Matthias Laengrich (University of Applied Sciences Zittau / Goerlitz, Germany)
Joerg Schulze (University of Applied Sciences Zittau / Goerlitz, Germany)
Amruth N. Kumar (Ramapo College of New Jersey, USA)

THE ISSUES OF ADOPTING SIMULATION GAMES IN SOFTWARE ENGINEERING CLASSES ................... 308
Daniela Peixoto (CEFET-MG, Brazil)
Rodolfo Resende (Federal University of Minas Gerais, Brazil)
Clarindo Pádua (Federal University of Minas Gerais, Brazil)

DIGITAL LOCKDOWN: A 3D ADVENTURE GAME FOR ENGINEERING EDUCATION ................................... 316
Rasha Morsi (Norfolk State University, USA)
Shawn Mull (Norfolk State University, USA)

EVALUATION OF SIGMA, AN EMPIRIC STUDY WITH MATH TEACHERS ....................................................... 320
Armando Maciel Toda (Universidade Estadual de Londrina, Brazil)
Roberto do Carmo (Universidade Estadual de Londrina, Brazil)
Vitor Campos (Universidade Estadual de Londrina, Brazil)
Ana Lucia Silva (Universidade Estadual de Londrina, Brazil)
Jacques D. Brancher (Universidade Estadual de Londrina, Brazil)

BADGES AND XP: AN OBSERVATIONAL STUDY ABOUT LEARNING ............................................................... 326
Ranilson Paiva (Federal University of Campina Grande, Brazil)
Armando Sobrinho (Universidade Federal de Alagoas, Brazil)
Ezequiel Farias (Universidade Federal de Alagoas, Brazil)
Daniel Pimentel (Universidade Federal de Alagoas, Brazil)
Ig Ibert Bittencourt (Universidade Federal de Alagoas, Brazil)

SYSTEMATIC REVIEW OF LITERATURE: EDUCATIONAL GAMES ABOUT ELECTRIC ENERGY CONSUMPTION ...................................................................................................................... 334
Adriana Keiko Nishida (ABC Federal University, Brazil)
Juliana Cristina Braga (ABC Federal University, Brazil)

ENGAGING STUDENTS INSIDE THE CLASSROOM TO INCREASE LEARNING .............................................. 342
Kristi J. Shryock (Texas A&M University, USA)

CAN STUDENT ENGAGEMENT BE MEASURED? AND, IF SO, DOES IT MATTER? ................................................. 349
Perry Samson (University of Michigan, USA)
ENGINEERING STUDENTS' MOTIVATIONAL BELIEFS DEVELOPMENT OF A SCALE UTILIZING AN EXPECTANCY, VALUE, AND COST FRAMEWORK ................................................................. 353
Mariafé Panizo (James Madison University, USA)
Casey Williamson (James Madison University, USA)
Olga Pierrakos (James Madison University, USA)
Robin Anderson (James Madison University, USA)
Verena Bethke (James Madison University, USA)
Cheryl Welch (James Madison University, USA)

EXPERIMENTS WITH PERSONAL OWNERSHIP OF QUALITY AT THE UNIVERSITY OF TEXAS AT EL PASO ........................................................................................................ 362
Oscar Mondragon (University of Texas at El Paso, USA)
Jagadish Thimiri Mallikarjan (University of Texas at El Paso, USA)
Eric Smith (University of Texas at El Paso, USA)

TEACHING METACOGNITION: HELPING ENGINEERING STUDENTS TAKE OWNERSHIP OF THEIR OWN LEARNING .................................................................................. 367
Patrick Cunningham (Rose-Hulman Institute of Technology, USA)
Holly Matusovich (Virginia Tech, USA)
Deirdre Hunter (Virginia Tech, USA)
Rachel McCord (University of Tennessee, USA)

T2H: Learning Analytics II
Chair: Michael Mogessie Ashenafi (University of Trento, Italy)
2:30 PM - 4:00 PM
Room: Rio Grande Room

PREDICTING STUDENTS’ FINAL EXAM SCORES FROM THEIR COURSE ACTIVITIES ................................................................. 372
Michael Mogessie Ashenafi (University of Trento, Italy)
Giuseppe Riccardi (University of Trento, Italy)
Marco Ronchetti (University of Trento, Italy)

A QUANTITATIVE CASE STUDY IN ENGINEERING OF THE EFFICACY OF QUALITY CHEAT-SHEETS ........................................................................................................ 381
Yang Song (NC State University, USA)
David Thuente (NC State University, USA)

INNOVATION WITHIN THE CONSTRAINTS OF SUSTAINABILITY:
ANALYSIS OF PRODUCT DEVELOPMENT PROJECTS ........................................................................................................ 388
Young Moon (Syracuse University, USA)
Mingtao Wu (Syracuse University, USA)

BLOOM'S TAXONOMY IN SOFTWARE ENGINEERING EDUCATION:
A SYSTEMATIC MAPPING STUDY ........................................................................................................ 392
Ricardo Britto (Blekinge Institute of Technology, Sweden)
Muhammad Usman (Blekinge Institute of Technology, Sweden)
T2I: Teaching Cryptography & Computer Security

Chair: Cem Sahin (Drexel University, United States)

2:30 PM - 4:00 PM
Room: Santa Fe Room

A PROJECT-BASED MULTI-DISCIPLINARY ELECTIVE ON DIGITAL DATA PROCESSING TECHNIQUES ................................................................. 400
Firas Hassan (Ohio Northern University, USA)
Joao Lucas Magalini Zago (Ohio Northern University, USA)
Victor de Campos Pentea (Ohio Northern University, USA)
Rodrigo Santos (Ohio Northern University, USA)

DEVELOPING A COURSE MODULE FOR TEACHING CRYPTOGRAPHY PROGRAMMING ON ANDROID ........................................................................................................ 407
Jinsheng Xu (North Carolina A&T University, USA)
Xiaohong Yuan (North Carolina A&T State University, USA)

AN INSIDER THREAT ACTIVITY IN A SOFTWARE SECURITY COURSE ........................................................................................................ 411
Daniel Krutz (Rochester Institute Of Technology, USA)
Andrew Meneely (Rochester Institute of Technology, USA)
Samuel A Malachowsky (Rochester Institute of Technology, USA)

A STRUCTURED APPROACH TO TRAINING OPEN-ENDED PROBLEM SOLVING ................................................................. 417
Sofia Cassel (Uppsala University, Sweden)
Björn Victor (Uppsala University, Sweden)

MOBILE SECURITY EDUCATION ON PORTABLE LABS .................................................................................................................... 421
Dan Chia-Tien Lo (Southern Polytechnic State University, USA)
Kai Qian (Southern Polytechnic State University, USA)
Wei Chen (Tennessee State University, USA)

T3A: Special Session: Introduction to Systematic Reviews in Engineering Education Research

Chair: Liping Liu (Lawrence Technological University, United States)

4:30 PM - 6:00 PM
Room: Kohlberg Room

SPECIAL SESSION: INTRODUCTION TO SYSTEMATIC REVIEWS IN ENGINEERING EDUCATION RESEARCH ................................................................. 425
Jeffrey E Froyd (Texas A&M University, USA)
Maura Borrego (University of Texas at Austin, USA)
Margaret Foster (Texas A&M University, USA)
Hyung Sok Choe (The University of Texas at Austin, USA)
Julie Martin (Clemson University, USA)
Xueshu Chen (University of Texas at Austin, USA)

T3B: Special Session: Exploring the Black Box of Dissemination: The Role of Professional and Organizational Development

Chair: Walter C. Lee (Virginia Tech, USA)

4:30 PM - 6:00 PM
Room: Pancho Villa Room

EXPLORING THE BLACK BOX OF DISSEMINATION: THE ROLE OF PROFESSIONAL AND ORGANIZATIONAL DEVELOPMENT ................................................................. 428
Stephanie Cutler (Embry-Riddle Aeronautical University, USA)
Alexandra Coso Strong (Franklin W. Olin College of Engineering, USA)
Mel Chua (Purdue University, USA)
T3C: Engineering Identity
Chair: James Huff (Harding University, United States)
4:30 PM - 6:00 PM
Room: Angus Room

Transitioning Students Navigating Engineering Identities
DeLean Tolbert (Purdue University, USA)
Morgan Hynes (Purdue University, USA)
Darryl Dickerson (Purdue University, USA)
Monica Cardella (Purdue University, USA)

Is Changing Pedagogy a Good Bait in Attracting Students to Engineering?
Josef Rojter (Victoria University, Australia)

Using Peer-Led Team Learning to Build University-Community College Relationships
Ann Gates (The University of Texas at El Paso, USA)
Claudia Casas (The University of Texas at El Paso, USA)
Christian Servin (El Paso Community College, USA)
Michelle Slattery (Peak Research, USA)

The Creation and Inauguration of Engineering Leadership: UTEP and Olin College Innovation Project
Peter Golding (University of Texas at El Paso, USA)
Roger Gonzalez (University of Texas at El Paso, USA)
Gilberto Moreno (University of Texas at El Paso, USA)
Richard Schoephoerster (University of Texas at El Paso, USA)
Scott Starks (University of Texas at El Paso, USA)
Meagan Vaughan (University of Texas at El Paso, USA)
Jessica Townsend (Franklin W. Olin College of Engineering, USA)

Becoming Boundary Spanners in Engineering: Identifying Roles, Activities, and Competencies
Brent Jesiek (Purdue University, USA)
Andrea Mazzurco (Purdue University, USA)
Natascha Trellinger (Purdue University, USA)
Kavitha Ramane (Purdue University, USA)

T3D: Curriculum Change
Chair: Marja Talikka (Lappeenranta University of Technology, Finland)
4:30 PM - 6:00 PM
Room: Brahma Room

Pivot Thinking - Predicting Entrepreneurial Intent Among Engineering Students and Faculty Using Problem Solving Style Preference
Mark Schar (Stanford University, USA)

Creating a New Civil Engineering Program in the 21st Century
Kenneth Leitch (West Texas A&M University, USA)
Erick Butler (West Texas A&M University, USA)

Design and Practice from the Micromouse Competition to the Undergraduate Curriculum
Shenghua Dai (Beijing Jiaotong University, P.R. China)
Bingxian Zhao (Beijing Jiaotong University, P.R. China)
Zhengjiao Li (Beijing Jiaotong University, P.R. China)
Ming Dai (Beijing Jiaotong University, USA)
BUILDING FACULTY EXPERTISE IN OUTCOME-BASED EDUCATION
CURRICULUM DESIGN ................................................................. 480
Srividya Bansal (Arizona State University, USA)
Ashraf Gaffar (Arizona State University, USA)
Odesma Dalrymple (University of San Diego, USA)

GLOBAL VS. LOCAL - EXPERIENCES FROM A DISTRIBUTED SOFTWARE
PROJECT COURSE USING AGILE METHODOLOGIES .................. 488
Outi Sievi-Korte (Tampere University of Technology, Finland)
Kari Systä (Tampere University of Technology, Finland)
Rune Hjelsvold (Gjøvik University College, Norway)

T3E: Assessment in Computer Science
Chair: Thomas Staubitz (Hasso Plattner Institute for Software Systems Engineering, Germany)
4:30 PM - 6:00 PM
Room: Charolais Room

A TREE INCLUSION ANALYZER FOR EXAMINING INTRODUCTORY PROGRAMMING CODES ........ 496
Marlos Tacio Silva (Federal University of Campina Grande, Brazil)
Evandro de Barros Costa (Federal University of Alagoas, Brazil)
Michel de Sousa Miranda (Federal University of Alagoas, Brazil)
Emanuele Tuane Silva (Federal University of Alagoas, Brazil)

ANALYZING THE IMPACT OF ASYNCHRONOUS MULTIMEDIA FEEDBACK ON
NOVICE COMPUTER PROGRAMMERS ............................................. 503
Walter W Schilling, Jr (Milwaukee School of Engineering, USA)

AN EVALUATION METHOD FOR PANORAMIC UNDERSTANDING OF
PROGRAMMING BY COMPARISON WITH VISUAL EXAMPLES .......... 511
Dick Martinez Calderon (Kobe University, Japan)
Kin Man (Kobe University, Japan)
Hidenari Kiyomitsu (Kobe University, Japan)
Kazuhiro Ohtsuki (Kobe University, Japan)
Yukinobu Miyamoto (Kobe Institute of Computing, Japan)
Yi Sun (Kobe Institute of Computing, Japan)

IDENTIFYING LEARNING-INDUCTIVE CONTENT IN PROGRAMMING DISCUSSION FORUMS ........ 519
I-Han Hsiao (Arizona State University, USA)
Fatima Naveed (Arizona State University, USA)

GAUGING INFLUENCE IN SOFTWARE DEVELOPMENT TEAMS ................................. 527
Allen Marshall (University of Tulsa, USA)
Rose Gamble (University of Tulsa, USA)

T3F: Game based learning II
Chair: Jacques Duilio Brancher (Universidade Estadual de Londrina, Brazil)
4:30 PM - 6:00 PM
Room: Longhorn Room

ADAPTIVE SYSTEMS AS ENABLERS OF FEEDBACK IN ENGLISH LANGUAGE
LEARNING GAME-BASED ENVIRONMENTS .................................... 535
Mariia Gavriushenko (University of Jyväskylä, Finland)
Laura Karilainen (University of Jyväskylä, Finland)
Marja Kankaanranta (University of Jyväskylä, Finland)
GAME-BASED ASSESSMENT FOR RADIOFREQUENCY CIRCUITS COURSES IN ENGINEERING ................................................................. 543
Luis Felipe Zapata Rivera (EAFIT University, Colombia)
Catalina Aranzazu-Suescun (University of Antioquia, Colombia)

TEACHING K-12 STUDENTS STEM-C RELATED TOPICS THROUGH PLAYING AND CONDUCTING RESEARCH ........................................................................................................ 548
Iva Bojic (Massachusetts Institute of Technology, USA)
Juan Arratia (Ana G. Méndez University System, USA)

USING SIMULATION GAMES TO TEACH GLOBAL SOFTWARE ENGINEERING COURSES................................. 556
Amir Zeid (American University of Kuwait, Kuwait)

ON COMBINING GAMIFICATION THEORY AND ABET CRITERIA FOR TEACHING AND LEARNING ENGINEERING ............................................................................................. 565
Ivan Mauricio Cabezas (Universidad de San Buenaventura, Colombia)

T3G: Gender in Engineering and Computing I
Chair: Virginia Grande (Uppsala University, Sweden)
4:30 PM - 6:00 PM
Room: Hereford Room

IS THERE A GENDER DIFFERENCE IN MATHS COMPETENCIES ACHIEVEMENT BETWEEN AEROSPACE ENGINEERING STUDENTS IN SPAIN? ................................................................. 574
S. Moll (Universitat Politècnica de València, Spain)
J.-A. Moraño (Universitat Politècnica de València, Spain)
M.-D. Roselló (Universitat Politècnica de València, Spain)
L.M. Sanchez Ruiz (Universitat Politècnica de València, Spain)

CODEPLUS - DESIGNING AN AFTER SCHOOL COMPUTING PROGRAMME FOR GIRLS ........................................... 578
K. Sullivan (Trinity College Dublin, Ireland)
J. R Byrne (Trinity College Dublin, Ireland)
N. Bresnihan (Trinity College Dublin, Ireland)
K. O'Sullivan (Trinity College Dublin, Ireland)
B. Tangney (Trinity College Dublin, Ireland)

INSIGHTS FROM A FIRST-YEAR LEARNING COMMUNITY TO ACHIEVE GENDER BALANCE ........................... 583
William Oakes (Purdue University, USA)
Ming-Chien Hsu (Purdue University, USA)
Carla Zoltowski (Purdue University, USA)

EFFECTS OF GENDER AND ABSTRACT THINKING FACTORS ON ADOLESCENTS' COMPUTER PROGRAM LEARNING ................................................................. 591
Chan Jung Park (Jeju National University, Korea)
Jung Suk Hyun (Jeju National University, Korea)
Jin Heuilan (Jeju National University High School, Korea)

STORIES OF BLACK WOMEN IN ENGINEERING INDUSTRY - WHY THEY LEAVE ............................................... 598
Monique Ross (Purdue University, USA)
Allison Godwin (Purdue University, USA)
THE EFFECT OF USING ONLINE TUTORS ON THE SELF-EFFICACY OF LEARNERS ........................................ 603
Amruth N. Kumar (Ramapo College of New Jersey, USA)

TEAMWORK ATTITUDE, INTEREST, AND SELF-EFFICACY: THEIR IMPLICATIONS FOR TEACHING TEAMWORK SKILLS TO ENGINEERING STUDENTS .................................................. 610
Abdullah Konak (Penn State Berks, USA)
Sadan Kulturel-Konak (Penn State Berks, USA)
Gül E. Okudan Kremer (Penn State University Park, USA)
Ivan E. Esparragoza (Penn State Brandywine, USA)

ENGINEERING SELF-EFFICACY, INTERACTIONS WITH FACULTY, AND OTHER FORMS OF CAPITAL FOR UNDERREPRESENTED ENGINEERING STUDENTS ............................................. 613
Sandra Dika (University of North Carolina at Charlotte, USA)
Miguel A. Pando (University of North Carolina at Charlotte, USA)
Brett Tempest (University of North Carolina at Charlotte, USA)
Krystal Foxx (University of North Carolina at Charlotte, USA)
Monica Allen (University of North Carolina at Charlotte, USA)

HOW THE APPLICATION OF COPING STRATEGIES CAN EMPOWER LEARNING ........................................ 619
Kirsi Helkala (Norwegian Defence Cyber Academy, Norway)
Benjamin Knox (Norwegian Defence Cyber Academy, Norway)
Øyvind Jøsok (Norwegian Defence Cyber Academy, Norway)

