

# Engineering Ethics Division Program for ASEE 2020 Annual Conference

**Monday, June 22, 2020**

## **M320-New Media for Ethics Education**

Mon. June 22, 2020 11:40 AM to 12:00 PM

### **Moderated by**

Buse Aktas and Dr. Hamid Khan P.E.

### **Papers Presented**

1. **Science Fiction as an Entry Point for Ethical Frameworks in Engineering and Computer Science Education**  
Dr. Valerie H. Summet (Rollins College) and Prof. Rebecca A. Bates (Minnesota State University, Mankato)
2. **Let's Get Ethical: Incorporating "The Office" and Engaging Practices into an Ethics Module for Capstone Students**  
Dr. Joshua Gargac (University of Mount Union)
3. **A Simulation for Exploring Ethical Situations that Arise from Conflicting Product Goals**  
Prof. Allen R. White (Rose-Hulman Institute of Technology)

## **ASEE Division Mixer**

Mon. June 22, 2020 4:30PM to 5:30PM

**Tuesday, June 23, 2020**

## **T220-Research on Engineering Ethics Education and Practice**

Tue. June 23, 2020 10:20 AM to 10:40 AM

### **Moderated by**

Alison J Kerr

### **Papers Presented**

1. **Health Stress and Support System Narratives of Engineering Students**  
Dr. Greg Rulifson P.E. (U.S. Agency for International Development) and Dr. Angela R. Bielefeldt (University of Colorado Boulder)
2. **Mapping Concepts Engineering Students in China Use to Think about Ethics**  
Dr. Rockwell Franklin Clancy III (University of Michigan-Shanghai Jiao Tong University Joint Institute), Dr. Charlemagne Manuel (University of Michigan Shanghai Jiao Tong University Joint Institute), and Richard James Clancy (University of Colorado Boulder)
3. **Student Perceptions of an Ethics Intervention: Exploration Across Three Course Types**  
Dr. Madeline Polmear (University of Florida), Dr. Angela R. Bielefeldt (University of Colorado Boulder), Dr. Nathan E. Canney (CYS Structural Engineers Inc.), Dr. Chris Swan (Tufts University), and Dr. Daniel Knight (University of Colorado Boulder)

#### 4. **Experiencing Ethical Engineering Practice**

Ms. Dayoung Kim (Purdue University, West Lafayette), Dr. Justin L. Hess (Purdue University, West Lafayette), and Dr. Nicholas D. Fila (Iowa State University)

### **T320-Assessing Ethics Learning**

Tue. June 23, 2020 11:20 AM to 11:40 AM

#### **Moderated by**

Dick Apronti and Dr. Hamid Khan P.E.

#### **Papers Presented**

1. **Using Qualitative Data to Further Examine Flagged Items from the Engineering Ethics Reasoning Instrument (EERI)**  
Peter Wesley Odom (Purdue University, West Lafayette)
2. **Assessment of the Impact of Civil Engineering Design Problems for Promoting Ethical Decisions**  
Dr. Jagadish Torlapati (Rowan University), Dr. Sarah K. Bauer (Rowan University), and Prof. Cheng Zhu (Rowan University)
3. **Measuring Curriculum Effectiveness for Developing Principled Leaders in an Undergraduate Engineering Program**  
Dr. David S. Greenburg (The Citadel) and Dr. Robert J. Rabb P.E. (The Citadel)
4. **Variations in Reflections as a Method for Teaching and Assessment of Engineering Ethics**  
Dr. Angela R. Bielefeldt (University of Colorado, Boulder), Dr. Madeline Polmear (University of Florida), Dr. Chris Swan (Tufts University), Dr. Daniel Knight (University of Colorado Boulder), and Dr. Nathan E. Canney

## **Wednesday, June 24, 2020**

### **W220-Ethical Reasoning and Decision Making**

Wed. June 24, 2020 10:20 AM to 10:40 AM

#### **Moderated by**

Dr. Alexa N. Rihana Abdallah and Dr. Joshua Gargac

#### **Papers Presented**

1. **Ethical Reasoning and Moral Foundations among Engineering Students in China**  
Dr. Rockwell Franklin Clancy III (University of Michigan-Shanghai Jiao Tong University Joint Institute)
2. **WIP: How Should We Decide? The Application of Ethical Reasoning to Decision Making in Difficult Cases**  
Mrs. Natalie C.T. Van Tyne P.E. (Virginia Tech)
3. **Piloting an Adaptive Ethical Decision-Making Tool for Engineering Students**  
Dr. Vignesh Subbian (University of Arizona) and Dr. Linda R Shaw (University of Arizona)

### **W320A-Innovating Ethics Curriculum and Instruction**

Wed. June 24, 2020 11:00 AM to 11:20 AM

#### **Moderated by**

Alison J Kerr and Joel Schneider

#### Papers Presented

1. **Ethical Development Through the Use of Fiction in a Project Based Engineering Program**  
Dr. Rob Sleezer (Minnesota State University, Mankato) and Dr. Rebecca A Bates (Minnesota State University, Mankato)
2. **WIP: A One-Page Ethical Checklist for Engineers**  
Dr. Elizabeth A. DeBartolo (Rochester Institute of Technology (COE)), Prof. Wade L. Robison (Rochester Institute of Technology), and Sarah Aileen Brownell (Rochester Institute of Technology (COE))
3. **Equity, Inclusion and Ethics: Adapting a Mentoring Curriculum to Develop an Ethics Workshop for Engineering Students**  
Dr. Katy Luchini-Colbry (Michigan State University) and Dr. Melissa McDaniels (Michigan State University)
4. **An investigation of when and where ethics appears in undergraduate engineering curricula**  
Dr. Andrew Katz (Virginia Tech) and Mr. Umair Shakir (Virginia Tech)

#### **W320B-Ethical Design**

Wed. June 24, 2020 11:40 AM to 12:00 PM

#### Moderated by

Mr. Jonathan Aurand and Dr. Basel Alsayyed Ahmad P.Eng.

