fPET 2024

FORUM ON PHILOSOPHY, ENGINEERING, AND TECHNOLOGY

Notes

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* We plan to take pictures during the conference and would like to use those pictures afterwards on the website, in information materials, etc. Therefore, we would like to ask all participants to sign a form, in which they declare that we are allowed to use those photographs depicting them. This can be done at the registration desk.

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WELCOME TO fPET 2024 AT KIT-ITAS!

We welcome all of you to the 2024 Forum on Philosophy, Engineering and Technology (fPET). This exciting program well embodies fPET's mission, to build reflection on engineering, engineers and technology, and to build bridges between organizations of philosophers and engineers. Existing since 2007, this 2024 fPET will be the largest fPET meeting attendance ever, with over 180 registered attendees. We are excited to have engineers as well as philosophers and other scholars presenting research at this meeting. As fPET 2024 co-chairs, we represent philosophy and engineering practice, and we believe that such shared and interdisciplinary reflection can benefit both engineers and philosophers.

We are at a fitting location for this fPET as well. The Karlsruhe Institute of Technology, KIT, and its predecessor institutions, the technical university of Karlsruhe, have a longstanding history in philosophy of engineering and technology. It was the late Hans Lenk who pioneered philosophy of technology in Germany already in the early 1970s and who together with the late Matthias Maring and others got to be known as the *Karlsruhe School of Philosophy of Technology*. The predecessors for our Institute for Technology Assessment and Systems Analysis (ITAS) date back to the late 1950s and the newly founded Academy for Responsible Research, Teaching, and Innovation ARRTI (2019), KIT has a long-standing history in researching and shaping responsible technological futures.

The need for broader reflection on engineering is clear. Engineers have a professional obligation to conform to the law, regulations and standards; but the profound and multi-faceted influence technology has on everyone's lives and on the natural world, comes with a profound responsibility. This responsibility does not amount to following rules or algorithms, but needs to address what a desirable future looks like. This year's conference theme thus focuses on **Understanding, Assessing, and Designing Responsible Futures** in a multi- inter- and transdisciplinary fashion. The conference venue at the ZKM, a museum with a mission of continuing the classical arts into the digital age, and the HfG, a university of arts and design, reflects this approach to imagining responsible futures shaped by technology in a multitude of ways.

We hope that many dialogs on engineering and philosophy branch out from this meeting. The fPET steering committee, co-led by philosopher Diane Michelfelder and engineer David Goldberg, is interested in proposals for hosting the next fPET. We encourage those attending to stay connected to the fPET community, including by staying on the fPET listserver (https://philosophyengineering.com/join-the-conversation).

Sincerely,

Prof Dr. Dr. Rafaela Hillerbrand
Dr. Zachary Pirtle

The fPET conference series traces back to 2007 and a Workshop on Philosophy and Engineering held at TU Delft. There have since been fPET meetings at the UK Royal Academy of Engineering, the Chinese Academy of Sciences, Colorado School of Mines, Virginia Tech, Friedrich-Alexander University Erlangen-Nuremberg, University of Maryland College Park, Universidad Técnica Federico Santa María & Universidad de Valparaíso, and TU Delft again.

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Prof Dr. Dr. Rafaela Hillerbrand, Philosopher of engineering and technology, Ph.D. theoretical physics, Ph.D. in philosophy; professor at KIT, head of the research group PhilETAS (Philsophy of Engineering, Technology Assessment, and Science), director of ARRTI

©ZACHARY PIRTLE

Dr. Zachary Pirtle, Independent scholar, Ph.D. in Systems Engineering; space exploration practitioner, and fPET steering committee member. Washington DC, USA.

Twitter: @phil_engineer. Google scholar

(All opinions reflect the views only of Pirtle and do not necessarily reflect the views of his employer)

PROGRAM OVERVIEW

TRACKS

Engineering and Technology Education

Ethics, Social Philosophy, and Political Philosophy in Engineering and Technology

Philosophy of Engineering and Technology

Epistemology of Engineering and Technology

Interdisciplinary Studies of Engineering and Technology (e.g. TA, RI, VSD, STS, etc.)