DYNAMIC ASSESSMENT OF LEARNERS' MENTAL STATE FOR AN IMPROVED LEARNING EXPERIENCE ........................................................................................................ 627
Aniruddha Sinha (Tata Consultancy Services Ltd., India)
Rahul Gavas (Tata Consultancy Services Ltd., India)
Debatri Chatterjee (Tata Consultancy Services Ltd., India)
Rajat Das (Tata Consultancy Services Ltd., India)
Arijit Sinharay (Tata Consultancy Services Ltd., India)

A SUMMER BRIDGE TO CALCULUS FOR STUDENTS WITH HIGH SCHOOL CALCULUS EXPERIENCE ........................................................................................................ 636
Virgil Pierce (The University of Texas - Pan American, USA)
Javier A. Kypuros (The University of Texas - Pan American, USA)

COMPUTATIONAL COMPLEXITY OF COLLEGE MATH EIGENVALUE PROBLEMS ........................................ 640
Yuki Mori (Hosei University, Japan)
Shuichi Yukita (Hosei University, Japan)

CALCTUTOR: APPLYING THE TEACHERS DILEMMA METHODOLOGY TO CALCULUS PEDAGOGY ........................................ 646
Kristian Kime (Brandeis University, USA)
Rebecca Torrey (Brandeis University, USA)
Timothy Hickey (Brandeis University, USA)
Friday, October 23

**F1A: Special Session: Taking Stock: Using a Landscape Inventory to Drive Curriculum and Program Change**
Chair: Yulei Pang (Southern Connecticut State University, USA)
9:00 AM - 10:30 AM
Room: Kohlberg Room

*TAKING STOCK: USING A LANDSCAPE INVENTORY TO DRIVE CURRICULUM AND PROGRAM CHANGE* ......................................................... 654
Elizabeth Nilsen (VentureWell, USA)
Victoria Matthew (VentureWell, USA)
Mary Besterfield-Sacre (University of Pittsburgh, USA)
Thema Monroe-White (SageFox Consulting Group, USA)

**F1B: Special Session: Helping your students learn "Engineering-ese": Using the results of conceptual change research to inform your instruction**
Chair: Ruth Streveler (Purdue University, USA)
9:00 AM - 10:30 AM
Room: Pancho Villa Room

*HELPING YOUR STUDENTS LEARN "ENGINEERING-ERE": USING THE RESULTS OF CONCEPTUAL CHANGE RESEARCH TO INFORM YOUR INSTRUCTION* ......................................................................................... 658
Ruth Streveler (Purdue University, USA)
Shane Brown (Oregon State University, USA)
Geoffrey Herman (University of Illinois at Urbana-Champaign, USA)
Holly Matusovich (Virginia Tech, USA)
Devlin Montfort (Oregon State University, USA)

**F1C: Innovative Mobile Tools and Applications**
Chair: Amalia Rusu (Fairfield University, United States)
9:00 AM - 10:30 AM
Room: Angus Room

*SHOWNTELL: AN EASY-TO-USE TOOL FOR ANSWERING STUDENTS' QUESTIONS WITH VOICE-OVER RECORDING* ......................................................... 660
Anand Bhojan (National University of Singapore, Singapore)
Kwan Yong Kang Nicholas (National University of Singapore, Singapore)
Nidhi Sharma (National University of Singapore, Singapore)

*INNOVATIVE MOBILE TOOL FOR ENGINEERING EMBEDDED DESIGN AND SECURITY EDUCATIONS* ......................................................................................... 669
Kuo-Sheng Ma (Southern Polytechnic State University, USA)
Yingnan Ma (Southern Polytechnic State University, USA)
Yanchen Wang (Southern Polytechnic State University, USA)
Kai Qian (Southern Polytechnic State University, USA)
Qichang Zheng (Southern Polytechnic State University, USA)
Liang Hong (Tennessee State University, USA)

*COMMEASY: AN INNOVATIVE INTERACTIVE COMMUNICATION SYSTEM FOR PROMOTING COMMUNICATION AND PARTICIPATION* ......................................................................................... 673
Abeer Algarni (Princess Nourah bint Abdulrahman University, Saudi Arabia)
Liz Burd (The University of Newcastle, Australia)
PERCEPTIONS OF STUDENTS AND INSTRUCTORS TOWARD THE ROLE OF COMMEASY IN TACKLING COMMUNICATION AND INTERACTION BARRIERS IN DISTANCE-LEARNING CLASSROOMS ........................................................................................................ 680
Abeer Algarni (Princess Nourah bint Abdulrahman University, Saudi Arabia)
Liz Burd (The University of Newcastle, Australia)

F1D: Game-Based Learning III
Chair: Jinghua Zhang (Winston-Salem State University, United States)
9:00 AM - 10:30 AM
Room: Brahma Room

ONLINE GAME-BASED PROGRAMMING LEARNING FOR HIGH SCHOOL STUDENTS - A CASE STUDY ............................................................... 687
Thiago Reis da Silva (Federal University of Rio Grande do Norte (UFRN), Brazil)
Eduardo Henrique da Silva Aranha (Federal University of Rio Grande do Norte (UFRN), Brazil)

REINFORCING STUDENT UNDERSTANDING OF LINKED LIST OPERATIONS IN A GAME ................................................................. 695
Jinghua Zhang (Winston-Salem State University, USA)
Mustafa Atay (Winston-Salem State University, USA)
Elvira Caldwell (Winston-Salem State University, USA)
Elva Jones (Winston-Salem State University, USA)

SYNTAX CIRCUITY: A MOBILE GAME FOR PRACTICING PROGRAMMING LANGUAGE SYNTAX ............................................................. 702
W. A. Shellington (Norfolk State University, USA)
T. O. Humphries (Norfolk State University, USA)
R. Morsi (Norfolk State University, USA)
Mona A. E. Rizvi (Nazarbayev University, USA)

TEACHING PROGRAMMING CONCEPTS TO ELEMENTARY STUDENTS ............................................................................................... 706
Chad Williams (Central Connecticut State University, USA)
Emtethal Alafghani (Central Connecticut State University, USA)
Antony Daley Jr. (Central Connecticut State University, USA)
Kevin Gregory (Central Connecticut State University, USA)
Marianella Rydzewski (Central Connecticut State University, USA)

PLAYING AND LEARNING WITH GAMIFICATION: AN IN-CLASS CONCURRENT AND DISTRIBUTED PROGRAMMING ACTIVITY .................. 715
Rodrigo Filev Maia (Centro Universitário FEI, Brazil)
Felipe Reis Graeml (Centro Universitário FEI, Brazil)

F1E: Flipped Classroom
Chair: Robert M O’Connell (University of Missouri-Columbia, United States)
9:00 AM - 10:30 AM
Room: Charolais Room

TOWARDS A FLIPPED CYBER CLASSROOM TO FACILITATE ACTIVE LEARNING STRATEGIES ................................................................. 721
Stephen Turner (University of Michigan-Flint, USA)
Mark Allison (The University of Michigan-Flint, USA)
Zahid Syed (The University of Michigan-Flint, USA)
Michael Farmer (The University of Michigan-Flint, USA)

EVALUATING THE EFFECT OF THOUGHTFUL DESIGN OF IN-CLASS TIME FOR A FLIPPED CLASSROOM ...................................................... 725
C.J. McClelland (Colorado School of Mines, USA)
ADAPTING A CONCEPT OF FRAMING TO UNDERSTAND HOW STUDENTS LEARN IN PROBLEM-CENTERED GROUP LEARNING IN FLIPPED ENGINEERING CLASSROOMS .............................................. 730
Jia-Ling Lin (University of Minnesota, USA)
Paul Imbertson (University of Minnesota, USA)
Kristen Gorman (University of Minnesota, USA)
Tamara J. Moore (Purdue University, USA)

EVALUATING FLIPPED CLASSROOMS WITH RESPECT TO THRESHOLD CONCEPTS LEARNING IN UNDERGRADUATE ENGINEERING ................................................................. 738
Elaine Khoo (University of Waikato, New Zealand)
Jonathan Scott (University of Waikato, New Zealand)
Mira Peter (University of Waikato, New Zealand)
Howell Round (University of Waikato, New Zealand)

F1F: Industry Oriented Teaching and Learning
Chair: Bunmi Bababajide (Purdue University, United States)
9:00 AM - 10:30 AM
Room: Longhorn Room

A LETTER TO THE FUTURE ENGINEER: EXPLORING CROSS-CULTURAL ENGINEERING IDENTITIES THROUGH PRACTITIONERS' LETTERS OF ADVICE ......................................................... 742
Héctor E Rodriguez-Simmonds (Purdue University, USA)
Matilde Sánchez-Peña (Purdue University, USA)
S. Zahra Atiq (Purdue University, USA)
Genisson Silva Coutinho (Purdue University, USA)
Brent Jesiek (Purdue University, USA)

COLLABORATION IN THE DEVELOPMENT OF A PRECISION ENGINEERING PROGRAMME AT LIMERICK INSTITUTE OF TECHNOLOGY IN RESPONSE TO A CALL FROM INDUSTRY .................................................................................. 746
Ciarán O'Loughlin (Limerick Institute of Technology, Ireland)
John Walsh (Limerick Institute of Technology, Ireland)
Tony Mahon (Limerick Institute of Technology, Ireland)

LOCALIZED OPEN SOURCE COLLABORATION IN SOFTWARE ENGINEERING EDUCATION .................. 751
Kevin Buffardi (California State University - Chico, USA)

TEACHING DIGITAL TV PROGRAMMING FOR ENGINEERING STUDENTS: AN INDUSTRY ORIENTED PROPOSAL ............................................................................................................................ 756
Waldir Sabino da Silva Junior (Federal University of Amazonas, Brazil)
Vicente Ferreira de Lucena Junior (Federal University of Amazonas, Brazil)

F1G: MOOCs and Big Data
Chair: Anna Douglas (Purdue University, United States)
9:00 AM - 10:30 AM
Room: Hereford Room

TENDENCIES TOWARDS DEEP OR SURFACE LEARNING FOR PARTICIPANTS TAKING A LARGE MASSIVE OPEN ONLINE COURSE (MOOC) ......................................................... 760
Amber Kemppainen (Michigan Technological University, USA)
Jon Sticklen (Michigan Technological University, USA)
Barbara Oakley (Oakland University, USA)
Denzel Chung (Temasek Polytechnic, Singapore)
SCALING YOUTH DEVELOPMENT TRAINING IN IT USING AN XMOOC PLATFORM ............................................ 764
Martin Löwis (Beuth Hochschule, Germany)
Thomas Staubitz (Hasso Plattner Institute, Germany)
Ralf Teusner (Hasso Plattner Institute, Germany)
Jan Renz (Hasso Plattner Institute, Germany)
Christoph Meinel (Hasso Plattner Institute, Germany)
Susanne Tannert (Hasso Plattner Institute, Germany)

FROM FLIPPED CLASSROOM THEORY TO THE PERSONALIZED DESIGN OF LEARNING EXPERIENCES IN MOOCs ........................................................................................................................................ 773
Aracele Garcia de Oliveira Fassbinder (Federal Institute of Education, Science and Technology, Brazil)
Marcelo Fassbinder (Federal Institute of Education, Science and Technology, Brazil)
Ellen Francine Barbosa (University of São Paulo, Brazil)

SMARTLAK: A BIG DATA ARCHITECTURE FOR SUPPORTING LEARNING ANALYTICS SERVICES ......................................................................................................................... 781
Thomas Rabelo (Faculdade de Ciências Aplicadas e Sociais de Petrolina, Brazil)
Manuel Lama (Universidade de Santiago de Compostela, Spain)
Ricardo R. Amorim (Faculdade de Ciências Aplicadas e Sociais de Petrolina, Brazil)
Juan Vidal (Universidade de Santiago de Compostela, Spain)

F1H: Teaching and Learning Programming I
Chair: Roberto A Bittencourt (State University of Feira de Santana, Brazil)
9:00 AM - 10:30 AM
Room: Rio Grande Room

THE USE OF LEARNING OBJECTS FOR TEACHING COMPUTER PROGRAMMING ........................................ 786
Luiz Carlos Begosso (Fundacao Educacional do Municipio de Assis, Brazil)
Luiz Ricardo Begosso (Fundacao Educacional do Municipio de Assis, Brazil)
Alexandre Ribeiro (Fundacao Educacional do Municipio de Assis, Brazil)
Rafaela Martins dos Santos (Fundacao Educacional do Municipio de Assis, Brazil)
Raissa Begosso (BS Tecnologia, Brazil)

LOOK MA, NO TEMPLATES! PROBLEM-BASED LEARNING OF COMPUTATIONAL PHYSICS FOR NOVICE PROGRAMMERS ........................................................................................................ 792
David Roundy (Oregon State University, USA)
Eric J. Krebs (Oregon State University, USA)
Jeff B. Schulte (Oregon State University, USA)
Greg S. Mulder (Linn-Benton Community College, USA)

INTEREST-DRIVEN AND INNOVATION-ORIENTED PRACTICE FOR PROGRAMMING COURSES .......... 797
Lingling Zhao (Harbin Institute of Technology, P.R. China)
Xiaohong Su (Harbin Institute of Technology, P.R. China)
Tiantian Wang (Harbin Institute of Technology, P.R. China)
Yongfeng Yuan (Harbin Institute of Technology, P.R. China)

FLIPPING A PROGRAMMING COURSE: THE GOOD, THE BAD, AND THE UGLY ........................................... 803
Carolyn Rosiene (University of Hartford, USA)
Joel Rosiene (Eastern Connecticut State University, USA)

ENHANCING OBJECT-ORIENTED PROGRAMMING EDUCATION USING STATIC AND DYNAMIC VISUALIZATION .................................................................................................................. 806
Jeong Yang (Texas A&M University-Kingsville, USA)
Young Lee (Texas A&M University-Kingsville, USA)
David Hicks (Texas A&M University-Kingsville, USA)
Kai H. Chang (Auburn University, USA)
F1I: Cyber Security
Chair: Walter W Schilling, Jr (Milwaukee School of Engineering, USA)
9:00 AM - 10:30 AM
Room: Santa Fe Room

WIRELESS CYBERSECURITY EDUCATION VIA A SOFTWARE DEFINED RADIO LABORATORY .......... 811
Cem Sahin (Drexel University, USA)
Danh Nguyen (Drexel University, USA)
James Chacko (Drexel University, USA)
Kapil Dandekar (Drexel University, USA)

STUDENT-CENTERED LEARNING IN CYBERSECURITY IN SUMMER SEMESTER................................. 819
Xiaojun Wu (Tsinghua University, P.R. China)
Shuzhen Tian (Tsinghua University, P.R. China)

USING A CASE STUDY TO TEACH STUDENTS ABOUT FINDING AND FIXING LOGIC FLAWS IN SOFTWARE ............................................................... 823
Lindsay Simpkins (North Carolina A&T State University, USA)
Xiaohong Yuan (North Carolina A&T State University, USA)
Huiming Yu (North Carolina A&T State University, USA)
Kenneth Williams (North Carolina A&T State University, USA)

HEALTHCARE SECURITY: A COURSE ENGAGING FEMALES IN CYBERSECURITY EDUCATION......... 830
Krishnendu Ghosh (Miami University, USA)

F2A: Special Session: CE2016 Updated Computer Engineering Curriculum Guidelines
Chair: Xiaosong Li (Unitec Institute of Technology, New Zealand)
11:00 AM - 12:30 PM
Room: Kohlberg Room

CE2016: UPDATED COMPUTER ENGINEERING CURRICULUM GUIDELINES .............................................. 834
Eric Durant (Milwaukee School of Engineering, USA)
John Impagliazzo (Hofstra University, USA)
Susan Conry (Clarkson University, USA)
Robert Reese (Mississippi State University, USA)
Herman Lam (University of Florida, USA)
Victor Nelson (Auburn University, USA)
Joseph Hughes (Georgia Tech, USA)
Weidong Liu (Tsinghua University, P.R. China)
Junlin Lu (Peking University, P.R. China)
Andrew McGettrick (University of Strathclyde, United Kingdom)

F2B: Special Session: What the Heck is That?! Adaptation of Evidence-Based Instructional Practices
Chair: Lizabeth Schlemer (Cal Poly, San Luis Obispo, USA)
11:00 AM - 12:30 PM
Room: Pancho Villa Room

WHAT THE HECK IS THAT?!
ADAPTATION OF EVIDENCE-BASED INSTRUCTIONAL PRACTICES ...................................................... 836
James Pembridge (Embry-Riddle Aeronautical University, USA)
Matthew Verleger (Embry-Riddle Aeronautical University, USA)
Stephanie Cutler (Embry-Riddle Aeronautical University, USA)
F2C: Mobile Teaching and Learning
Chair: Manuel Castro (Spanish University for Distance Education - UNED, Spain)
11:00 AM - 12:30 PM
Room: Angus Room

A TALE OF TWO MOBILE LEARNING JOURNEYS WITH SMARTPHONES AND TABLETS: THE INTERPLAY OF TECHNOLOGY AND IMPLEMENTATION CHANGE................................................................. 839
Mirna Domancic (Faculty of Electrical Engineering and Computing University of Zagreb, Croatia)
Jelena Baksa (Faculty of Electrical Engineering and Computing University of Zagreb, Croatia)
Tomislav Jagušt (Faculty of Electrical Engineering and Computing University of Zagreb, Croatia)
Ivica Botički (Faculty of Electrical Engineering and Computing University of Zagreb, Croatia)
Peter Seow (National Institute of Education, Singapore)
Chee-Kit Looi (National Institute of Education, Singapore)

