

Schedule at a Glance

Tuesday, 27 May	
4:00 – 6:45 PM	Conference Registration (Latham Ballroom Foyer)
7:00 PM	<p><u>Opening Plenary--Keynote Address (Alumni Center Assembly Hall)</u> A Practical, Comprehensive Decomposition of the Forces, Foci, and Processes for Engineering Education Transformation David E. Goldberg, ThreeJoy Associates and Big Beacon</p>
8:30 PM	Reception (Latham Ballroom A)
Wednesday, 28 May	
7:00 – 8:45 AM	Conference Registration (Latham Ballroom Foyer)
8:15 – 9:30 AM	Paper Sessions I <ul style="list-style-type: none"> • Philosophical Perspectives from Engineers (Cascade A) • Public vs. Expert Understandings in Engineering (Cascade B) • Ethical Issues With Specific Technologies – I (Draper's Meadow)
9:30 – 10:00 AM	Mid-morning Break (Upper Quad)
10:00 – 11:40 AM	Paper Sessions II <ul style="list-style-type: none"> • Epistemological Issues in Engineering (Cascade A) • Governance of Sociotechnical Systems (Cascade B) • Issues in Engineering Education (Draper's Meadow)
11:40 AM -- 12:00 PM	Break
12:00 – 1:30 PM	<p><u>Lunch and Keynote Address (Latham Ballroom A)</u> Engineering Ethics: Reflections on an Intellectual Journey Christelle Didier, Université de Lille III</p>
1:30 – 2:45 PM	Paper Sessions III <ul style="list-style-type: none"> • Sociological Issues in Engineering (Cascade A) • Technological Risk (Cascade B) • Issues in the Philosophy of Technology (Draper's Meadow)
2:45 – 3:15 PM	Mid-afternoon Break (Upper Quad)
3:15 – 4:30	Paper Sessions IV <ul style="list-style-type: none"> • Affective States in Engineering Ethics (Cascade A) • Philosophical Issues in Engineering Design (Cascade B) • Ethical Issues With Specific Technologies – II (Draper's Meadow)
4:30 – 6:00 PM	Break
6:00 – 8:00 PM	<p><u>Conference Dinner & Keynote Address (Latham Ballroom A)</u> Is Technology a Science? Recent Developments in German Philosophy of Technology and Engineering Klaus Kornwachs, Brandenburg University of Technology – Cottbus</p>

Thursday, 29 May	
8:15 – 9:15 AM	<p><u>Panel Session: Philosophy of Engineering and Management (Latham A&B)</u></p> <ul style="list-style-type: none">• Thomas Kowall, Professor Emeritus, Ecole des Ponts, Paris Tech• Stephen C. Armstrong, Professor of Innovation, University of Toronto• Zach Pirtle, George Washington University• Steen Hyldgaard Christensen, Aarhus University
9:15 – 9:45 AM	Break (Upper Quad)
9:45 – 11:30 AM	<p>Paper Sessions V</p> <ul style="list-style-type: none">• Social Responsibilities of Engineers (Cascade B)• Engineering Innovation and the Engineering Method in Historical Context (Draper's Meadow)
11:30 AM – 12:00 PM	Closing Session: A Conversation with the fPET Steering Committee (Latham Ballroom A)
12:00 – 1:00 PM	Box Lunch Pick-Up (Latham Ballroom Foyer)

Detailed Conference Schedule

TUESDAY, 27 MAY

4:00 – 6:45 PM

Conference Registration

Latham Ballroom Foyer

7:00 PM

Opening Plenary--Keynote Address

Alumni Center Assembly Hall

**A Practical, Comprehensive Decomposition of the Forces, Foci, and Processes for
Engineering Education Transformation**

David E. Goldberg, ThreeJoy Associates and Big Beacon

8:30 PM

Reception

Latham Ballroom A

WEDNESDAY, 28 MAY

7:00 – 8:45 AM**Conference Registration**

Latham Ballroom Foyer

8:15 – 9:30 AM**PAPER SESSIONS I****Philosophical Perspectives from Engineers**

Cascade A

Session Chair – ZHU Qin (Purdue University)

8:15-8:40**Pragmatism and Engineering**

William M. Bulleit, Michigan Technological University

8:40-9:05**Axiology of Engineering**Byron Newberry, Zach Bitting, Andrew Hoeckel, Courtney Kimutis, Peyton Lunsford,
Alexa Wilde, Baylor University9:05-9:30**The Value of Engineering to Society**

Erik W. Aslaksen, Gumbooya Pty Ltd

Public vs. Expert Understandings in Engineering

Cascade B

Session Chair – Wang Nan (University of the Chinese Academy of Sciences)

8:15-8:40**Interdisciplinarity, Incommensurability, and Engineering in Policy-Making**