#### Papers Presented

1. **Integrating Ethics into the Curriculum through Design Courses**  
Prof. Scott A Civjan P.E. (University of Massachusetts, Amherst) and Prof. Nicholas Tooker (University of Massachusetts Amherst)
2. **Building Better Worlds: An Interdisciplinary Approach to Engineering Ethics Pedagogy**  
Dr. Amy Schroeder (University of Southern California)
3. **Developing and Applying Knowledge and Skills in Ethics and Professional Morality: An Evidence-Based Practice Paper**  
Dr. Donald Winiiecki (Boise State University), Mr. Lynn Catlin P.E. (Boise State University), and Dr. Harold Ackler (Boise State University)

#### **W477B-DISTINGUISHED LECTURE: Indigeneering Engineering Education: Welcoming Indigenous Knowledge and Wisdom with Integrity**

**Dist. Lecture** ASEE Committee on Diversity, Equity & Inclusion , Engineering Ethics Division, International Division, Liberal Education/Engineering & Society Division, Minorities in Engineering Division, and Engineering Technology Council  
Wed. June 24, 2020 2:00 PM to 2:30 PM

#### Moderated by

Dr. Susan E. Walden

#### Speakers

##### 1. Deanna Burgart

Schulich School of Engineering, University of Calgary

##### 2. Dr. Susan E. Walden

University of Oklahoma

## **W520-Engineering Ethics Division Business Meeting**

Wed. June 24, 2020 2:30 PM to 3:30 PM

**Thursday, June 25, 2020**

### **R320-New Areas of Ethical Inquiry**

Thu. June 25, 2020 10:40 AM to 11:00 AM

**Moderated by**

Dr. Nebojsa Sebastijanovic P.E.

#### **Papers Presented**

- 1. Ethics in Undergraduate Construction Curricula: A Two-Stage Exploratory Sequential Approach to Developing and Piloting the HETC Survey**  
Dr. Kenneth Stafford Sands II (Florida Gulf Coast University), Dr. Annie R Pearce (Virginia Polytechnic Institute and State University), Dr. Denise Rutledge Simmons P.E. (University of Florida), Dr. Min Jae Suh (Sam Houston State University), and Dr. Christine Marie Fiori (Drexel University)
- 2. Curriculum Development for Cyber Ethics with a Focus on Law Enforcement**  
Dr. Joseph Benin (U.S. Coast Guard Academy) and Mr. William Randall (US Coast Guard Academy)
- 3. Ethics in Data Science Education**  
Dr. Karen C. Davis (Miami University)
- 4. WIP: Ethical Responsibility Formation of Students in a Nuclear Engineering Course through Inquiry Learning**  
Ms. Minha R. Ha (Lassonde School of Engineering, York University), Mr. Joshua Racette (Department of Engineering Physics, McMaster University), and Prof. Shinya Nagasaki (Affiliation unknown)

**Friday, June 26, 2020**

### **F320-Reimagining Engineering Ethics**

Fri. June 26, 2020 11:20 AM to 11:40 AM

**Moderated by**

Ms. Sahithya Reddivari and Dr. Nebojsa Sebastijanovic P.E.

#### **Papers Presented**

- 1. Ethics in Engineering or Engineering in Ethics?**  
Mr. Grant A. Fore (Indiana University Purdue University, Indianapolis), Dr. Justin L. Hess (Purdue University), and Dr. Andrew Katz (Virginia Tech)
- 2. Conceptualizing a Theory of Ethical Behavior in Engineering**  
Mr. Luan Minh Nguyen (Iowa State University), Dr. Cristina Poleacovschi (Iowa State University), Dr. Kasey M. Faust (University of Texas at Austin), Kate Padgett Walsh (Iowa State University), Dr. Scott Grant Feinstein (Affiliation unknown), and Dr. Cassandra Rutherford (Iowa State University)
- 3. What Can We Learn from Character Education? A Literature Review of Four Prominent Virtues in Engineering Education**  
Dr. Jessica Koehler (Wake Forest University), Dr. Olga Pierrakos (Wake Forest University), Dr. Michael Lamb (Wake Forest University), Alana Demaske (Wake Forest University), Mr. Carlos

Santos (Wake Forest University), Dr. Michael D. Gross (Wake Forest University), and Mr. Dylan Franklin Brown (Wake Forest University)

**4. Many Facets of Imagination: What Really Matters in Engineering Ethics Instruction?**

Mr. Yousef Jalali (Virginia Tech ) and Prof. Scott A. Civjan (University of Massachusetts Amherst)

**F477-Expanding Resources that Connect Diversity, Equity, Access, and Inclusion with Ethics Education**

**Special** ASEE Committee on Diversity, Equity & Inclusion , Engineering Ethics Division, Liberal Education/Engineering & Society Division, Engineering Technology Council, and Minorities in Engineering Division  
Fri. June 26, 2020 2:00 PM to 3:00 PM

**Moderated by**

Dr. Elizabeth Cady and Jean Sanders

**Speakers**

**1. Dr. Rosalyn W. Berne**

National Academy of Engineering

**2. Prof. Rebecca A Bates**

Minnesota State University, Mankato

**3. Dr. Michael C. Loui**

University of Illinois at Urbana - Champaign