THE EXPERIENCES OF SETTING UP, DEVELOPING AND IMPLEMENTING A MOBILE LEARNING PROJECT IN CROATIA: THE SCOLLAM PROJECT.......................................................... 846
Tomislav Jagušt (University of Zagreb Faculty of Electrical Engineering and Computing, Croatia)
Igor Mekterović (University of Zagreb Faculty of Electrical Engineering and Computing, Croatia)
Ivica Botički (University of Zagreb Faculty of Electrical Engineering and Computing, Croatia)

CHILO: USING AN E-TEXTBOOK TO CREATE AN AD-HOC M-LEARNING ENVIRONMENT ....................... 851
Masumi Hori (NPO CCC-TIES, Japan)
Seishi Ono (NPO CCC-TIES, Japan)
Shinzo Kobayashi (SmileNC & Co, Japan)
Kazutsuna Yamaji (Research and Development Centre for Academic Networks, Japan)
Toshihiro Kita (Kumamoto University, Japan)
Tsuneo Yamada (Open University of Japan, Japan)

FROM REALITY TO AUGMENTED REALITY: RAPID STRATEGIES FOR DEVELOPING MARKER-BASED AR CONTENT USING IMAGE CAPTURING AND AUTHORING TOOLS............................. 859
Jorge D. Camba (University of Houston, USA)
Manuel Contero (Universitat Politècnica de València, Spain)

AN INVESTIGATION OF THE USE OF MOBILE MATHEMATICS APPLICATIONS: AN AFRICAN PERSPECTIVE.........................................................................................................
M.I. Venter (Central University of Technology Free State, South Africa)
A.B. Van der Walt (Central University of Technology, South Africa)
A.J. Swart (Central University of Technology, South Africa)
L. de Wet (University of the Free State, South Africa)

F2D: Game-Based Learning IV
Chair: Bhojan Anand (National University of Singapore, Singapore)
11:00 AM - 12:30 PM
Room: Brahma Room

DIGITAL DEFENDERS - COMPUTER SECURITY LITERACY VIA GAME-BASED LEARNING ................. 874
Jin-Ning Tioh (Iowa State University, USA)
Mani Mina (Iowa State University, USA)

INTEGRATION OF THE ARTS AND TECHNOLOGY IN GK-12 SCIENCE COURSES ...................... 879
Daphney Chery (Drexel University, USA)
Susan Mburu (Philadelphia High School for Girls, USA)
Jessica Ward (Drexel University, USA)
Adam Fontecchio (Drexel University, USA)
INTRODUCING GAMING TOOLS FOR COMPUTING EDUCATION IN STEM RELATED CURRICULA ................................................................. 883
Amalia Rusu (Fairfield University, USA)

SCAFFOLDING IN EDUCATIONAL VIDEO GAMES: AN APPROACH TO TEACHING COLLABORATIVE SUPPORT SKILLS ................................. 891
Anna Loparev (University of Rochester, USA)
Christopher Egert (Rochester Institute of Technology, USA)

PROJECT MANAGEMENT GAME 2D (PMG-2D): A SERIOUS GAME TO ASSIST SOFTWARE PROJECT MANAGERS TRAINING ........................................... 896
José Eduardo Nunes Lino (Pontifícia Universidade Católica do Paraná, Brazil)
Marco Antonio Paludo (Pontifícia Universidade Católica do Paraná, Brazil)
Fabio Vinicius Binder (Pontifícia Universidade Católica do Paraná, Brazil)
Sheila Reinehr (Pontifícia Universidade Católica do Paraná, Brazil)
Andreia Malucelli (Pontifícia Universidade Católica do Paraná, Brazil)

F2E: Student engagement II
Chair: Ricardo José Rocha Amorim (State University of Bahia (UNEB), Brazil)
11:00 AM - 12:30 PM
Room: Charolais Room

ENGAGING GRADUATE STUDENTS THROUGH ONLINE LECTURE CREATION ................................................................. 904
Mireille Boutin (Purdue University, USA)
Joanne Lax (Purdue University, USA)

EFFECTIVENESS OF PRACTICES WITH SENSORS IN ENGAGING IN MEANINGFUL LEARNING IN HIGHER EDUCATION: EXTENDING A FRAMEWORK OF UBIQUITOUS LEARNING ........................................... 908
Josilene Almeida Brito (UFPE - Informatics Centre - Pernambuco, Brazil)
Ricardo Amorim (UNEB - Education Department, Brazil)
Bruno de Sousa Monteiro (UFERSA - Federal Rural University of Semi-arid Region, Brazil)
Alex Sandro Gomes (UFPE - Informatics Centre - Pernambuco, Brazil)
Ivanildo José de Melo Filho (UFPE - Informatics Centre - Pernambuco, Brazil)

INCREASING STUDENT ENGAGEMENT THROUGH THE DEVELOPMENT OF INTERDISCIPLINARY COURSES: LINKING ENGINEERING AND TECHNOLOGY, THE SCIENCES, AND THE HUMANITIES ................................................................. 912
Dana L. Collins (University of Puerto Rico - Mayagüez Campus, Puerto Rico)
Nayda G. Santiago (University of Puerto Rico - Mayagüez Campus, Puerto Rico)
Héctor Huyke (University of Puerto Rico - Mayagüez Campus, Puerto Rico)
Christopher Papadopoulos (University of Puerto Rico - Mayagüez Campus, Puerto Rico)
J. Fernando Vega-Riveros (University of Puerto Rico - Mayagüez Campus, Puerto Rico)
Ana Nieves-Rosa (University of Puerto Rico - Mayagüez Campus, Puerto Rico)
Anderson Brown (University of Puerto Rico - Mayagüez Campus, Puerto Rico)
Raúl Portuondo (University of Puerto Rico - Mayagüez Campus, Puerto Rico)
Matias Cafaro (University of Puerto Rico - Mayagüez Campus, Puerto Rico)
Matthew Landers (University of Puerto Rico - Mayagüez Campus, Puerto Rico)

LATINAS' RESILIENCE AND PERSISTENCE IN COMPUTER SCIENCE AND ENGINEERING: PRELIMINARY FINDINGS OF A QUALITATIVE STUDY EXAMINING IDENTITY AND AGENCY ........................................... 917
Alberto Esquinca (The University of Texas at El Paso, USA)
Elsa Villa (The University of Texas at El Paso, USA)
Elaine Hampton (The University of Texas at El Paso, USA)
Martine Ceberio (The University of Texas at El Paso, USA)
Luciene Wandermurem (The University of Texas at El Paso, USA)
MAKING CO-OP WORK: AN EXPLORATION OF STUDENT ATTITUDES TO CO-OP PROGRAMS .......... Sally Smith (Edinburgh Napier University, United Kingdom)
Tessa Berg (Heriot Watt University, United Kingdom)
Colin Smith (Edinburgh Napier University, United Kingdom)

F2F: Gender in Engineering and Computing II
Chair: Amir Zeid (American University of Kuwait, Kuwait)
11:00 AM - 12:30 PM
Room: Longhorn Room

PERSPECTIVES ON VOLUNTEERING FOR INITIATIVES FOR WOMEN IN COMPUTING:
A CASE STUDY ................................................................. Virginia Grande (Uppsala University, Sweden)

SOFTWARE ENGINEERING EDUCATION - DOES GENDER MATTER IN PROJECT RESULTS?
A CHILEAN CASE STUDY ................................................ Maíra Marques (Universidad de Chile, Chile)

WORK/FAMILY ATTITUDES OF COMPUTING GRADUATE STUDENTS ....................................
Leslie Cintron (University of Virginia, USA)
J. McGrath Cohoon (University of Virginia, USA)

STUDENT EVALUATIONS OF TEAM MEMBERS: IS THERE GENDER BIAS? .........................
Joyce B. Main (Purdue University, USA)
Matilde Sánchez-Peña (Purdue University, USA)

WOMEN IN STEM: THE IMPACT OF STEM PBL IMPLEMENTATION ON
PERFORMANCE, ATTRITION, AND COURSE CHOICE OF WOMEN ........................................
Peter Boedeker (Texas A&M University, USA)
Robert M. Capraro (Texas A&M University, USA)
Mary Margaret Capraro (Texas A&M University, USA)
Sandra Nite (Texas A&M University, USA)

F2G: Faculty Development I
Chair: Jacqueline McNeil (University of Louisville, United States)
11:00 AM - 12:30 PM
Room: Hereford Room

EXAMINING THE RELATIONSHIP BETWEEN FACULTY TEACHING PRACTICE AND
INTERCONNECTIVITY IN A SOCIAL NETWORK .................................................................
James Middleton (Arizona State University, USA)
Stephen Krause (Arizona State University, USA)
Kendra Beeley (Arizona State University, USA)
Eugene Judson (Arizona State University, USA)
John Ernzen (Arizona State University, USA)
Robert Culbertson (Arizona State University, USA)

PREPARING FOR AN ACADEMIC CAREER - THE ENGINEERING FACULTY OF TOMORROW ..........
Susan Schneider (Marquette University, USA)
Jennifer Bonniwell (Marquette University, USA)
INNOVATIVE FACULTY COHORT HIRE AT THE UNIVERSITY OF SAN DIEGO ......................................................... 972
Susan M. Lord (University of San Diego, USA)
Lisa Baird (University of San Diego, USA)
Jane Friedman (University of San Diego, USA)
Perla Myers (University of San Diego, USA)
Sandra Sgoutas-Emch (University of San Diego, USA)
Michelle Camacho (University of San Diego, USA)

TAILOR-MADE: MEETING THE UNIQUE NEEDS OF WOMEN OF COLOR STEM-SBS FACULTY THROUGH MENTORING ............................................................................................................. 976
DeLois Kijana Crawford (Department of Sociology and Anthropology, USA)

THE ROLE OF COLLABORATIVE INQUIRY IN TRANSFORMING FACULTY PERSPECTIVES ON USE OF REFLECTION IN ENGINEERING EDUCATION ................................................................. 981
Trevor Harding (California Polytechnic State University, USA)
Katherine Chen (California Polytechnic State University, USA)
Linda Vanasupa (California Polytechnic State University, USA)
Lawrence Domingo (California Polytechnic State University, USA)
Kurt Colvin (California Polytechnic State University, USA)
Anurag Pande (California Polytechnic State University, USA)
Troy Kawahara (California Polytechnic State University, USA)
Lyne Silivovsky (California Polytechnic State University, USA)
Steffen Peuker (California Polytechnic State University, USA)
James Widmann (California Polytechnic State University, USA)
Peter Schuster (California Polytechnic State University, USA)

F2H: Teaching and Learning Programming II
Chair: Ivan Mauricio Cabezas (Universidad de San Buenaventura, Colombia)
11:00 AM - 12:30 PM
Room: Rio Grande Room

TEACHING COMPUTER PROGRAMMING: PRACTICES, DIFFICULTIES AND OPPORTUNITIES ............................................................................................................ 988
Sandra Milena Merchan Rubiano (Universidad El Bosque, Colombia)
Orlando López-Cruz (Universidad El Bosque, Colombia)
Esteban Gómez Soto (Universidad El Bosque, Colombia)

TEACHING-LEARNING METHODOLOGY FOR FORMAL LANGUAGES AND AUTOMATA THEORY ................................................................. 997
Gabriel Spadon de Souza (Universidade Estadual Paulista "Julio de Mesquita Filho", Brazil)
Celso Olivete Junior (Universidade Estadual Paulista "Julio de Mesquita Filho", Brazil)
Ronaldo Celso Messias Correia (Universidade Estadual Paulista "Julio de Mesquita Filho", Brazil)
Rogério Garcia (Universidade Estadual Paulista "Julio de Mesquita Filho", Brazil)

AN ONLINE INTRODUCTORY COMPUTER PROGRAMMING COURSE USING MATLAB: DESIGN STEPS AND WHAT TO EXPECT ................................................................. 1004
Asad Azemi (Pennsylvania State University, Brandywine Campus, USA)

PROGRAMMING EDUCATION FOR PRIMARY SCHOOLCHILDREN USING A TEXTUAL PROGRAMMING LANGUAGE ......................................................... 1008
Hidekuni Tsukamoto (Osaka University of Arts, Japan)
Yasuhiro Takemura (Osaka University of Arts, Japan)
Hideo Nagumo (Niigata Seiryo University, Japan)
Isamu Ikeda (Institute of Information Education Support, Japan)
Akito Monden (Okayama University, Japan)
Ken-ichi Matsumoto (Nara Institute of Science and Technology, Japan)
A PROFICIENT HIGH LEVEL PROGRAMMING PROGRAM AS A WAY TO OVERCOME UNEMPLOYMENT AMONG GRADUATES .............................................................................................................. 101
Maria José Marcelino (University of Coimbra, Portugal)
Bruno Cabral (University of Coimbra, Portugal)
Luís Paquete (University of Coimbra, Portugal)
António José Mendes (University of Coimbra, Portugal)

F2I: Design methods
Chair: Susan Donohue (University of Virginia, United States)
11:00 AM - 12:30 PM
Room: Santa Fe Room

ENGINEERING UNIVERSITY-INDUSTRY PROJECTS: A DESIGN FOR SIX SIGMA FRAMEWORK .............................................................................................. 1023
Bunmi Bababajide (Purdue University, USA)
Tamara J. Moore (Purdue University, USA)

PERSPECTIVES ON ENGINEERING DESIGN LEARNING: REALITIES, CHALLENGES, AND RECOMMENDATIONS .............................................................................. 1027
Waddah Akili (Geotechnical Engineering, USA)

ADVANCING RESEARCH ON ENGINEERING DESIGN USING E-JOURNAL .............................................................................................. 1034
Andreas Febrian (Utah State University, USA)
Oenardi Lawanto (Utah State University, USA)
Matthew Cromwell (Utah State University, USA)

USING ROBUST DESIGN AS A CONCEPTUAL FRAMEWORK TO UNDERSTAND EXPERTISE .............................................................................................. 1039
Antonette Cummings (Purdue, USA)
Ali Shafaat (Purdue University, USA)
William Oakes (Purdue University, USA)

ESTABLISHING FUNCTIONAL CONCEPTS VITAL FOR DESIGN BY ANALOGY .............................................................................................. 1045
Megan Tomko (Georgia Institute of Technology, USA)
Briana Lucero (Colorado School of Mines, USA)
Cameron Turner (Colorado School of Mines, USA)
Julie Linsey (Georgia Institute of Technology, USA)

F3A: Special Session: Is the Engineer of 2035 a Maker?
Chair: Neha Choudhary (Purdue University, USA)
2:30 PM - 4:00 PM
Room: Kohlberg Room

IS THE ENGINEER OF 2035 A MAKER? .............................................................................................. 1053
Shawn Jordan (Arizona State University at the Polytechnic Campus, USA)
Micah Lande (Arizona State University at the Polytechnic Campus, USA)
F3B: Special Session: Agents for Change in Engineering & Computer Science Education
Chair: Kevin Buffardi (California State University - Chico, United States)
2:30 PM - 4:00 PM
Room: Pancho Villa Room

SPECIAL SESSION: AGENTS FOR CHANGE IN ENGINEERING & COMPUTER SCIENCE EDUCATION
Rebecca Bates (Minnesota State University, Mankato, USA)
Lisa Benson (Clemson University, USA)
Alan Cheville (Bucknell University, USA)
Cynthia Finelli (University of Michigan, USA)
Jennifer Karlin (SD School of Mines and Technology, USA)
Susan M. Lord (University of San Diego, USA)

F3C: Using Robots in Teaching and Learning
Chair: Kevin Gary (Arizona State University, USA)
2:30 PM - 4:00 PM
Room: Angus Room

AN INVESTIGATION OF THE RELATIONSHIP BETWEEN K-8 ROBOTICS TEAMS' COLLABORATIVE BEHAVIORS AND THEIR PERFORMANCE IN A ROBOTICS TOURNAMENT
Muhsin Menekse (University of Pittsburgh, USA)
Chris Schunn (University of Pittsburgh, USA)
Ross Higashi (University of Pittsburgh, USA)
Emily Baehr (University of Pittsburgh, USA)

EFFECTS OF REPORT-WRITING ON A MULTI-STAGE-EXPERIENCE EDUCATIONAL PROGRAM USING AN AUTONOMOUS MOBILE ROBOT
Shigeto Nakamura (National Institute of Technology, Nara College, Japan)
Takayuki Tamaki (National Institute of Technology, Nara College, Japan)
Yorihiko Yano (National Institute of Technology, Nara College, Japan)
Shigeki Nishida (National Institute of Technology, Nara College, Japan)
Kenichi Iida (National Institute of Technology, Nara College, Japan)
Hiroaki Ichii (National Institute of Technology, Nara College, Japan)
Yasuhiro Hayakawa (National Institute of Technology, Nara College, Japan)
Mitsuyoshi Shimaoka (National Institute of Technology, Nara College, Japan)
Yoshihiro Oshida (National Institute of Technology, Nara College, Japan)
Etsuko Ueda (Osaka Institute of Technology, Japan)
Takahiro Michishita (National Institute of Technology, Nara College, Japan)
Tomohito Sasayama (National Institute of Technology, Nara College, Japan)
Hirotugu Shimada (National Institute of Technology, Nara College, Japan)
Hiroshi Fukuyama (CS-Wakita Co., Ltd., Japan)

INTEGRATION OF ROBOTIC ARM MANIPULATOR WITH COMPUTER VISION IN A PROJECT-BASED LEARNING ENVIRONMENT
Krystian Radlak (Silesian University of Technology, Poland)
Marcin Fojcik (Sogn og Fjordane University College, Norway)