Natasha McCarthy, University College London

8:40-9:05**A Hermeneutical Analysis of the Divergence Between Expert and Public Understanding of Safety**ZHANG Can, Dalian University of Technology & the University of South Carolina – Columbia;
WANG Guoyu, Dalian University of Technology9:05-9:30**The Ultimate Ethics: The Inevitable Approach in Ethics of Science, Technology and Engineering Today**

FAN Chunping, Beijing Institute of Technology

Ethical Issues With Specific Technologies – I

Draper's Meadow

Session Chair – Diane Michelfelder (Macalester College)

8:15-8:40**Ethical and Social Issues of 3-D Printing**

Richard Wilson, University of Maryland Baltimore County

8:40-9:05**Thorium: a viable alternative for uranium?**

Behnam Taebi, Delft University of Technology

9:05-9:30**Allergic to Modern Technology: What Are the Ethical Responsibilities of Society to Electrically Hypersensitive Individuals?**

Kenneth R. Foster, University of Pennsylvania

9:30 – 10:00 AM**Mid-morning Break**

Upper Quad

10:00 – 11:40 AM**PAPER SESSIONS II****Epistemological Issues in Engineering**

Cascade A

Session Chair – Pieter Vermaas (TUDelft)

10:00-10:25.....**Evidence in Engineering**

Eric T. Kerr, National University of Singapore

10:25-10:50.....**The Role of Technologies in Undermining the Perennial Philosophy**

Joe Pitt, Virginia Tech

10:50-11:15.....**The Development of New Engineers' Epistemologies**

Devlin Montfort, Kacey Beddoes, Shane Brown, Oregon State University

11:15-11:40.....**Independence as an Epistemic Strategy in Engineering: Lessons from Space Science Instrument Developments**

Zachary Pirtle, Ademir Vrolijk, Zoe Szajnarfarber, George Washington University

Governance of Sociotechnical Systems

Cascade B

Session Chair – Natasha McCarthy (University College London)

10:00-10:25.....**Finding Common Ground: Engineering Ethics for Transformative Leadership Toward Sustainable Systems**Sharon Jones, University of Portland; Diane Michelfelder, Macalester College;
Indira Nair, Carnegie Mellon University10:25-10:50.....**Leadership for Complex Sociotechnical Systems of Systems**

Darryl Farber, Pennsylvania State University

10:50-11:15.....**The State-Society's Role in Chinese Large-Scale Engineering Projects**

LI Sanhu, Guangzhou Institute of Administration

Issues in Engineering Education

Draper's Meadow

Session Chair – Matt Wisnioski (Virginia Tech)

10:00-10:25.....**It's All About "Languaging:" Teaching Engineering Faculty What They Already Know (But Don't Know They Know) About Communication**

Richard Evans, Cornell University

10:25-10:50.....**Nanotechnology Ethics Education in China: A Case Study**

WANG Nan, University of the Chinese Academy of Sciences

10:50-11:15.....**Students' Perceptions of Ethics in a Project-based Team Context: Implications for Teaching and Assessing Ethical Reasoning in Engineering Education**ZHU Qin, Megan Kenny Feister, Carla B. Zoltowski, Patrice M. Buzzanell,
William C. Oakes, Purdue University11:15-11:40.....**Teaching History and Philosophy of Engineering to Masters Engineering Students**

Stephen C. Armstrong, University of Toronto

11:40 AM – 12:00 PM**Break**

Upper Quad

12:00 – 1:30 PM**Lunch and Keynote Address**

Latham Ballroom A

Engineering Ethics: Reflections on an Intellectual Journey

Christelle Didier, Université de Lille III

1:30 – 2:45 PM

PAPER SESSIONS III

Sociological Issues in Engineering

Cascade A

Session Chair – Richard Evans (Cornell University)

1:30-1:55 **Sociology of Engineering and the Social Evaluation of Engineering Projects**

LI Bocong, University of Chinese Academy of Sciences

1:55-2:20 **Ethics of Community Based Engineering Research**

Sarah Bell, University College London

2:20-2:45 **Engineering Education Policies as Global Assemblages: The Culture of Engineering Education Policymaking in China**

ZHU Qin, Brent Jesiek, Purdue University

Technological Risk

Cascade B

Session Chair – Kenneth R. Foster (University of Pennsylvania)

1:30-1:55 **Pascal's Wager – Decision Making and Risk Management**

William Grimson, Dublin Institute of Technology

1:55-2:20 **On the Interpretation of Engineering Safety Issues**

WANG Dazhou, University of Chinese Academy of Sciences

2:20-2:45 **Why Installation Failures Can't be Predicted**

WANG Peiqiong, University of Chinese Academy of Sciences

Issues in the Philosophy of Technology

Draper's Meadow

Session Chair – Carl Mitcham (Colorado School of Mines)