Other

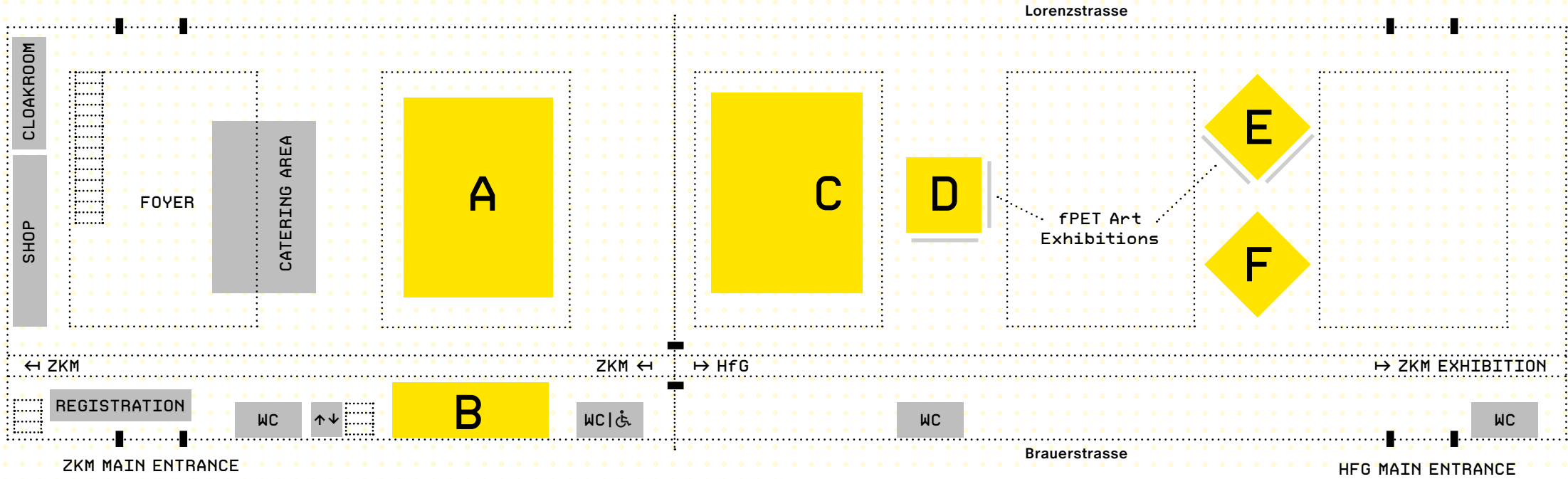| TIME	SESSION				SESSION			
TUESDAY, 17TH OF SEPTEMBER								
09:00 – 12:00	**Registration**							
09:00 – 09:45	**First Coffee**							
09:45 – 10:20	**Welcome and Practicalities (Room A - hybrid)**							
10:20 – 11:10	**Keynote 1** **Necessary Conditions for the Duty Plus Respicere:** **Explicating the Capacity of Engineers to "Take More into Account"** Erik Fisher (Room A - hybrid)							
11:10 – 11:20	**Coffee Break**							
11:20 – 12:30	**Session 2A:** Engineering Ethics Education 1	**Session 2B:** AI and Health Technology	**Session 2C:** Futures of Sustainable Engineering 1		**Session 2D:** AI Developments and Challenges 1	**Session 2E:** Engineering Knowledge and Understanding 1	**Session 2F:** Military Technology Ethics	
12:30 – 14:00	**Lunch**							
14:00 – 15:45	**Session 3A:** Engineering Knowledge and Understanding 2	**Session 3B:** Political and Ethical Issues in AI, Gender, and Health	**Session 3C:** Futures of Sustainable Engineering 2		**Session 3D:** AI Developments and Challenges 2	**Session 3E:** The Role of the Engineer	**Session 3F:** Values in the European Union's Transition and Transformation Policies	**Session 3G:** EXP. SESSION: Interdisciplinary Speculations for the Future of Bio-hybrid Robots
15:45 – 16:15	**Coffee Break**							
16:15 – 17:25	**Session 4A:** New Methods in Engineering Education	**Session 4B:** AI in Sensitive Domains	**Session 4C:** Futures of Sustainable Engineering 3		**Session 4D:** Theoretical Issues in the Philosophy of Engineering and Technology 1	**Session 4E:** Boundary Objects and Category Theory	**Session 4F:** Futures, Technological Visions, and Imaginaries 1	
17:30 – 18:30	**Session 5:** Poster Session **Location:** ZKM Building				**Session 5:** Vernissage of fPET Art Exhibitions **Location:** HfG Ground Floor			
18:30 – 21:30	**Opening Speeches, ZKM Exhibition, and Reception**							