PROGRAMMING DESIGN PROCESS: PROVIDING K-12 STUDENTS WITH A STRUCTURE TO ATTAIN PROGRAMMING GOALS
Krystal Corbett (Cyber Innovation Center, USA)
Natasha Nesiba (New Mexico State University, USA)
MICROMOUSE: AN AUTONOMOUS ROBOTIC VEHICLE INTERDISCIPLINARY ATTRACTION TO EDUCATION AND RESEARCH ................................................................. 1074
Guillermo Lopez-Cardalda (University of Puerto Rico-Mayagüez, Puerto Rico)
Daniel Ramos (University of Puerto Rico-Mayagüez, Puerto Rico)
Kevin Rivera (University of Puerto Rico-Mayagüez, Puerto Rico)
Kelvin del Valle (University of Puerto Rico-Mayagüez, Puerto Rico)
Angel Rodriguez (University of Puerto Rico-Mayagüez, Puerto Rico)
Eduardo Ortiz-Rivera (University of Puerto Rico-Mayagüez, Puerto Rico)

F3D: Retention
Chair: Shaobo Huang (South Dakota School of Mines and Technology, United States)
2:30 PM - 4:00 PM
Room: Brahma Room

FINDING COMPETENCE CHARACTERISTICS AMONG FIRST SEMESTER STUDENTS IN COMPUTER SCIENCE ........................................................................................................ 1079
Daniela Zehetmeier (Munich University of Applied Sciences, Germany)
Axel Böttcher (Munich University of Applied Sciences, Germany)
Anne Brüggemann-Klein (Technisch Universität München, Germany)
Veronika Thurner (Munich University of Applied Sciences, Germany)
Kathrin Schlierkamp (Munich University of Applied Sciences, Germany)

WHAT IS THE EFFECT OF ESTABLISHING PROGRAMS THAT ADDRESS SENSE OF BELONGING ON UNDERGRADUATE ENGINEERING RETENTION? .................................................................................................................. 1088
Eugene Judson (Arizona State University, USA)
John Ernzen (Arizona State University, USA)
Ying-Chih Chen (Arizona State University, USA)
Stephen Krause (Arizona State University, USA)
James Middleton (Arizona State University, USA)
Robert Culbertson (Arizona State University, USA)

GRIT FOR ENGINEERING STUDENTS ........................................................................................................ 1096
Dong San Choi (University of Illinois at Urbana-Champaign, USA)
Michael C. Loui (Purdue University, USA)

MEASURING STUDENT INTEGRATION AND INSTITUTIONAL SUPPORT ........................................................................................................ 1098
Walter C. Lee (Virginia Tech, USA)
Holly Matusovich (Virginia Tech, USA)

RECRUITING, RETAINING AND TRANSITIONING COMPUTING UNDERGRADUATES THE STAIRSTEP WAY ................................................................................ 1102
Peggy Doerschuk (Lamar University, USA)
Judith Mann (Lamar University, USA)

F3E: Design Education II
Chair: Jay R Porter (Texas A&M University, United States)
2:30 PM - 4:00 PM
Room: Charolais Room

A COURSE IN INNOVATIVE PRODUCT DESIGN: A COLLABORATION BETWEEN ARCHITECTURE, BUSINESS, AND ENGINEERING .................................................................. 1110
Jay Porter (Texas A&M University, USA)
Joseph Morgan (Texas A&M University, USA)
Richard Lester (Texas A&M University, USA)
Adam Steele (Texas A&M University, USA)
Jorge Vanegas (Texas A&M University, USA)
Rodney Hill (Texas A&M University, USA)
ASSESSING IDEA FLUENCY THROUGH THE STUDENT DESIGN PROCESS .......................................................... 1115
Molly Hathaway Goldstein (Purdue University, USA)
Şenay Purzer (Purdue University, USA)
Camilo Vieira Mejia (Purdue University, USA)
Mitch Zielinski (Purdue University, USA)
K. Anna Douglas (Purdue University, USA)

ENGINEERING DESIGN JOURNEY AND PROJECT MANAGEMENT ............................................................... 1120
Oenardi Lawanto (Utah State University, USA)
Matthew Cromwell (Utah State University, USA)
Andreas Febrian (Utah State University, USA)

LIFE-BASED DESIGN AS AN EXTENSION OF PROBLEM-BASED LEARNING -
A TOOL FOR UNDERSTANDING PEOPLE AND TECHNOLOGY ........................................................................ 1125
Rebekah Rousi (University of Jyväskylä, Finland)
Jaana Leikas (VTT Technical Research Centre of Finland Ltd, Finland)

A SPIRAL CURRICULUM IN DESIGN AND PROJECT MANAGEMENT ............................................................ 1133
Chris Venters (East Carolina University, USA)
John Reis (East Carolina University, USA)
Hayden Griffin (East Carolina University, USA)
Gene Dixon (East Carolina University, USA)

F3F: Social Responsibility and Ethics
Chair: Wilkistar Otieno (University of Wisconsin-Milwaukee, United States)
2:30 PM - 4:00 PM
Room: Longhorn Room

UNDERSTANDING AND IMPROVING THE CULTURE OF HACKATHONS:
THINK GLOBAL HACK LOCAL ................................................................................................. 1138
Adrienne Decker (Rochester Institute of Technology, USA)
Kurt Eiselt (University of British Columbia, Canada)
Kimberly Voll (Roadhouse Interactive Ltd. And Centre for Digital Media, Canada)

CHARACTERISTICS OF ENGINEERING FACULTY ENGAGED IN THE SCHOLARSHIP
OF TEACHING AND LEARNING ...................................................................................................... 1146
Angela Bielefeldt (University of Colorado Boulder, USA)

USING SOCIAL NETWORK THEORY TO ELUCIDATE THE IMPACT OF DIVERSITY
ON THE SOCIAL PROCESSES IN DESIGN ............................................................................................ 1154
David Torres (Purdue University, USA)
Carla Zoltowski (Purdue University, USA)
Patrice Buzanell (Purdue University, USA)
Megan Kenny Feister (Purdue University, USA)
William Oakes (Purdue University, USA)

A SITUATED LEARNING ETHICS INSTRUCTION MODEL FOR ENGINEERING
UNDERGRADUATE STUDENTS ........................................................................................................ 1159
Wilkistar Otieno (Department of Industrial and Manufacturing Engineering, USA)
Nisha Kumar (College of Letters and Science, USA)

HOW ENGINEERING STUDENTS DEFINE 'SOCIAL RESPONSIBILITY' ............................................................ 1164
Nathan Canney (Seattle University, USA)
Mikhail Russu (Seattle University, USA)
Angela Bielefeldt (University of Colorado Boulder, USA)
**F3G: Faculty Development II**

*Chair:* Jeffrey E Froyd (Texas A&M University, United States)  
*2:30 PM - 4:00 PM*  
*Room:* Hereford Room

**STAGES AND PROCESSES OF PEDAGOGICAL CHANGE - AN APPLICATION OF TTM** ............................................. 1171  
James Pembridge (Embry-Riddle Aeronautical University, USA)  
Kari Jordan (Embry-Riddle Aeronautical University, USA)  
Heidi Steinhauer (Embry-Riddle Aeronautical University, USA)  
Timothy Wilson (Embry-Riddle Aeronautical University, USA)  
Douglas Holton (Embry-Riddle Aeronautical University, USA)

**ENGINEERING PH.D. STUDENTS' CAREER PREFERENCES: LEVELS, CHANGES, AND THE ROLE OF ADVISORS** .................................................................................... 1175  
Neha Choudhary (Purdue University, USA)  
Brent Jesiek (Purdue University, USA)

**TRACKING THE SPREAD OF RESEARCH-BASED INSTRUCTIONAL STRATEGIES** ........................................ 1179  
Geoffrey Herman (University of Illinois at Urbana-Champaign, USA)  
Irene Mena (University of Illinois at Urbana-Champaign, USA)

**STRATEGIES FOR SUSTAINING CHANGE IN ENGINEERING EDUCATION** .................................................. 1184  
Sarah Hug (University of Colorado, Boulder, USA)  
Heather Thiry (University of Colorado, Boulder, USA)  
Ann Gates (University of Texas, El Paso, USA)

**IMPROVING FACULTY PERCEPTION OF AND ENGAGEMENT IN STEM EDUCATION** ......................... 1191  
Jonathan Miorelli (Colorado School of Mines, USA)  
Nicholas Stambach (Colorado School of Mines, USA)  
Barbara Moskal (Colorado School of Mines, USA)  
Jerry Dwyer (Texas Tech University, USA)

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**F3H: Interdisciplinary Education in Programming**

*Chair:* Laura R. Hanlan (Worcester Polytechnic Institute, USA)  
*2:30 PM - 4:00 PM*  
*Room:* Rio Grande Room

**USING FLIPPED CLASSROOM, PEER DISCUSSION, AND JUST-IN-TIME TEACHING TO INCREASE LEARNING IN A PROGRAMMING COURSE** ................................................................. 1197  
Håkan Jonsson (Luleå University of Technology, Sweden)

**LEARNING PROGRAMMING WITH PEER SUPPORT, GAMES, CHALLENGES AND SCRATCH** .................. 1206  
Roberto A Bittencourt (State University of Feira de Santana, Brazil)  
David Moises dos Santos (State University of Feira de Santana, Brazil)  
Carlos Rodrigues (State University of Feira de Santana, Brazil)  
Washington Batista (State University of Feira de Santana, Brazil)  
Henderson Chalegre (State University of Feira de Santana, Brazil)

**APPLYING FLIPPED CLASSROOM AND PROBLEM-BASED LEARNING IN A CS1 COURSE** ....................... 1215  
Aracele Garcia de Oliveira Fassbinder (Federal Institute of Science and Technology - Campus Muzambinho, Brazil)  
Tiago Gonçalves Botelho (Federal Institute of Science and Technology - Campus Muzambinho, Brazil)  
Ricardo José Martins (Federal Institute of Science and Technology - Campus Muzambinho, Brazil)  
Ellen Francine Barbosa (University of São Paulo, Brazil)
PROGRAMMING TEACHING IN HIGH SCHOOLS: AN ANALYSIS BASED ON THE DISCOURSE OF COLLECTIVE SUBJECT............................................................................................ 1222
Fernanda P. Mota (Federal University of Rio Grande, Brazil)
Diana F. Adamatti (Federal University of Rio Grande, Brazil)

WEBTA: AUTOMATED ITERATIVE CRITIQUE OF STUDENT PROGRAMMING ASSIGNMENTS .......... 1227
Leo Ureel, II (Michigan Technological University, USA)
Charles Wallace (Michigan Technological University, USA)

F3I: Embedded Systems Education I
Chair: Victor F. A. Barros (Science and Education Research Council, Portugal)
2:30 PM - 4:00 PM
Room: Santa Fe Room

RESEARCH ON SYSTEM LEVEL INNOVATIVE PRACTICE IN EMBEDDED LABORATORY EDUCATION ........................................................................................................ 1236
Ninghan Zheng (Tsinghua University, P.R. China)
Yongqiang Chen (Tsinghua University, P.R. China)
Pin Tao (Tsinghua University, P.R. China)

TEAM-BASED LEARNING COURSE DESIGN AND ASSESSMENT IN COMPUTER ENGINEERING........................................................................................................ 1242
Mihir Awatramani (Iowa State University, USA)
Diane Rover (Iowa State University, USA)

FROM THE BROWSER TO THE REMOTE PHYSICAL LAB: PROGRAMMING CYBER-PHYSICAL SYSTEMS ............................................................................................ 1251
Steffen Peter (University of California, Irvine, USA)
Farshad Momtaz (University of California, Irvine, USA)
Tony Givargis (University of California, Irvine, USA)

MOTIVATION AS A KEY FACTOR TO IMPROVE FRESHMEN ACADEMIC PERFORMANCE IN COMPUTER ENGINEERING COURSES ............................................................................................ 1258
Lenin Lemus-Zúñiga (Universitat Politècnica de València, Spain)
Francisco Romero (Universitat Politècnica de València, Spain)
José-V. Benlloch-Dualde (Universitat Politècnica de València, Spain)

F4A: Special Session: Qualitative Research on Psychological Experience: A Starting Point for Using Interpretative Phenomenological Analysis
Chair: James Huff (Harding University, USA)
5:00 PM - 6:30 PM
Room: Kohlberg Room

QUALITATIVE RESEARCH ON PSYCHOLOGICAL EXPERIENCE: A STARTING POINT FOR USING INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS ........................................................................ 1265
James Huff (Harding University, USA)
Brent Jesiek (Purdue University, USA)
Carla Zoltowski (Purdue University, USA)
William Oakes (Purdue University, USA)
Joachim Walther (University of Georgia, USA)
**F4B: Special Session: Aesthetics and Emotional Engagement: Why it Matters to Our Students, Why it Matters to Our Professions**

Chair: Nathan Canney (Seattle University, USA)

5:00 PM - 6:30 PM

Room: Pancho Villa Room

AESTHETICS AND EMOTIONAL ENGAGEMENT: WHY IT MATTERS TO OUR STUDENTS, WHY IT MATTERS TO OUR PROFESSIONS

Jean Hertzberg (University of Colorado, Boulder, USA)
Katherine Goodman (University of Colorado, Boulder, USA)

**F4C: Student-Centered Education I**

Chair: Brian Rague (Weber State University, United States)

5:00 PM - 6:30 PM

Room: Angus Room

APPLYING PBL IN PROJECT MANAGEMENT EDUCATION: A CASE STUDY OF AN UNDERGRADUATE COURSE

Simone Santos (UFPE - Centro de Informática, Brazil)
Gustavo Alexandre (UFPE - Centro de Informática, Brazil)
Ariane Rodrigues (University of Pernambuco, Brazil)

MANAGING FIRST PBL EXPERIENCES: CROSS COMPETENCES IN A TRADITIONAL ENVIRONMENT

Jorge Martin-Gutierrez (Universidad de La Laguna, Spain)
Carlos Efrén Morín (Universidad de La Laguna, Spain)
Beatriz Añorbe-Díaz (Universidad de La Laguna, Spain)
M. Peña Fabiani Bendicho (Universidad de La Laguna, Spain)
Antonio Manuel González Marrero (Universidad de La Laguna, Spain)
Pedro Rivero Rodríguez (Universidad de La Laguna, Spain)

BEING A PBL TEACHER IN COMPUTER ENGINEERING: AN INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS

Cristiano Cintra (State University of Feira de Santana & Federal University of Bahia, Brazil)
Roberto A Bittencourt (State University of Feira de Santana, Brazil)

IS VIDEO FEEDBACK MORE EFFECTIVE THAN WRITTEN FEEDBACK?

Spencer Hilton (Weber State University, USA)
Brian Rague (Weber State University, USA)

NEW METHODOLOGY TO DIFFERENTIATE INSTRUCTIONAL STRATEGIES FOR ESL LEARNERS IN THE INDIAN CONTEXT

Rema Menon (Amrita University, India)
Prema Nedungadi (Amrita University, India)

**F4D: K-12 Teacher Education and Computational Thinking**

Chair: Charles Wallace (Michigan Technological University, United States)

5:00 PM - 6:30 PM

Room: Brahma Room

STARTING FROM SCRATCH: DEVELOPING A PRE-SERVICE TEACHER TRAINING PROGRAM IN COMPUTATIONAL THINKING

Nathan Bean (Kansas State University, USA)
Joshua Weese (Kansas State University, USA)
Russell Feldhausen (Kansas State University, USA)
Scott Bell (Northwest Missouri State University, USA)
COMPARING STUDENTS' MATHEMATICS ACHIEVEMENT BY THEIR SCHOOL TYPES: INCLUSIVE STEM SCHOOLS THAT IMPLEMENTED PLTW CURRICULUM WITH INCLUSIVE STEM SCHOOLS THAT DID NOT IMPLEMENT PLTW

Ali Bicer (Texas A&M University, USA)
Peter Boedeker (Texas A&M University, USA)
Mahati Kopparla (Texas A&M University, USA)
Robert M. Capraro (Texas A&M University, USA)
Mary Margaret Capraro (Texas A&M University, USA)

ON THE DEVELOPMENT AND IMPLEMENTATION OF A PROJECT-BASED LEARNING CURRICULUM FOR AIR QUALITY IN K-12 SCHOOLS

Ashley Collier (University of Colorado, Boulder, USA)
Daniel Knight (University of Colorado, Boulder, USA)
Katya Hafich (University of Colorado, Boulder, USA)
Michael Hannigan (University of Colorado, Boulder, USA)
Madaline Polmear (University of Colorado, Boulder, USA)
Ben Graves (Delta School District 50, USA)

F4F: Design Education III
Chair: Deeksha Seth (Drexel University, USA)
5:00 PM - 6:30 PM
Room: Longhorn Room

MEASURING UNDERGRADUATE STUDENTS' SELF-EFFICACY IN ENGINEERING DESIGN IN A PROJECT-BASED DESIGN COURSE

Deeksha Seth (Drexel University, USA)
James Tangorra (Drexel University, USA)
Ahmed Ibrahim (University of California, Riverside, USA)

THERE'S MORE THAN ONE WAY TO ANALYZE FEEDBACK ON DESIGN

Farshid Marbouti (Purdue University, USA)
Heidi Diefes-Dux (Purdue University, USA)
Monica Cardella (Purdue University, USA)

EVALUATING CAPSTONE PROJECT THROUGH FLEXIBLE AND COLLABORATIVE USE OF SCRUM FRAMEWORK

Rafael Tomé de Souza (UFSCar - Federal University of São Carlos, Brazil)
Sergio D. Zorzo (UFSCar - Federal University of São Carlos, Brazil)
Daniele Aparecida da Silva (UFSCar - Federal University of São Carlos, Brazil)

A SELF-ASSESSMENT INSTRUMENT TO ASSESS ENGINEERING STUDENTS' SELF-DIRECTEDNESS IN INFORMATION LITERACY

Kerrie Anna Douglas (Purdue University, USA)
Todd Fernandez (Purdue University, USA)
Şenay Purzer (Purdue University, USA)
Michael Fosmire (Purdue University, USA)
Amy Van Epps (Purdue University, USA)