1:30-1:55 **Affordances and Technical Artefacts**

Peter Kroes, Maarten Franssen, Delft University of Technology

1:55-2:20 **Problems with a Theory of Functions**

Robert Mackey, Independent Scholar

2:20-2:45 **Thinking About the Dao of Technology: An Organicist Philosophy of Technology from the Perspective of Chinese Culture**

WANG Qian, Dalian University of Technology; ZHANG Wei, Central China Normal University

2:45 – 3:15 PM

Mid-afternoon Break

Upper Quad

3:15 – 4:30 PM

PAPER SESSIONS IV**Affective States in Engineering Ethics**

Cascade A

Session Chair – David E. Goldberg (ThreeJoy Associates)

3:15-3:40 **Empathy and Ethical Reasoning in Engineering Ethics Education**

Justin Hess, Purdue; Johannes Strobel, Texas A&M; Jonathan Beever, Penn State University; Andrew Brightman, Purdue

3:40-4:05 **Engineers, Emotions, and Ethics**

Michael Davis, Illinois Institute of Technology

4:05-4:30 **How René Girard's Theories Complicate Engineering Ethics**

Glen Miller, Texas A&M University

Philosophical Issues in Engineering Design

Cascade B

Session Chair – Byron Newberry (Baylor University)

3:15-3:40 **Engineering Challenges Outside the Comfort Zone: Contemporary (Engineering) Design**

Pieter Vermaas, Delft University of Technology

3:40-4:05 **Design as Representation**

Michael Poznic, Delft University of Technology

4:05-4:30 **Is Evolution a Progressive Engineering Design Enterprise?**

Terry Bristol, Institute for Science, Engineering, and Public Policy, affiliated with Portland State University

Ethical Issues With Specific Technologies – II

Draper's Meadow

Session Chair – Gary Downey (Virginia Tech)

3:15-3:40 **The Limits of Logic-Based Inherent Safety of Social Robots**

Martin Bentzen, Technical University of Denmark

3:40-4:05 **The Philosophical Implications of Big Data**

Ken Archer, Telogical Systems

4:05-4:30 **Conceptualizing Technological Reversibility for the Case of Geological Disposal of Nuclear Waste**

Jan Peter Bergen, Delft University of Technology

4:30 – 6:00 PM

Break

6:00 – 8:00 PM

Conference Dinner & Keynote Address

Latham Ballroom A

**Is Technology a Science? Recent Developments in German
Philosophy of Technology and Engineering**

Klaus Kornwachs, University of Ulm, BTU – Cottbus

THURSDAY, 29 MAY

8:15 – 9:15 AM**Panel Session**

Latham A&B

Session Chair – Carl Mitcham (Colorado School of Mines)

Philosophy, Engineering, and Management

Thomas Kowall, Professor Emeritus of Strategy and Communication, Ecole des Ponts, ParisTech

Stephen C. Armstrong, Professor of Innovation, University of Toronto

Zach Pirtle, George Washington University

Steen Hyldgaard Christensen, Aarhus University

9:15 – 9:45 AM**Break****9:45 – 11:25 AM****PAPER SESSIONS V****Social Responsibilities of Engineers**

Cascade B

Session Chair – Darryl Farber (Penn State University)

9:45-10:10.....**Rethinking the Responsibilities of Engineers as Accountability**

Deborah Johnson, University of Virginia

10:10-10:35**The Rationality of Ethical Codes in Engineering: The Case of Dam Construction in China**

ZHANG Zhihui, Institute for the History of Natural Sciences, Chinese Academy of Sciences

10:35-11:00**Ethical Presentations of Data: Tufte and the Morton-Thiokol Engineers**

Wade Robison, RIT

11:00-11:25**Neglecting Peer Review: A Case Study of Engineering Ethics and the Official Reports about the Destruction of World Trade Center Building 7 (WTC7) on 9/11**

Wayne Coste, Michael R. Smith, Architects & Engineers for 9/11 Truth

Engineering Innovation and the Engineering Method in Historical Context

Draper's Meadow

Session Chair – Joe Pitt (Virginia Tech)

9:45-10:10.....**An Historical Perspective on the Epistemology of Breakthrough Innovation**

Bruce Vojak, University of Illinois

10:10-10:35**The Role of Engineers in Open Innovation – Towards a New Understanding of Engineering as a Topological Science**

Albrecht Fritzsche, Friedrich-Alexander Universität Erlangen-Nürnberg

10:35-11:00**Hidden in Plain Sight: Engineering Heuristics Used in the Temple of Apollo, Didyma, Turkey**

Billy V. Koen, University of Texas at Austin

11:00-11:25**Why Ancient Egyptian Engineering is Not Engineering**

Carl Mitcham, Colorado School of Mines

11:30 AM – 12:00 PM**Closing Session:**

Latham Ballroom A

A CONVERSATION WITH THE fPET STEERING COMMITTEE**12:00 – 1:00 PM****Box Lunch Pick-Up**

Latham Ballroom Foyer