TIME	SESSION				SESSION			
WEDNESDAY, 18TH OF SEPTEMBER								
08:30 – 12:00	**Registration**							
08:30 – 18:30	**Posters and fPET Art Exhibitions (available all day)**							
09:00 – 10:10	**Session 6A:** AI Developments and Challenges 3	**Session 6B:** Responsible Technology Development	**Session 6C:** Political Philosophy of Engineering and Technology 1		**Session 6D:** Theoretical Issues in the Philosophy of Engineering and Technology 2	**Session 6E:** Global Perspectives on Engineering Education	**Session 6F:** Futures, Technological Visions, and Imaginaries 2	**Session 6G EXP. SESSION:** Civic-Minded Engineers and Wicked Problems
10:10 – 10:45	**Coffee Break**							
10:45 – 12:30	**Session 7A:** Limitations of Technological Progress	**Session 7B:** AI Ethics	**Session 7C:** Political Philosophy of Engineering and Technology 2		**Session 7D:** Theoretical Issues in the Philosophy of Engineering and Technology 3	**Session 7E:** Theoretical Perspectives on AI	**Session 7F:** Principles and Practices of Responsible Research and Innovation 1	**Session 7G EXP. SESSION:** Ways to Get Philosophy of Engineering Taken Seriously by Engineers
12:30 – 14:00	**Lunch**							
14:00 – 15:45	**Session 8A:** AI and Responsibility	**Session 8B:** Digital Ethics and AI	**Session 8C:** Sustainable Engineering and Technology Assessment		**Session 8D:** Engineering Design and Innovation 1	**Session 8E:** Know How and Tacit Knowledge	**Session 8F:** Principles and Practices of Responsible Research and Innovation 2 – Socio-Technical Integration Research	**Session 8G EXP. SESSION:** Innovating Educational Approaches in Engineering Ethics: Experiencing Space, Power, and Social Relations, and Imagining Responsible (Technological) Futures
15:45 – 16:15	**Coffee Break**							
16:15 – 17:25	**Session 9A:** Design and Values	**Session 9B:** (Ethics of) Autonomous Vehicles	**Session 9C:** Fundamental Questions in Technology Ethics		**Session 9D:** Engineering Design and Innovation 2	**Session 9E:** New Approaches in Engineering Education	**Session 9F:** Epistemology and Ethics in Design	**Session 9G PANEL:** Roundtable Discussion: The Role of Theoretical Foundations of the Philosophy of Technology and Engineering Ethics in Engineering Education
17:40 – 18:30	**Keynote 2** **Epistemological Responsibility of Engineers** Mieke Boon (Room A - hybrid)							
18:30 – 19:00	**Break**							
19:00 – 22:00	**Conference Dinner (at ZKM)**							