F4G: Philosophy Of Engineering
Chair: Geoffrey Herman (University of Illinois at Urbana-Champaign, United States)
5:00 PM - 6:30 PM
Room: Hereford Room

IMPLICATIONS OF ANONYMOUS ASSESSMENT

Arnold Pears (Uppsala University, Sweden)
Aletta Nylén (Uppsala University, Sweden)
CASE FOR REFLECTION IN ENGINEERING EDUCATION—AND AN ALTERNATIVE ........................................ 1409
Mani Mina (Iowa State University, USA)
John Cowan (UK Open University, United Kingdom)
John Heywood (Trinity College Dublin, Ireland)

CHALLENGES IN FINDING A CONNECTION BETWEEN IL EDUCATION AND RESEARCH PROBLEM FORMULATION .............................................................................................. 1415
Talikka Marja (Lappeenranta University of Technology, Finland)
Värrri Hanna (Lappeenranta University of Technology, Finland)
Eskelinen Harri (Lappeenranta University of Technology, Finland)
Rimppi Heli (Lappeenranta University of Technology, Finland)

DRAFTING A CODE OF ETHICS FOR ENGINEERING EDUCATION .................................................................................................................. 1420
Alan Cheville (Bucknell University, USA)
John Heywood (Trinity College, Dublin, Ireland)

COMPETENCIES FOR PARADIGM SHIFT "SURVIVAL" .................................................................................... 1424
Mats Daniels (Uppsala University, Sweden)
Åsa Cajander (Uppsala University, Sweden)
Anna Eckerdal (Uppsala University, Sweden)
Mats Lind (Uppsala University, Sweden)
Aletta Nylén (Uppsala University, Sweden)
Tony Clear (Auckland University of Technology, New Zealand)
Roger McDermott (Robert Gordon University, United Kingdom)

F4H: Professional Skills
Chair: Abe Zeid (Northeastern University, United States)
5:00 PM - 6:30 PM
Room: Rio Grande Room

ADDRESSING THE PROBLEM OF MAL-EMPLOYMENT OF LIBERAL ARTS GRADUATES ...................... 1430
Abe Zeid (Northeastern University, USA)
Chitra Javdekar (MassBay Community College, USA)
Marina Bograd (MassBay Community College, USA)
Susanne Steiger-Escobar (MassBay Community College, USA)
Shamsi Moussavi (MassBay Community College, USA)
Claire Duggan (Northeastern University, USA)
Daniel Sullivan (Northeastern University, USA)
Sagar Kamarthi (Northeastern University, USA)

IMPLIED IDENTITY: A CONCEPTUAL FRAMEWORK FOR EXPLORING ENGINEERING PROFESSIONAL IDENTITY PRACTICES IN HIGHER EDUCATION ........................................ 1434
Maryam Khosronejad (The University of Sydney, Australia)
Peter Reimann (The University of Sydney, Australia)
Lina Markauskaite (The University of Sydney, Australia)

CAMPUS TO CAREER, UNDERSTANDING HOW ENGINEERING STUDENT SKILL PERCEPTIONS LINK TO FUTURE CAREER PATHWAYS ................................................................. 1438
Glenda Young (Virginia Tech, USA)
David Knight (Virginia Tech, USA)
F4I: Embedded Systems Education II
Chair: Firas Hassan (Ohio Northern University, USA)  
5:00 PM - 6:30 PM  
Room: Santa Fe Room

MORE MISSING THE BOAT - ARDUINO, RASPBERRY PI, AND SMALL PROTOTYPING BOARDS AND ENGINEERING EDUCATION NEEDS THEM .............................................................................. 1442
Peter Jamieson (Miami University, USA)  
Jeff Herdtner (Miami University, USA)

DESIGN AND IMPLEMENTATION OF A MICROCONTROLLER BASED WORKSTATION WITH EDUCATIONAL PURPOSES FOR THE CONTROL SYSTEMS AREA ................................................................................. 1448
Juan Felipe Patarroyo (University of Puerto Rico at Mayaguez, Puerto Rico)  
Gerson Beauchamp (University of Puerto Rico at Mayaguez, Puerto Rico)  
Aidsa Santiago (University of Puerto Rico at Mayaguez, Puerto Rico)

AUTONOMOUS ROBOT: AN INTELLECTUAL WAY OF INFUSING MICROCONTROLLER FUNDAMENTALS INTO SOPHOMORE STUDENTS .......................................................................................... 1456
Chirag Parikh (Grand Valley State University, USA)

DEVELOPMENT OF A NOVEL MODULAR INTEGRATED STACKABLE LAYER - ANALOG SYSTEM ENVIRONMENT (MISL - ASE) PLATFORM FOR EMBEDDED SYSTEMS EDUCATION ...................................................................... 1460
Gang Sun (Texas A&M University, USA)  
Joseph Morgan (Texas A&M University, USA)  
Jay Porter (Texas A&M University, USA)  
Hester Yim (Texas A&M University, USA)

VAMONOS: EMBEDDABLE VISUALIZATIONS OF ADVANCED ALGORITHMS .............................................................................. 1465
Brent Carmer (Oregon State University, USA)  
Mike Rosulek (Oregon State University, USA)
Saturday, October 24

**S1A: Panel: International iCampus Forum (IC15) on "Smart Education in Smart Cities"**

**Chair:** Jason Ng (British Telecom, United Kingdom)

**9:00 AM - 10:30 AM**

**Room:** Kohlberg Room

**INTERNATIONAL ICAMPUSS FORUM (IC15) ON "SMART EDUCATION IN SMART CITIES"**................................................. 1473

Jason Ng (United Arab Emirates, UAE)

**AN EXPLORATION INTO THE ATTITUDES OF YOUNG GIRLS TOWARD THE FIELD OF COMPUTER SCIENCE**................................................................. 1475

JJ LaBouliere (SDSU, USA)
Amanda Pelloth (SDSU, USA)
Chiao-Ling Lu (SDSU, USA)
Jason Ng (Etisalat British Telecom Innovation Center, UAE)

**INTERACTION DRIVEN COMPOSITION OF STUDENT GROUPS FOR OPTIMAL GROUPWORK LEARNING PERFORMANCE**................................................................. 1481

Ling Cen (Khalifa University of Science, Technology and Research, UAE)
Dymitr Ruta (Khalifa University of Science, Technology and Research, UAE)
Leigh Powell (Khalifa University of Science, Technology and Research, UAE)
Jason Ng (Khalifa University of Science, Technology and Research, UAE)

**EXPERIMENTAL DEVELOPMENT AND IMPLEMENTATION OF COMPUTER-BASED QUIZ GAMES IN GENERAL CHEMISTRY FOR ENGINEERING**................................................................. 1487

S.S. Ling (Khalifa University of Science, Technology and Research, UAE)
F. Saffre (BT Research and Innovation, United Kingdom)
D.L. Gater (Khalifa University of Science, Technology and Research, UAE)
L. Bt. Halim (National University of Malaysia, Malaysia)
A. F. Isakovic (Khalifa Semiconductor Research Center, UAE)

**SMART GROUPING TOOL PORTAL FOR COLLABORATIVE LEARNING**................................................................. 1494

David M. Liu (Etisalat BT Innovation Center, UAE)
George Wesley Hitt (Khalifa University of Science, Technology and Research, UAE)
A. F. Isakovic (Khalifa University of Science, Technology and Research, UAE)
Di Wang (Etisalat BT Innovation Center, UAE)
Benjamin Hirsch (Etisalat BT Innovation Center, UAE)
Jason W.P. Ng (Etisalat BT Innovation Center, United Kingdom)

**SMART TEXT-CLASSIFICATION OF USER-GENERATED DATA IN EDUCATIONAL SOCIAL NETWORKS**................................................................. 1499

Di Wang (Khalifa University, UAE)
Ahmed Al-Rubaie (Khalifa University, UAE)
Ahmed Al Dhanhani (Khalifa University, UAE)
Jason Ng (Khalifa University, United Kingdom)
S1B: New Approaches-Student-Center
Chair: Rangith Baby Kuriakose (University of Technology, South Africa)
9:00 AM - 10:30 AM
Room: Pancho Villa Room

A B-LEARNING NEW APPROACH APPLIED TO A PRACTICAL POWER ELECTRONICS CONVERTERS COURSE
Alfonso Lago Ferreiro (University of Vigo, Spain)
Andrés A. Nogueiras Meléndez (University of Vigo, Spain)
Ana Maria Cao-Paz (University of Vigo, Spain)
Jorge Marcos Acevedo (University of Vigo, Spain)
Manuel Castro (Spanish University for Distance Education (UNED), Spain)

INITIAL INVESTIGATION INTO ENGINEERING STUDENTS PROBLEM SOLVING WITHIN CONTROLS
Jessica Swenson (Tufts University, USA)
Ethan Danahy (Tufts University, USA)
William Messner (Tufts University, USA)

OPTIMAL CONTROL DESIGN AND IMPLEMENTATION FOR THE DOUBLE INVERTED PENDULUM SYSTEM IN A GRADUATE CONTROL COURSE
Felix Muñiz-Rodríguez (University of Puerto Rico at Mayagüez, Puerto Rico)
Gerson Beauchamp-Báez (University of Puerto Rico at Mayagüez, Puerto Rico)
Gerardo Cruz-Díaz (University of Puerto Rico at Mayagüez, Puerto Rico)
Juan Carlos Santos-Ferrer (University of Puerto Rico at Mayagüez, Puerto Rico)

A LOW-COST SYSTEM FOR EXPERIMENTS WITH DIGITAL CIRCUITS
Flávio H Toribio Destro (Federal University of Mato Grosso do Sul, Brazil)
Rafael A. Costa (Federal University of Mato Grosso do Sul, Brazil)
Fábio Iaione (Federal University of Mato Grosso do Sul, Brazil)

THE EXPLORATION FOR COMPUTER SYSTEM CAPACITY TRAINING IN EXPERIMENTAL TEACHING
Li Shan-shan (Tsinghua University, P.R. China)
Quan Cheng-bin (Tsinghua University, P.R. China)
Chen Yong-qiang (Tsinghua University, P.R. China)

S1C: Student Center Education
Chair: Brian Skromme (Arizona State University, United States)
9:00 AM - 10:30 AM
Room: Angus Room

HELPING UNDERGRADUATE ENGINEERING STUDENTS DISCOVER THEIR INTERESTS (AND REDUCE THEIR FEAR OF RESEARCH)
Mary Anderson-Rowland (Arizona State University, USA)
Armando Rodriguez (Arizona State University, USA)
Anita Grierson (Arizona State University, USA)

DEVELOPING AN ECOSYSTEM FOR STUDENT SUCCESS IN ENGINEERING IN RIO SOUTH TEXAS
Javier A. Kypuros (The University of Texas-Pan American, USA)
Stephen W. Crown (The University of Texas-Pan American, USA)
Arturo A. Fuentes (University of Texas-Pan American, USA)
Horacio Vasquez (The University of Texas-Pan American, USA)
Virgil Pierce (The University of Texas-Pan American, USA)
Jessica Lavariaga Monforti (The University of Texas-Pan American, USA)
LEARNING TO LEARN: CREATING ENGINEERING CLASSROOMS FOR DEEP UNDERSTANDING ................................................................. 1549
Sarah Hug (University of Colorado Boulder, USA)
Elsa Q. Villa (The University of Texas at El Paso, USA)
Peter Golding (University of Texas at El Paso, USA)
Gabby Gandara (University of Texas at El Paso, USA)

AGILE LEARNING THROUGH CONTINUOUS ASSESSMENT ................................................................. 1554
Kevin A. Gary (Arizona State University, USA)
Suhas Xavier (Arizona State University, USA)

AMNESIA: A LEARNING OBJECT FOR MEMORY HIERARCHY TEACHING ................................................. 1558
Fernando Tiosso (University of São Paulo, Brazil)
Sarita Mazzini Bruschi (University of São Paulo, Brazil)
Paulo S. Souza (University of São Paulo, Brazil)
Ellen Barbosa (University of São Paulo, Brazil)
Carlos Emilio de Andrade Cacho (University of São Paulo, Brazil)

S1D: Assessment I
Chair: Vladik Kreinovich (University of Texas at El Paso, United States)
9:00 AM - 10:30 AM
Room: Brahma Room

HOW SHOULD WE ESTIMATE A MISSING EXAM SCORE? ................................................................................. 1565
Michael C. Loui (Purdue University, USA)
Athena Lin (University of Illinois at Urbana-Champaign, USA)

HOW TO TAKE INTO ACCOUNT A STUDENT'S DEGREE OF CERTAINTY WHEN EVALUATING THE TEST RESULTS .............................................................................................. 1568
Joe Lorkowski (University of Texas at El Paso, USA)
Olga Kosheleva (University of Texas at El Paso, USA)
Vladik Kreinovich (University of Texas at El Paso, USA)

THE ACADEMIC PERFORMANCE INDEX: CREATING A MORE ROBUST AND LESS BIASED MEASURE OF STUDENT ACADEMIC PERFORMANCE ............................................................ 1573
Allison Godwin (Purdue University, USA)
Tyler D. Scott (Northwestern College, USA)
Geoff Potvin (Florida International University, USA)
Gerhard Sonnert (Harvard University, USA)
Phillip M. Sadler (Harvard University, USA)

EVALUATING METRICS FOR AUTOMATIC MIND MAP ASSESSMENT IN VARIOUS CLASSES .......... 1581
Amber Franklin (Miami University, USA)
Peter Jamieson (Miami University, USA)
Walter Vanderbush (Miami University, USA)
Tuo Li (Miami University, USA)
Julie Semlak (Miami University, USA)
S1E: First and Second Year Topics II
Chair: Frank Vahid (University of California, Riverside, USA)
9:00 AM - 10:30 AM
Room: Charolais Room

STUDENT LED CURRICULUM DEVELOPMENT AND INSTRUCTION OF INTRODUCTION TO ENGINEERING LEADERSHIP COURSE.......................................................................................................................... 1589
America Fernandez (The University of Texas at El Paso, USA)
Erwin Delgado (The University of Texas at El Paso, USA)
Yazmin Montoya (The University of Texas at El Paso, USA)
Roger Gonzalez (The University of Texas at El Paso, USA)
Meagan Vaughan (The University of Texas at El Paso, USA)

ENHANCING THE EXPERIENCE OF FIRST-YEAR ENGINEERING STUDENTS WITH AN ENTRY-LEVEL STS COURSE: SCIENCE-TECHNOLOGY-SOCIETY........................................................................................................... 1597
Jan DeWaters (Clarkson University, USA)
Jessica Halfacre (Clarkson University, USA)
John Moosbrugger (Clarkson University, USA)
Elisabeth Chapman (Clarkson University, USA)
Elisabeth Wultsch (Clarkson University, USA)

ASSESSING STUDENT VIEWS OF TRADITIONAL, FREE, AND INTERACTIVE MODIFICATIONS FOR AN INTRODUCTORY NETWORKING COURSE........................................................................................................... 1605
Patrick Seeling (Central Michigan University, USA)

A PEDAGOGICAL MODEL FOR INTRODUCING 3D PRINTING TECHNOLOGY IN A FRESHMAN LEVEL COURSE BASED ON A CLASSIC INSTRUCTIONAL DESIGN THEORY.......................................................................................................... 1609
Pit Ho Patrio Chiu (City University of Hong Kong, Hong Kong)
King Wai Chiu Lai (City University of Hong Kong, Hong Kong)
Tsz Ki Frankie Fan (City University of Hong Kong, Hong Kong)
Suk Han Cheng (City University of Hong Kong, Hong Kong)

OUTCOMES OF ACCEPTING OR DECLINING ADVANCED PLACEMENT CALCULUS CREDIT .......... 1615
Karen De Urquidi (Purdue University, USA)
Dina Verdin (Purdue University, USA)
Stephen Hoffmann (Purdue University, USA)
Matthew W. Ohland (Purdue University, USA)

S1F: Online Assessment
Chair: Dazhi Yang (Boise State, United States)
9:00 AM - 10:30 AM
Room: Longhorn Room

TECEVAL: AN ON-LINE DYNAMIC EVALUATION SYSTEM FOR ENGINEERING COURSES AVAILABLE FOR WEB BROWSERS AND TABLETS ............................................................................................................. 1621
Jesus Jaquez (Tecnologico de Monterrey, Mexico)
Julia Noguez (Tecnologico de Monterrey, Mexico)
Gerardo Aguilar-Sanchez (Tecnologico de Monterrey, Mexico)
Luis Neri (Tecnologico de Monterrey, Mexico)
Andres Gonzalez-Nucamendi (Tecnologico de Monterrey, Mexico)

SEED-PA. A PRACTICAL INSTRUMENT FOR ASSESSING INDIVIDUAL ETHICS INITIATIVES........... 1629
Trevor S. Harding (California Polytechnic State University, USA)
Donald D. Carpenter (Lawrence Technological University, USA)
Janel A. Sutkus (Carnegie Mellon University, USA)
Cynthia J. Finelli (University of Michigan, USA)
AUTOMATIC FILL-THE-BLANK QUESTION GENERATOR FOR STUDENT SELF-ASSESSMENT .......... 1633
Girish Kumar (Agency for Science, Technology and Research, Singapore)
Rafael E. Banchs (Institute for Infocomm Research, Singapore)
Luis Fernando D’Haro (Institute for Infocomm Research, Singapore)

PLUGGABLE REPUTATION SYSTEMS FOR PEER REVIEW: A WEB-SERVICE APPROACH............... 1636
Yang Song (North Carolina State University, USA)
Zhewei Hu (North Carolina State University, USA)
Edward Gehringer (North Carolina State University, USA)