TIME	SESSION				SESSION			
THURSDAY, 19TH OF SEPTEMBER								
08:30 – 12:00	**Registration**							
08:30 – 17:30	**Posters and fPET Art Exhibitions (available all day)**							
09:00 – 10:10	**Session 11A:** Digital Ethics	**Session 11B:** Deep Fakes	**Session 11C:** Experimental Approaches		**Session 11D:** Theoretical Issues in the Philosophy of Engineering and Technology 4	**Session 11E:** Engineering Ethics Education 2	**Session 11F:** Values in Technology	**Session 11G EXP. SESSION:** Workshop: Reviewing for Early Career Scholars – A Bridge Towards Scholarly Expertise and Fair Practice
10:10 – 10:45	**Coffee Break**							
10:45 – 12:30	**Session 12A:** Justice and Participation	**Session 12B:** Risk and Trust	**Session 12C PANEL:** Retrofitting: Maintenance and Philosophy of Technology		**Session 12D:** Engineering and Religion	**Session 12E:** Engineering Ethics Education 3	**Session 12F:** Digitalization and AI	**Session 12G PANEL:** The Multiple Languages of Engineering I
12:30 – 14:00	**Lunch**							
14:00 – 15:45	**Session 13A:** Engineering Design and Innovation 3		**Session 13C EXP. SESSION:** Transdisciplinary and Participatory Research and Innovation: Philosophical Questions and Practical Challenges			**Session 13E EXP. SESSION:** Interactive Exploration of Possible Climate Actions With the En-ROADS Simulator	**Session 13F:** Interdisciplinary Studies of Technologies and Infrastructures	**Session 13G PANEL:** The Multiple Languages of Engineering II
15:45 – 16:15	**Coffee Break**							
16:15 – 17:05	**Keynote 3** **Inclusive crash safety assessment – past, present, and future** Astrid Linder (Room A - hybrid)							
17:05 – 17:30	**Closing Remarks and End of fPET 2024**							
FRIDAY, 20TH OF SEPTEMBER								
09:00–17:15	**Energy Ethics Workshop**							