ARCHITECTURAL SUPPORT FOR NON-EXPERT DEPLOYMENT OF REMOTE LABORATORIES......... 1641
Khanh Nguyen (University of Sydney, Australia)
David Lowe (University of Sydney, Australia)

SIG: Innovative Curriculum & Course Design I
Chair: Venky Shankararaman (Singapore Management University, Singapore)
9:00 AM - 10:30 AM
Room: Hereford Room

STUDENT-CONSTRUCTED CONCEPT MAPS FOR ACTIVE LEARNING IN A FOUNDATIONAL UNDERGRADUATE ENGINEERING COURSE ................................................................. 1649
Ning Fang (Utah State University, USA)

O-CHARTS: TOWARDS AN EFFECTIVE TOOLKIT FOR TEACHING TIME COMPLEXITY ........... 1654
Scott Barlowe (Western Carolina University, USA)
Andrew Scott (Western Carolina University, USA)

ANALYZING EDUCATIONAL COMMENTS FOR TOPICS AND SENTIMENTS: A TEXT ANALYTICS APPROACH ................................................................. 1658
Gokam Ila Nitin (Singapore Management University, Singapore)
Gottipati Swapna (Singapore Management University, Singapore)
Venky Shankararaman (Singapore Management University, Singapore)

PREPARING ECE STUDENTS FOR RESEARCH CAREER IN NANOTECHNOLOGY VIA TRACK PROGRAM ......................................................... 1667
Maher E. Rizkalla (Indiana University-Purdue University Indianapolis, USA)
Mangilal Agarwal (Indiana University-Purdue University Indianapolis, USA)

SIG: Innovative Curriculum & Course Design II
Chair: Wei-Fan Chen (Penn State University, United States)
9:00 AM - 10:30 AM
Room: Rio Grande Room

CURRICULUM DRIVEN CLASSROOM DESIGN ........................................................................ 1672
Kerry Milligan (Drexel University, USA)
Adam K. Fontecchio (Drexel University, USA)

RUBRICS FOR ASSESSMENT ITEM DIFFICULTY IN ENGINEERING COURSES ....................... 1676
Shilpi Banerjee (International Institute of Information Technology, India)
N.J. Rao (International Institute of Information Technology, India)
Chandrashekar Ramanathan (International Institute of Information Technology, India)
INSPIRING UNDERGRADUATE STUDENTS IN ENGINEERING LEARNING, COMPREHENDING AND PRACTICING BY THE USE OF ANALOG DISCOVERY KITS ........................................ 1684
Lei Zhang (University of Maryland Eastern Shore, USA)
Ibibia Dabipi (University of Maryland Eastern Shore, USA)
Yuanwei Jin (University of Maryland Eastern Shore, USA)
Payam Matin (University of Maryland Eastern Shore, USA)

TEACHING PROJECT MANAGEMENT USING A REAL-WORLD GROUP PROJECT .................................. 1688
Lawrence Collingbourne (Victoria University of Wellington, New Zealand)
Winston K.G. Seah (Victoria University of Wellington, New Zealand)

USING 3-D OPEN SOURCE SOFTWARE TO FACILITATE STUDENTS' SPATIAL VISUALIZATION SKILLS ........................................................................................................... 1696
Wei-Fan Chen (The Pennsylvania State University, USA)
Pao-Nan Chou (National University of Tainan, Taiwan)
Robert Carey (The Pennsylvania State University, USA)

S11: Faculty Development III
Chair: Megan Tomko (Georgia Institute of Technology, USA)
9:00 AM - 10:30 AM
Room: Santa Fe Room

LEARNING ABOUT ENGINEERING EDUCATION RESEARCH: WHAT CONCEPTUAL DIFFICULTIES STILL EXIST FOR A NEW GENERATION OF SCHOLARS? ................................................... 1699
Ruth A. Streveler (Purdue University, USA)
Nicole P. Pitterson (Purdue University, USA)
Avneet Hira (Purdue University, USA)
Héctor Rodríguez-Simmonds (Purdue University, USA)
Juan Ortega Alvarez (Purdue University, USA)

APPRENTICESHIP OF OBSERVATION: IMPLICATIONS FOR THE ADOPTION OF EVIDENCE-BASED INSTRUCTIONAL PRACTICES ................................................................................... 1705
Kari L. Jordan (Embry-Riddle Aeronautical University, USA)
James J. Pembridge (Embry-Riddle Aeronautical University, USA)
Heidi M. Steinhauer (Embry-Riddle Aeronautical University, USA)
Timothy Wilson (Embry-Riddle Aeronautical University, USA)
Douglas Holton (Embry-Riddle Aeronautical University, USA)

AMBIGUITY DURING ENGINEERING PROBLEM SOLVING ..................................................................... 1712
Elliot P. Douglas (University of Florida, USA)
Sevcan Aqdas (University of Florida, USA)
Christine Lee (California State University East Bay, USA)
Mirka Korje-Ljungberg (Arizona State University, USA)
David J. Therriault (University of Florida, USA)

BACKGROUND AND DEMOGRAPHIC FACTORS THAT INFLUENCE GRADUATION: A COMPARISON OF SIX DIFFERENT TYPES OF MAJORS ................................................................. 1716
Sara Hahler (Louisiana Tech University, USA)
Marisa K. Orr (Louisiana Tech University, USA)
S2A: Technological Tools I
Chair: Jean Hertzberg (University of Colorado Boulder, USA)
11:00 AM - 12:30 PM
Room: Kohlberg Room

UNDERGRADUATE EXPERIMENTS WITH APERIODIC GRATINGS BASED ON THE FIBONACCI SEQUENCE .......................................................... 1723
J.A. Monsoriu (Universitat Politècnica de València, Spain)
M.H. Giménez (Universitat Politècnica de València, Spain)
E. Ballester (Universitat Politècnica de València, Spain)
L.M. Sanchez-Ruiz (Universitat Politècnica de València, Spain)

AN INTERACTIVE LEARNING ENVIRONMENT FOR ASSISTING STUDENTS IN SOLVING PROBLEMS ON DESIGNING OF LOGIC DIGITAL CIRCUITS BY USING MULTIPLE REPRESENTATIONS ................................................................. 1726
Evandro de Barros Costa (University of Alagoas, Brazil)
Hemilis Joyse Barbosa Rocha (Federal Institute of Alagoas, Brazil)

ADAPTIVE VISION STUDIO - EDUCATIONAL TOOL FOR IMAGE PROCESSING LEARNING ......................................................... 1732
Krystian Radlak (Silesian University of Technology, Poland)
Mariusz Frackiewicz (Silesian University of Technology, Poland)
Marek Szczepanski (Silesian University of Technology, Poland)
Michal Kawulok (Silesian University of Technology, Poland)
Michal Czardybon (Future Processing, Poland)

ANALYSIS OF OPPORTUNITIES AND CHALLENGES OF THE ELECTRONIC DUAL-BOARD IN INSTRUCTION .......................................................... 1740
Li-ping Cai (Central China Normal University, P.R. China)
Rui-hua Shi (Central China Normal University, P.R. China)
Wen-yan Niu (Central China Normal University, P.R. China)
Ming-Wen Tong (Central China Normal University, P.R. China)

AESTHETICS AND EXPANDING PERCEPTION IN FLUID PHYSICS .......................................................... 1747
Katherine Goodman (University of Colorado, USA)
Jean Hertzberg (University of Colorado, USA)
Noah Finkelstein (University of Colorado, USA)

S2B: Computer Based Learning
Chair: Rogério Garcia (São Paulo State University, Brazil)
11:00 AM - 12:30 PM
Room: Pancho Villa Room

STEP-BASED TUTORING SYSTEM FOR INTRODUCTORY LINEAR CIRCUIT ANALYSIS .......................................................... 1752
B. J. Skromme (Arizona State University, USA)
P. J. Rayes (Arizona State University, USA)
B. E. McNamara (Arizona State University, USA)
V. Seetharam (Arizona State University, USA)
X. Gao (Arizona State University, USA)
T. Thompson (Arizona State University, USA)
X. Wang (Arizona State University, USA)
B. Cheng (Arizona State University, USA)
Y.-F. Huang (University of Notre Dame, USA)
D.H. Robinson (Colorado State University, USA)
IMPLEMENTATION OF AN INTELLIGENT TUTORING SYSTEM USING MOODLE ............................................................. 1761
Vyshnavi Malathi Ramesh (International Institute of Information Technology, India)
N. J. Rao (International Institute of Information Technology, India)
Chandrashekhar Ramanathan (International Institute of Information Technology, India)

A USER PROFILE DEFINITION IN CONTEXT OF RECOMMENDATION OF OPEN EDUCATIONAL RESOURCES. AN APPROACH BASED ON LINKED OPEN VOCABULARIES .................................................................................................................. 1770
Janneth Chicaiza (Universidad Técnica Particular de Loja, Ecuador)
Nelson Piedra (Universidad Técnica Particular de Loja, Ecuador)
Jorge Lopez-Vargas (Universidad Técnica Particular de Loja, Ecuador)
Edmundo Tovar-Caro (Universidad Politécnica de Madrid, Spain)

SUPPORTIVE ENVIRONMENT FOR TEACHING AND LEARNING DIGITAL IMAGE PROCESSING .................................................................................................................................................................................. 1777
Lenon Fachiano Silva (Universidade Estadual Paulista "Júlio de Mesquita Filho", Brazil)
Celso Olivete Júnior (Universidade Estadual Paulista "Júlio de Mesquita Filho", Brazil)
Pedro Henrique Reis (Universidade Estadual Paulista "Júlio de Mesquita Filho", Brazil)
Rafael Silva Santos (Universidade Estadual Paulista "Júlio de Mesquita Filho", Brazil)
Ronaldo Celso Messias Correia (Universidade Estadual Paulista "Júlio de Mesquita Filho", Brazil)
Rogério Eduardo Garcia (Universidade Estadual Paulista "Júlio de Mesquita Filho", Brazil)

ADAPTATION RESOURCES IN VIRTUAL LEARNING ENVIRONMENTS UNDER CONSTRUCTIVIST APPROACH: A SYSTEMATIC REVIEW .................................................................................................................. 1784
Vitor Bremgartner (Federal University of Amazonas, Brazil)
José Magalhães, Netto (Federal University of Amazonas, Brazil)
Crediné Silva de Menezes (University of Rio Grande do Sul (UFRGS), Brazil)

S2C: Innovative Curriculum & Course Design III
Chair: Rebecca Reck (University of Illinois at Urbana-Champaign, United States)
11:00 AM - 12:30 PM
Room: Angus Room

BRIDGING THE DIVIDE:
STRATEGIES FOR COLLEGE TO CAREER READINESS IN COMPUTER SCIENCE .......................................................... 1792
Wendy A Lawrence-Fowler (The University of Texas-Pan American, USA)
Laura M. Grabowski (University of Texas-Pan American, USA)
Christine F. Reilly (University of Texas-Pan American, USA)

THE INSTITUTIONAL ENVIRONMENT FOR STUDENT VETERANS IN ENGINEERING ..................................................................................... 1800
Catherine E. Brawner (Research Triangle Educational Consultants, USA)
Catherine Mobley (Clemson University, USA)
Joyce Main (Purdue University, USA)
Susan M. Lord (University of San Diego, USA)
Michelle M. Camacho (University of San Diego, USA)

ASSESSING AN AFFORDABLE AND PORTABLE LABORATORY KIT IN AN UNDERGRADUATE CONTROL SYSTEMS COURSE .................................................................................................................. 1805
Rebecca M. Reck (University of Illinois at Urbana-Champaign, USA)
Ramavarapu S. Sreenivas (University of Illinois at Urbana-Champaign, USA)
Michael C. Loui (Purdue University, USA)

HANDS ON PROJECT EXPERIENCE IN A CORE CLASS FOCUSED ON SUSTAINABILITY ..................................................... 1809
Anoop Desai (Georgia Southern University, USA)
S2D: Curriculum Design III
Chair: Rebecca Reck (University of Illinois at Urbana-Champaign, USA)
11:00 AM - 12:30 PM
Room: Brahma Room

**BIOINFORMATICS CURRICULUM DEVELOPMENT AND SKILL SETS FOR BIOINFORMATICIANS** ................................................................. 1813
Huanmei Wu (School of Informatics and Computing, USA)
Amritha Palani (School of Informatics and Computing, USA)

**STUDENTS LEARN MORE WITH LESS TEXT THAT COVERS THE SAME CORE TOPICS** ................................................................. 1820
Alex Edgcomb (University of California, Riverside, USA)
Frank Vahid (University of California, Riverside, USA)
Roman Lysecky (University of Arizona, USA)

**VIRTUAL LABORATORY PLATFORM FOR COMPUTER SCIENCE CURRICULA** ................................................................. 1825
Yuanyuan Li (Central South University, P.R. China)
Lei Xiao (Central South University, P.R. China)
Yu Sheng (Central South University, P.R. China)

**CLOUD-BASED TEACHING IN AN ENGINEERING-PHYSICS COURSE** ................................................................. 1832
John M. Long (Deakin University, Australia)

**AN AUTOMATION OF THE COURSE DESIGN BASED ON MATHEMATICAL MODELING AND GENETIC ALGORITHMS** ................................................................. 1840
Alexey Dukhanov (ITMO University, Russia)
Maria Karpova (ITMO University, Russia)
Vadim Shmelev (ITMO University, Russia)

S2E: Innovative Curriculum & Course Design IV
Chair: Brian Faulkner (University of Illinois, USA)
11:00 AM - 12:30 PM
Room: Charolais Room

**STUDENTS OF ENGINEERING ON BEHALF OF PEOPLE WITH DISABILITIES: EVALUATING THE IMPACT OF AN INSTITUTION’S FLAGSHIP PROJECT** ................................................................. 1844
Orna Muller (ORT Braude College of Engineering, Israel)
Noga Shalit (ORT Braude College of Engineering, Israel)
Orit Braun Benyamin (ORT Braude College of Engineering, Israel)

**ENHANCING THE EDUCATIONAL EXPERIENCE FOR DEAF AND HARD OF HEARING STUDENTS IN SOFTWARE ENGINEERING** ................................................................. 1849
Daniel E. Krutz (Rochester Institute of Technology, USA)
Samuel A Malachowsky (Rochester Institute of Technology, USA)
Scott D. Jones (Rochester Institute of Technology, USA)
Jayme A. Kaplan (St. Mary's School for the Deaf, USA)

**GETTING THE ATTENTION OF UNDERREPRESENTED MINORITY COMMUNITY COLLEGE STUDENTS TO CONSIDER ENGINEERING AS A CAREER** ................................................................. 1858
Mary R. Anderson-Rowland (Arizona State University, USA)
Armando A. Rodriguez (Arizona State University, USA)
Anita E. Grierson (Arizona State University, USA)

**EFFECT OF ASSERTION HEADINGS AND EXPANDABLE EXAMPLES IN AN ONLINE ENGINEERING TEXTBOOK** ................................................................. 1866
Brian Faulkner (University of Illinois at Urbana-Champaign, USA)
Geoffrey Herman (University of Illinois at Urbana-Champaign, USA)
STEM SUMMER CAMP FOLLOW UP STUDY: EFFECTS ON STUDENTS’ SAT SCORES AND POSTSECONDARY MATRICULATION ............................................................ 1875
Peter Boedeker (Texas A&M University, USA)
Ali Bicer (Texas A&M University, USA)
Robert M. Capraro (Texas A&M University, USA)
Mary Margaret Capraro (Texas A&M University, USA)
Jim Morgan (Texas A&M University, USA)
Luciana Barroso (Texas A&M University, USA)

NANOTECHNOLOGY STEM PROGRAM VIA RESEARCH EXPERIENCE FOR HIGH SCHOOL TEACHERS ...................................................................................................... 1883
Mangilal Agarwal (Indiana University-Purdue University Indianapolis, USA)
Qurat-ul-Ann Mirza (Indiana University-Purdue University Indianapolis, USA)
Joseph Bondi (Indiana University-Purdue University Indianapolis, USA)
Brandon Sorge (Indiana University-Purdue University Indianapolis, USA)
Maher Rizkalla (Indiana University-Purdue University Indianapolis, USA)
Richard Ward (Indiana University-Purdue University Indianapolis, USA)
Corbin Feldhaus (Charlestown High School, USA)
Amy Hinshaw (McKenzie Center for Innovation & Technology, Indianapolis, USA)
Kody Varahramyan (Indiana University-Purdue University Indianapolis, USA)

L.E.A.P.: LOCALIZED ENERGY AWARENESS PROGRAM THROUGH COLLABORATIVE K-UNIVERSITY STEM PROJECTS ...................................................................................... 1888
Jamie Kennedy (Drexel University, USA)
Brandon Morton (Drexel University, USA)
Adam Fontecchio (Drexel University, USA)

USING COMMON ELEMENTS TO EXPLAIN ELECTROMAGNETISM TO CHILDREN: REMOTE LABORATORY OF ELECTROMAGNETIC CRANE ................................................................................. 1892
German Carro Fernandez (Spanish University for Distance Education - UNED, Spain)
Ramón Carrasco Borrego (Spanish University for Distance Education - UNED, Spain)
Elio Sancristobal Ruiz (Spanish University for Distance Education - UNED, Spain)
Manuel Castro Gil (Spanish University for Distance Education - UNED, Spain)
Francisco Mur Perez (Spanish University for Distance Education - UNED, Spain)

AN AGILE LEARNING DESIGN METHOD FOR OPEN EDUCATIONAL RESOURCES ...................................................................................................... 1897
Mauricio Massaru Arimoto (University of São Paulo, Brazil)
Ellen Francine Barbosa (University of São Paulo, Brazil)
Leonor Barroca (The Open University, United Kingdom)

STUDENT-PERCEIVED EFFECTIVENESS OF ONLINE CONTENT DELIVERY MODES ...................................................................................................... 1906
Julie S. Mullen (Worcester Polytechnic Institute, USA)
John M. Sullivan, Jr (Worcester Polytechnic Institute, USA)
TOPIC BASED SEGMENTATION OF CLASSROOM VIDEOS.............................................................................. 1910
Tayfun Tuna (University of Houston, USA)
Mahima Joshi (University of Houston, USA)
Varun Varghese (University of Houston, USA)
Rucha Deshpande (University of Houston, USA)
Jaspal Subhlok (University of Houston, USA)
Rakesh Verma (University of Houston, USA)

MOTIVATING STUDENTS WITH NEW MECHANISMS OF ON-LINE ASSIGNMENTS AND EXAMINATION TO MEET THE MOOC CHALLENGES FOR PROGRAMMING................................................................. 1919
Xiaohong Su (Harbin Institute of Technology, P.R. China)
Tiantian Wang (Harbin Institute of Technology, P.R. China)
Jing Qiu (Harbin Institute of Technology, P.R. China)
Lingling Zhao (Harbin Institute of Technology, P.R. China)

SUPPORTING REAL OPEN EDUCATIONAL RESOURCES IN EDU-AREA ............................................................ 1925
Manuel Caeiro-Rodríguez (Universidade de Vigo, Spain)
Martín Llamas-Nistal (Universidade de Vigo, Spain)
Manuel Fernández-Iglesias (Universidade de Vigo, Spain)
Fernando Mikic-Fonte (Universidade de Vigo, Spain)
Manuel Lama-Penín (Universidade de Santiago de Compostela, Spain)

S2H: Assessment
Chair: Senay Purzer (Purdue University, USA)
11:00 AM - 12:30 PM
Room: Rio Grande Room

ON THE EFFECTIVENESS OF USING MIDTERM EXAMINATIONS STRICTLY FOR FORMATIVE FEEDBACK ............................................................................................ 1933
Robert M. O'Connell (University of Missouri, USA)

AN ASSESSMENT ARCHITECTURE FOR COMPETENCY-BASED LEARNING: VERSION 1.0 ..................... 1936
Jeffrey J. Evans (Purdue University, USA)
Esteban Garcia (Purdue University, USA)
Michael Smith (Purdue University, USA)
Amy Van Epps (Purdue University, USA)
Michael Fosmire (Purdue University, USA)
Sorin Matei (Purdue University, USA)

SYSTEMS THINKING SKILLS OF UNDERGRADUATE ENGINEERING STUDENTS........................................ 1943
Shaobo Huang (South Dakota School of Mines and Technology, USA)
Karim Heinz Muci-Kuchler (South Dakota School of Mines and Technology, USA)
Mark D. Bedillion (South Dakota School of Mines and Technology, USA)
Marius D. Ellingsen (South Dakota School of Mines and Technology, USA)
Cassandra M. Degen (South Dakota School of Mines and Technology, USA)

AN ANALYSIS OF THE PROVISION OF CONTEXT WITHIN EXISTING REMOTE LABORATORIES ........................ 1948
Tania Machet (The University of Sydney, Australia)
David Lowe (The University of Sydney, Australia)
EVALUATION AND CONTINUOUS IMPROVEMENT IN A MULTIDISCIPLINARY S-STEM PROGRAM FOCUSING ON PROFESSIONAL SKILLS, GOALS & MENTORING ................................................................. 1957
Robert H. Kinzel (Minnesota State University, Mankato, USA)
Jennifer Veltsos (Minnesota State University, Mankato, USA)
Rebecca A. Bates (Minnesota State University, Mankato, USA)
Rachel E. Cohen (Minnesota State University, Mankato, USA)
Winston Sealy (Minnesota State University, Mankato, USA)
Deborah K. Nykanen (Minnesota State University, Mankato, USA)

S2I: Innovative Curriculum & Course Design V
Chair: Dan Tappan (Eastern Washington University, USA)
11:00 AM - 12:30 PM
Room: Santa Fe Room

A COMPARATIVE ANALYSIS OF TWO GLOBALLY DISTRIBUTED GROUP PROJECTS: A PERSPECTIVE FROM CSCW/CSCL RESEARCH.......................................................................................... 1964
Roger McDermott (Robert Gordon University, United Kingdom)
Mats Daniels (Uppsala University, Sweden)
Åsa Cajander (Uppsala University, Sweden)
Julian Bass (Robert Gordon University, United Kingdom)
Jay Prakash Lalchandani (International Institute for Information Technology, India)

A QUASI-NETWORK-BASED FLY-BY-WIRE SIMULATION ARCHITECTURE FOR TEACHING SOFTWARE ENGINEERING ............................................................................................. 1973
Dan Tappan (Eastern Washington University, USA)

PEER INSTRUCTION METHODOLOGY FOR LINEAR ALGEBRA SUBJECT: A CASE STUDY IN AN ENGINEERING COURSE ...................................................................................... 1981
Katiuscia C. B. Teixeira (Federal University of Ceará, Brazil)
Thomaz E. V. Silva (Federal University of Ceará, Brazil)
Joao C. M. Mota (Federal University of Ceará, Brazil)
Natália C. Barroso (Federal University of Ceará, Brazil)
Eduardo V. O. Teixeira (Federal University of Ceará, Brazil)

AN INTEGRATED CURRICULUM FOR INTERNET OF THINGS: EXPERIENCE AND EVALUATION .............................................................................................................. 1988
Simon G. M. Koo (Jesuit Liberal Arts College, Hong Kong)

USING AN INTERACTIVE ANIMATED TOOL TO IMPROVE THE EFFECTIVENESS OF LEARNING CPU SCHEDULING ALGORITHMS .......................................................................................... 1992
Sukanya Suranauwarat (National Institute of Development Administration (NIDA), Thailand)

S3A: Innovative Curriculum & Course Design VI
Chair: Paul B. Crilly (United States Coast Guard Academy, USA)
2:30 PM - 4:00 PM
Room: Kohlberg Room

ANOTHER PERSPECTIVE FOR LINEAR EQUATIONS, MATRICES AND THE TECHNOLOGICAL TOOLS IN LEARNING ...................................................................................... 1999
Rogelio Palomera-Garcia (U. of Puerto Rico at Mayaguez, Puerto Rico)

HOW MANY POINTS SHOULD BE AWARDED FOR INTERACTIVE TEXTBOOK READING ASSIGNMENTS? ............................................................................................................. 2004
Alex Edgcomb (University of California, Riverside, USA, USA)
Frank Vahid (University of California, Riverside, USA, USA)

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2015 IEEE Frontiers in Education Conference
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COMBINING MATLAB® SIMULATION WITH TELECOMMUNICATIONS INSTRUCTIONAL MODELING (TIMSTM) IN A SENIOR LEVEL COMMUNICATIONS COURSE ................................................................. 2008
Richard J. Hartnett (U.S. Coast Guard Academy, USA)
Paul B. Crilly (U.S. Coast Guard Academy, USA)

MORE THAN JUST RIGHT OR WRONG: USING CONCEPT QUESTIONS TO DISCERN STUDENTS' THINKING IN MECHANICS .......................................................................................... 2012
Jeffrey L. Newcomer (Western Washington University, USA)

S3B: Global Programs
Chair: Joyce B. Main (Purdue University, United States)
2:30 PM - 4:00 PM
Room: Pancho Villa Room

ENTERPRISE ARCHITECTURE OF COLOMBIAN HIGHER EDUCATION ................................................................................................................................. 2019
Ricardo Llamosa-Villalba (Industrial University of Santander, Colombia)
Dario J. Delgado Q. (Industrial University of Santander, Colombia)
Luz Torres Carreño (Industrial University of Santander, Colombia)
Andres Bueno Barajas (Industrial University of Santander, Colombia)
Ana M. Paéz Q. (Industrial University of Santander, Colombia)
Edgar Garcia Sneyder (Industrial University of Santander, Colombia)

EVIDENCE-BASED APPROACHES FOR ENGINEERING GLOBAL PREPAREDNESS PROGRAMMING: RESEARCH TO INFORM PRACTICE ............................................................................. 2028
Scott C. Streiner (University of Pittsburgh, USA)
Mary Besterfield-Sacre (University of Pittsburgh, USA)

EXAMINING HOW INTERNATIONAL EXPERIENCES PROMOTE GLOBAL COMPETENCY AMONG ENGINEERING GRADUATE STUDENTS .................................................................................. 2033
Lauren B. Denney (Purdue University, USA)
Matilde Sánchez-Peña (Purdue University, USA)
Joyce B. Main (Purdue University, USA)

A SEMESTER-LONG STUDY ABROAD MODEL FOR ENGINEERING STUDENTS - THE UNIFIED PROJECT APPROACH .................................................................................................................. 2041
John W. Dyer (The University of Oklahoma, USA)
Theresa M. Marks (The University of Oklahoma, USA)
Chris Ramseyer (The University of Oklahoma, USA)
James J. Sluss (The University of Oklahoma, USA)
P. Simin Pulat (The University of Oklahoma, USA)
Kirk Duclaux (The University of Oklahoma, USA)

S3C: Outreach & University, Community Collaborations
Chair: Natascha Trellinger (Purdue University, United States)
2:30 PM - 4:00 PM
Room: Angus Room

LEARNING PHILOSOPHIES: A GLIMPSE INTO STUDENTS' APPROACHES TO A LEARNING ...................................................................................................................... 2045
Natascha M. Trellinger (Purdue University, USA)
Michael C. Loui (Purdue University, USA)
A BRIDGE TO ENGINEERING: A PERSONALIZED PRECALCULUS (BRIDGE) PROGRAM .................... 2053
Sandra B. Nite (Texas A&M University, USA)
G. Donald Allen (Texas A&M University, USA)
Michael Pilant (Texas A&M University, USA)
Robert M. Capraro (Texas A&M University, USA)
Mary M. Capraro (Texas A&M University, USA)
Jim Morgan (Charles Sturt University, USA)

FIRST IN THE FAMILY: A COMPARISON OF FIRST-GENERATION AND NON-FIRST-GENERATION ENGINEERING COLLEGE STUDENTS .................................................................................. 2059
Dina Verdin (Purdue University, USA)
Allison Godwin (Purdue University, USA)

EFFECTS OF PRE-COLLEGE ENGINEERING PARTICIPATION ON FIRST-YEAR ENGINEERING OUTCOMES ......................................................................................................................... 2067
Noah Salzman (Boise State University, USA)
Matthew Ohland (Purdue University, USA)

S3D: First and Second Year Topics III
Chair: James Morris (Portland State University, USA)
2:30 PM - 4:00 PM
Room: Brahma Room

EARLY IDENTIFICATION OF AT-RISK STUDENTS IN A LOWER-LEVEL ENGINEERING GATEKEEPER COURSE ........................................................................................................... 2071
Horacio Vasquez (The University of Texas-Pan American, USA)
Arturo A. Fuentes (University of Texas-Pan American, USA)
Javier A. Kypuros (The University of Texas-Pan American, USA)
Mohammad Azarbayejani (The University of Texas-Pan American, USA)

ENGINEERING CURRICULUM READINESS: IMPLEMENTING AN ANALYTICAL AND COMMUNICATION SKILLS BUILDING COURSE FOR THE TECHNICAL DISCIPLINES ........................................................................ 2080
Barbara Christe (IUPUI, USA)
Alison Stevenson (IUPUI, USA)

GETTING PAST THE FIRST YEAR: RETAINING ENGINEERING MAJORS ................................................ 2084
A.E. Dreyfuss (NYC College of Technology, CUNY, USA)
Melanie Villatoro (NYC College of Technology, CUNY, USA)
Michael C. Loui (Purdue University, USA)
James E. Becvar (University of Texas El Paso, USA)
Geoffrey B. Sautre (University of Texas El Paso, USA)
Wayne Johnson (Mass Insight Global Partnerships, USA)

S3E: Student Interest
Chair: Linda P. DuHadway (Utah State University, USA)
2:30 PM - 4:00 PM
Room: Charolais Room

ARE THEY SIMPLY INTERESTED? AN EXPLORATION OF ENGINEERING STUDENTS' MOST FAVORITE CLASS ........................................................................................................ 2090
Dazhi Yang (Boise State University, USA)
Louis S. Nadelson (Utah State University, USA)
Kimberly Hardy (Boise State University, USA)
IS THIS "TRANSFER SHOCK"? EXAMINING THE PERCEPTIONS OF ENGINEERING STUDENTS WHO ARTICULATE WITHIN THE IRISH HIGHER EDUCATION CONTEXT ......................... 2094
Susan O'Shaughnessy (Dublin Institute of Technology, Ireland)
Anne Marie McCarrick (Dublin Institute of Technology, Ireland)
Fionnuala Farrell (Dublin Institute of Technology, Ireland)
Una Beagon (Dublin Institute of Technology, Ireland)
Lance C. Pérez (University of Nebraska-Lincoln, USA)

WHATSAPP WITH LEARNING PREFERENCES? ................................................................. 2101
Imelda Smit (North-West University, South Africa)

THE PUERTO RICO CUBESAT PROJECT TO ATTRACT STEM STUDENTS INTO THE AREA OF AEROSPACE ENGINEERING ..................................................... 2107
Rachid Darbali-Zamora (University of Puerto Rico Mayagüez Campus, Puerto Rico)
Eduardo I. Ortiz-Rivera (University of Puerto Rico Mayagüez Campus, Puerto Rico)
Amilcar A. Rincon-Charris (Inter American University of Puerto Rico, Bayamon, Puerto Rico)

INFORMING CHANGE: COURSE CONTENT ANALYSIS AND ORGANIZATION .............. 2114
Linda P. DuHadway (Utah State University, USA)
Thomas C. Henderson (University of Utah, USA)

AUTOMATICALLY AUGMENTING LEARNING MATERIAL WITH PRACTICAL QUESTIONS TO INCREASE ITS RELEVANCE ....................................................... 2123
Gaurav Kumar Singh (Tata Consultancy Services Limited, India)
Varun Kumar (Tata Consultancy Services Limited, India)
Savita Bhat (Tata Consultancy Services Limited, India)
Niranjan Pedanekar (Tata Consultancy Services Limited, India)

BLENDING LEARNING AT MATHS WITH AEROSPACE ENGINEERING FRESHMEN .......... 2130
N. Llobregat-Gómez (Universitat Politècnica de Valencia, Spain)
J.-A. Morañó (Universitat Politècnica de València, Spain)
M.-D. Roselló (Universitat Politècnica de València, Spain)
L.M. Sánchez Ruiz (Universitat Politècnica de València, Spain)

SOUTH AFRICAN STUDENT PERCEPTIONS OF PRACTICAL LABORATORY WORK - A CASE STUDY FROM DIGITAL SYSTEMS 1 ..................................................... 2134
R.B. Kuriakose (Central University of Technology, South Africa)
A.J. Swart (Central University of Technology, South Africa)

CYBER-INFRASTRUCTURE SUPPORT FOR THE INTEGRATION AND ANALYSIS OF STUDENT SUCCESS DATA ................................................................. 2141
Wai Yan Elsa Tai (University of Texas at El Paso, USA)
Ann Q. Gates (University of Texas at El Paso, USA)
Monika Akbar (University of Texas at El Paso, USA)
S3G: K-12 Education IV
Chair: DeLean Tolbert (Purdue University, USA)
2:30 PM - 4:00 PM
Room: Hereford Room

DEFINING MOMENTS: THE LINK BETWEEN DEFINITIONS OF
TEACHING AND THE DESIRE TO TEACH ................................................................. 2146
Yevgeniya V. Zastavker (Olin College of Engineering, USA)
Jeremy M. Goodman (Olin College of Engineering, USA)
Rebecca J. Christianson (Olin College of Engineering, USA)

INNOESCUELA, INNOVATION IN SECONDARY SCHOOL TECHNICAL STUDIES ........................................ 2151
Manuel Blazquez (Universidad A.de Nebrija, Spain)
Federico Baeza (Fundación Cotec para la Innovación Tecnológica, Spain)
Manuel Castro (Spanish University for Distance Education - UNED, Spain)
Elio Sancristobal (Spanish University for Distance Education - UNED, Spain)
Pablo Losada (Spanish University for Distance Education - UNED, Spain)
German Carro (Spanish University for Distance Education - UNED, Spain)
Salvador Ros (Spanish University for Distance Education - UNED, Spain)
Javier Garcia-Zubia (University of Deusto, Spain)

ARTS & BOTS: APPLICATION AND OUTCOMES OF A SECONDARY SCHOOL
ROBOTICS PROGRAM .............................................................................................................. 2159
Jennifer L. Cross (Carnegie Mellon University, USA)
Emily Hamner (Carnegie Mellon University, USA)
Chris Bartley (Carnegie Mellon University, USA)
Illah Nourbakhsh (Carnegie Mellon University, USA)

VIRTUAL EXPERIMENTS FOR INTRODUCTION OF COMPUTING:
USING VIRTUAL REALITY TECHNOLOGY .............................................................................. 2168
Fengxia Li (Beijing Institute of Technology, P.R. China)
Dongni Li (Beijing Institute of Technology, P.R. China)
Jun Zheng (Beijing Institute of Technology, P.R. China)
Sanyuan Zhao (Beijing Institute of Technology, P.R. China)

S3H: Innovative Curriculum & Course Design VII
Chair: Samuel A Malachowsky (Rochester Institute of Technology, United States)
2:30 PM - 4:00 PM
Room: Rio Grande Room

A NEW SIGNAL PROCESSING COURSE FOR DIGITAL CULTURE ................................................................. 2173
Andreas Spanias (Arizona State University, USA)
Paul Curtis (Arizona State University, USA)
Photini Spanias (Arizona State University, USA)
Mahesh K. Banavar (Clarkson University, USA)

AN APPROACH TO IMPROVING STUDENT LEARNING OF CIVIL ENGINEERING
CONCEPTS USING CASE STUDIES .............................................................................. 2177
Hudson Jackson (United States Coast Guard Academy, USA)
Corinna Fleischmann (United States Coast Guard Academy, USA)
Kassim Tarhini (United States Coast Guard Academy, USA)

A PROJECT COMPONENT IN A WEB ENGINEERING COURSE ................................................................. 2182
Samuel A. Malachowsky (Rochester Institute of Technology, USA)
Daniel E. Krutz (Rochester Institute of Technology, USA)
ANALYSIS OF THE UTILIZATION OF WEB 2.0 RESOURCES IN SECONDARY EDUCATION AND ADVANCED VOCATIONAL TRAINING STUDIES ...................................................... 2188
Federico Banda-Sierra (Universidad Alfonso X El Sabio, Spain)
Antonio J. Reinoso (Universidad Alfonso X El Sabio, Spain)
Susana Reichardt (Universidad Alfonso X El Sabio, Spain)

AN INTELLIGENT STUDENT ADVISING SYSTEM USING COLLABORATIVE FILTERING ......................... 2194
Kathiravelu Ganeshan (Unitec Institute of Technology, New Zealand)
Xiaosong Li (Unitec Institute of Technology, New Zealand)

S3I: Project-Based Learning
Chair: Stephen Frezza (Gannon University, USA)
2:30 PM - 4:00 PM
Room: Santa Fe Room

CAMPUS INTEGRATED PROJECT-BASED LEARNING COURSE IN CIVIL AND ENVIRONMENTAL ENGINEERING ................................................................. 2202
Jeffery Roesler (University of Illinois Urbana-Champaign, USA)
Paul Littleton (University of Illinois Urbana-Champaign, USA)
Arthur Schmidt (University of Illinois Urbana-Champaign, USA)
Lance Schideman (University of Illinois Urbana-Champaign, USA)
Morgan Johnston (University of Illinois Urbana-Champaign, USA)
Jose Mestre (University of Illinois Urbana-Champaign, USA)
Geoffrey Herman (University of Illinois Urbana-Champaign, USA)
Irene Mena (University of Illinois Urbana-Champaign, USA)
Emily Gates (University of Illinois Urbana-Champaign, USA)
Jason Morphew (University of Illinois Urbana-Champaign, USA)
Liang Liu (University of Illinois Urbana-Champaign, USA)

USING MODERN PEDAGOGICAL TOOLS TO IMPROVE LEARNING IN TECHNOLOGICAL CONTENTS ................................................................. 2209
Jose P. Queiroz-Neto (Federal Institute of Amazonas, Brazil)
Diego C. Sales (Federal Institute of Amazonas, Brazil)
Hayanne S. Pinheiro (Federal Institute of Amazonas, Brazil)
Benjamin O. Neto (Federal Institute of Amazonas, Brazil)

EVALUATION OF STUDENT LEARNING OUTCOMES IN FOURTH YEAR ENGINEERING MECHATRONICS THROUGH DESIGN BASED LEARNING CURRICULUM .................................................... 2217
Sivachandran Chandrasekaran (Deakin University, Australia)
John M. Long (Deakin University, Australia)
Matthew A. Joordens (Deakin University, Australia)

S4B: Innovative Tools and Approaches
Chair: Efraín O'Neill-Carrillo (University of Puerto Rico-Mayaguez, Puerto Rico)
4:30 PM - 6:00 PM
Room: Pancho Villa Room

A BUSINESS INTELLIGENCE MODEL FOR ONLINE TUTORING PROCESS ................................................................. 2224
Priscila Valdiviezo-Díaz (Universidad Técnica Particular de Loja, Ecuador)
Jorge Cordero (Universidad Técnica Particular de Loja, Ecuador)
Ruth Reátegui (Universidad Técnica Particular de Loja, Ecuador)
Jose Aguilar (Universidad Técnica Particular de Loja, Venezuela)

DESIGN AND IMPACT OF A CLASSROOM INTERVENTION TO SUPPORT TEAMING METACOGNITION ........................................................................... 2233
Lee Rynearson (Purdue University, USA)
Morgan Hynes (Purdue University, USA)
SEAMLESS CROSS-PLATFORM INTEGRATION OF EDUCATIONAL RESOURCES FOR IMPROVED LEARNING EXPERIENCES ................................................................. 2239
Leonardo Favario (Politecnico di Torino, Italy)
Angelo Raffaele Meo (Politecnico di Torino, Italy)
Enrico Masala (Politecnico di Torino, Italy)

ANALYSIS OF INTEGRATION OF REMOTE LABORATORIES FOR RENEWABLE ENERGY COURSES AT JORDAN UNIVERSITIES ................................................................. 2243
Ll. Tobarra (Universidad Nacional de Educación a Distancia, Spain)
S. Ros (Universidad Nacional de Educación a Distancia, Spain)
R. Hernandez (Universidad Nacional de Educación a Distancia, Spain)
R. Pastor (Universidad Nacional de Educación a Distancia, Spain)
M. Castro (Universidad Nacional de Educación a Distancia, Spain)
A.Y. Al-Zoubi (Princess Sumaya University for Technology, Jordan)
B. Hammad (The Hashemite University, Jordan)
M. Dmour (University of Jordan, Jordan)
A.C. Caminero (Universidad Nacional de Educación a Distancia, Spain)

A NOVEL, INTERNATIONAL MASTERS PROGRAM TO ADDRESS THE SUSTAINABLE ENERGY CHALLENGE .................................................................................................. 2248
Efrain O'Neill-Carrillo (University of Puerto Rico-Mayagüez, Puerto Rico)
Agustín Irizarry-Rivera (University of Puerto Rico-Mayagüez, Puerto Rico)
Cristina Pomales-García (University of Puerto Rico-Mayagüez, Puerto Rico)
Emilio Contreras (University of APEC, Dominican Republic)

SELF-REGULATED LEARNING IN TRANSFER STUDENTS: A CASE STUDY OF NON-TRADITIONAL STUDENTS ................................................................................... 2254
Sara Hooshangi (The George Washington University, USA)
Jonathan Willford (The George Washington University, USA)
Tara Behrend (The George Washington University, USA)

TRANSFER STUDENT PATHWAYS TO ENGINEERING DEGREES: A MULTI-INSTITUTIONAL STUDY BASED IN TEXAS ................................................................. 2259
Andrea M. Ogilvie (Virginia Tech, USA)
David B. Knight (Virginia Tech, USA)
Maura Borrego (The University of Texas at Austin, USA)
Arturo A. Fuentes (The University of Texas-Pan American, USA)
Patricia A. Nava (The University of Texas at El Paso, USA)
Valerie E. Taylor (Texas A&M University, USA)

INFLUENCE OF PROFESSIONAL DEMOGRAPHICS ON FACULTY FEEDBACK IN AN ASYNCHRONOUS, VIDEO-ANNOTATED PEER REVIEW (VAPR) ............................................. 2264
James J. Pembridge (Embry-Riddle Aeronautical University, USA)
Yosef Allam (Embry-Riddle Aeronautical University, USA)
Lisa K. Davids (Embry-Riddle Aeronautical University, USA)

PATHWAY, CHOICE OF MAJOR, AND PEER ECONOMIC STATUS OF NONTRADITIONAL STUDENTS IN ENGINEERING .......................................................... 2272
Jacqueline C. McNeil (Purdue University, USA)
Matthew W. Ohland (Purdue University, USA)
CULTURALLY SITUATED SURVEY OF ENGINEERING IDENTITY FOR LATIN/A/O UNDERGRADUATES ................................................................. 2277
Renata A. Revelo (University of Illinois at Urbana-Champaign, USA)

**S4D: Technological Tools II**
**Chair:** Jaspal Subhluk (University of Houston, USA)
**4:30 PM - 6:00 PM**
**Room:** Brahma Room

**TECHNOLOGICAL TOOLS TO LEARN CALCULUS** .......................................................................................................................... 2282
Gloria Patricia Pérez Gómez (Universidad EAFIT, Colombia)
Claudia Maria Zea Restrepo (Universidad EAFIT, Colombia)
Pedro Vicente Esteban Duarte (Universidad EAFIT, Colombia)
Luis Felipe Zapata Rivera (Universidad EAFIT, Colombia)

**CONSTRUCT PEER ASSESSMENT INSTRUMENT USING EXISTING E-LEARNING TOOLS** .................................................................. 2290
Xiaosong Li (Unitec institute of technology, New Zealand)

**USE OF OPERATIONAL AMPLIFIERS AND DISCRETE OFF-THE-SHELF COMPONENTS TO TEACH FUZZY LOGIC CONTROLLER CONCEPTS** .......................................................................................................................... 2294
Nicolas Cobo-Yepes (University of Puerto Rico - Mayaguez Campus, Puerto Rico)
Rogelio Palomera-Garcia (University of Puerto Rico - Mayaguez Campus, Puerto Rico)

**USING AUDIO AMPLIFIER DISTORTION CHARACTERISTICS AS A PEDAGOGICAL TOOL TO EXPLAIN SIGNAL PROCESSING THEORY** .......................................................................................................................... 2299
Paul Crilly (U.S. Coast Guard Academy, USA)
Richard Hartnett (U.S. Coast Guard Academy, USA)

**A MIXED PEDAGOGICAL METHOD TO IMPROVE TEACHING AND LEARNING IN BRAZILIAN COMPUTING AREA UNDERGRADUATE COURSES** ................................................................. 2303
Alberto Lima (Federal University of Ceará, Brazil)
Wagner Andriola (Federal University of Ceará, Brazil)
Neuman de Souza (Federal University of Ceará, Brazil)
Thomaz E. V. da Silva (Federal University of Ceará, Brazil)
Zarathon L. Viana (Federal University of Ceará, Brazil)

**S4E: Co-Ops and Early Career Training**
**Chair:** Samantha Brunhaver (Arizona State University, United States)
**4:30 PM - 6:00 PM**
**Room:** Charolais Room

**MODELING STUDENT PERCEIVED COSTS AND BENEFITS TO COOPERATIVE EDUCATION PROGRAMS (CO-OPS) AND PATHWAYS TO PARTICIPATION** .................................................................................................................. 2312
Beata Strubel (Purdue University, USA)
Joyce Main (Purdue University, USA)
Nichole Ramirez (Purdue University, USA)
Jake Davis (Purdue University, USA)
Matthew Ohland (Purdue University, USA)

**MAPPING CAREER SUCCESS COMPETENCIES TO ENGINEERING LEADERSHIP CAPABILITIES** .......................................................................................................................... 2318
Robyn Paul (University of Calgary, Canada)
Lynne Cowe Falls (University of Calgary, Canada)
PROFESSIONAL ENGINEERING PATHWAYS STUDY - A LONGITUDINAL STUDY OF EARLY CAREER PREPAREDNESS AND DECISION-MAKING
Samantha Brunhaver (Arizona State University, USA)
Cheryl Carrico (Virginia Tech, USA)
Holly Matusovich (Virginia Tech, USA)
Ruth Streveler (Purdue University, USA)
Peggy Boylan-Ashraf (Stanford University, USA)
Sheri Sheppard (Stanford University, USA)

ASSESSMENT OF A COOPERATIVE TRAINING COURSE USING FACULTY COURSE ASSESSMENT REPORT IN AN ABET ACCREDITED ENGINEERING TECHNOLOGY PROGRAM
Mohammed Mujahid Ulla Faiz (King Fahd University of Petroleum & Minerals, Saudi Arabia)
Mubarak Almutairi (King Fahd University of Petroleum & Minerals, Saudi Arabia)

S4F: Communication and Storytelling
Chair: Imelda Smit (North West University, South Africa)
4:30 PM - 6:00 PM
Room: Longhorn Room

IS THIS THING ON? DETERMINING COMFORT LEVEL WITH COMMUNICATION SKILLS IN A TECHNICAL DISCIPLINE
Adrienne Decker (Rochester Institute of Technology, USA)
Christopher A. Egert (Rochester Institute of Technology, USA)

FORMULATING THE PROBLEM: DIGITAL STORYTELLING AND THE DEVELOPMENT OF ENGINEERING PROCESS SKILLS
Tamara Ball (University of California, Santa Cruz, USA)
Linnea Beckett (University of California, Santa Cruz, USA)
Michael Isaacson (University of California, Santa Cruz, USA)

IS INFORMATION TECHNOLOGY GENERAL EDUCATION EFFECTIVE FOR NON-ENGINEERING MAJOR STUDENTS? AN EXPLORATORY STUDY ON ETHNICALLY CHINESE CLASSROOMS
Kai Pan Mark (BNU - HKBU United International College, Hong Kong)
Gary K. W. Wong (Hong Kong Institute of Education, Hong Kong)

LECTURE, NARRATED SLIDES, OR FIRST PERSON VIEW? IMPACT OF PRESENTATION ON LEARNING OUTCOMES
Michael P. McGarry (University of Texas at El Paso, USA)
Patrick Seeling (Central Michigan University, USA)

RAPID IMPROVEMENT OF STUDENTS' SOFT-SKILLS BASED ON AN AGILE-PROCESS APPROACH
Eduardo Valentin (Federal University of Amazonas, Brazil)
José Reginaldo Hughes Carvalho (Federal University of Amazonas, Brazil)
Raimundo Barreto (Federal University of Amazonas, Brazil)

S4G: Computing Education
Chair: David R Monismith, Jr. (Northwest Missouri State University, USA)
4:30 PM - 6:00 PM
Room: Hereford Room

NANOTECHNOLOGY: SIMULATION AND DESIGN
James E. Morris (Portland State University, USA)

INCORPORATING PARALLELISM AND HIGH PERFORMANCE COMPUTING INTO COMPUTER SCIENCE COURSES
David R. Monismith Jr. (Northwest Missouri State University, USA)
REPRESENTATION OF ABSTRACT CONCEPTS: DIFFERENCES ACROSS COMPUTING DISCIPLINES .......................................................................................................................... 2383
Laura Benvenuti (Open Universiteit, The Netherlands)
C. F. (Nelleke) Louwe Kooijmans (Leiden Institute of Advanced Computer Science, The Netherlands)
Johan Versendaal (Open Universiteit, The Netherlands)
Gerrit C. van der Veer (Dalian Maritime University, P.R. China)

TEACHING AND LEARNING SOFTWARE PROJECT MANAGEMENT: A HANDS-ON APPROACH .................................................................................................................. 2392
Rogério Eduardo Garcia (Universidade Estadual Paulista "Júlio de Mesquita Filho", Brazil)
Ronaldo Celso Messias Correia (Universidade Estadual Paulista "Júlio de Mesquita Filho", Brazil)
Celso Olivete Junior (Universidade Estadual Paulista "Júlio de Mesquita Filho", Brazil)
Analice C. Brandi (Universidade Estadual Paulista "Júlio de Mesquita Filho", Brazil)
Jorge Marques Prates (Universidade Estadual de Mato Grosso de Sul, Brazil)

COMPUTATIONAL PLATFORM FOR THE EDUCATIONAL MODEL BASED ON THE CLOUD PARADIGM ........................................................................................................ 2399
Jose Aguilar (Universidad de Los Andes, Venezuela)
Karla Moreno (Universidad de Los Andes, Venezuela)
Ricardo Dos Santos (Universidad de Los Andes, Venezuela)
Junior Altamiranda (Universidad de Los Andes, Venezuela)
Domingo Hernandez (Universidad de Los Andes, Venezuela)
Jairo Fuentes (Universidad San Francisco de Paula Santander, Colombia)
Omar Portillo (Universidad de Pamplona, Colombia)

S4I: Innovative Curriculum & Course Design VIII
Chair: Chiu Choi (University of North Florida, United States)
4:30 PM - 6:00 PM
Room: Santa Fe Room

EXPERIENCE OF EXPERIMENTAL TEACHING AND MANAGEMENT BASED ON CLOUD COMPUTING ................................................................................................................... 2408
Jun Zhang (Dalian Maritime University, P.R. China)
Sheng Bi (Dalian Maritime University, P.R. China)
Xueyu Geng (Dalian Maritime University, P.R. China)
Xianping Fu (Dalian Maritime University, P.R. China)

TEACHING RESEARCH AND PRACTICE OF BLENDED LEARNING MODEL BASED ON COMPUTATIONAL THINKING ......................................................................................... 2413
Ying Li (Beijing University, P.R. China)
Yu Liu (Beihang University, P.R. China)
Pan Shu (Beihang University, P.R. China)

BE A SIMULATOR DEVELOPER AND GO BEYOND IN COMPUTING ENGINEERING ...................................................................................................................... 2421
Ricardo Ferreira (Universidade Federal de Vicosa, Brazil)
Jose Nacif (Universidade Federal de Vicosa, Brazil)
Salles Magalhaes (Universidade Federal de Vicosa, Brazil)
Thales de Almeida (Universidade Federal de Vicosa, Brazil)
Racyus Pacifico (Universidade Federal de Vicosa, Brazil)

THE APPROACH TO DESIGN OF STEM COURSES' LEARNING RESOURCES BASED ON STUDENTS' ACTIVITY WITH THE USE OF SCIENTIFIC RESOURCES' DATABASES ......................................................... 2429
Alexey Dukhanov (ITMO University, Russia)
Anna Bilyatdinova (ITMO University, Russia)
Klavdiya Bochenina (ITMO University, Russia)
Vladislav Karbovskii (ITMO University, Russia)
COMPARING MICROCONTROLLER AND ANALOG METHODS FOR TRACKING CONTROL EXPERIMENTS ............................... 2435
Chiu Choi (University of North Florida, USA)

AUTHOR INDEX .................................................................................................................. 2439