GROUND FLOOR ZKM/HFG

Lorenzstrasse

CLOAKROOM

SHOP

FOYER

CATERING AREA

A

C

D

fPET Art Exhibitions

E

F

← ZKM

ZKM ← ↦ HfG

↦ ZKM EXHIBITION

REGISTRATION

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ZKM MAIN ENTRANCE

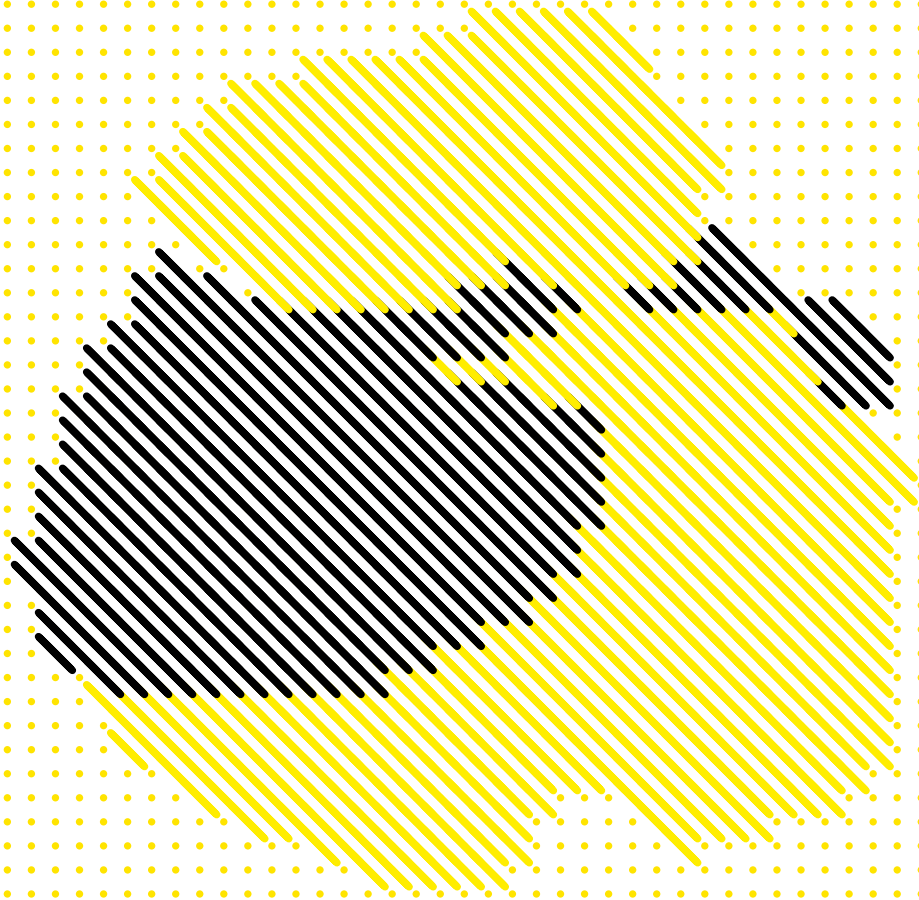Brauerstrasse

HFG MAIN ENTRANCE

FIRST FLOOR ZKM

FOYER

G

POSTER SESSION

WC

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(A) ZKM MEDIA THEATRE
(B) LECTURE HALL
(C) STUDIO
(D) PARTITION WALLS
(E) PARTITION WALLS
(F) PARTITION WALLS
(G) MEDIALOUNGE

BALCONY

Venue Map

Venue Map

KEYNOTES

Erik Fisher
Arizona State University

Necessary Conditions for the Duty Plus Respicere: Explicating the Capacity of Engineers to "Take More into Account"

Abstract Philosophers and policy makers have long debated whether engineers should integrate social and ethical considerations into their technical work practices. For instance, Carl Mitcham claims that engineers are bound by the ethical duty *plus respicere* (Latin for "take more into account"), while others question the utility and even the possibility of such integration. Drawing on over a decade of qualitative empirical results from hundreds of socio-technical dialogues that follow the STIR method, this talk will argue that engineers' capacity to "take more into account" is a dynamic, temporally unfolding, potentially engageable phenomenon. Given its status as a microfoundation for Responsible Innovation, attempts to understand, assess, and design responsible futures should be sensitive to the conditions under which this integrative capacity of engineers both expands and contracts.

Mieke Boon
University of Twente

Epistemological Responsibility of Engineers

[1] Boon, M. (2011). In Defense of Engineering Sciences: On the Epistemological Relations Between Science and Technology. *Techne: Research in Philosophy & Technology*, *15*(1).

[2] Boon, M. (2017). An engineering paradigm in the biomedical sciences: Knowledge as epistemic tool. Progress in biophysics and molecular biology, 129, 25-39. https://doi.org/10.1016/j.pbiomolbio.2017.04.001

[3] Boon, M., & Van Baalen, S. (2019). Epistemology for interdisciplinary research–shifting philosophical paradigms of science. *European journal for philosophy of science*, *9*(1), 16. https://doi.org/10.1007/s13194-018-0242-4

[4] Boon, M., & Knuuttila, T. (2009). Models as epistemic tools in engineering sciences. In *Philosophy of technology and engineering sciences* (pp. 693-726). North-Holland.

[5] Boon, M. (2020). Scientific methodology in the engineering sciences. In *The Routledge handbook of the philosophy of engineering* (pp. 80-94). Routledge.

[6] The transdisciplinary 'high-tech-human-touch 30 ECTS minor program ICR&TIST (Intelligence, Creativity, and Responsible Technological Innovations in Societal Transformations). https://www.utwente.nl/en/education/student-services/news-events/news/2022/6/678748/transdisciplinary-cbl-minor-icrtist

Abstract   The theme for this fPET2024 conference, *Understanding, Assessing, and Designing Responsible Futures*, points at the importance of both ethics and scientific research. Yet, in the philosophy of technology, the connection between the two has hardly been thematized – that is, the connection between the moral ambition to do good through responsible engineering design, on the one hand, and the question of how scientific research (aimed at 'understanding and assessing') contributes to this ambition on the other. My explanation for this blind spot concerns the traditional assumptions and beliefs that both philosophers and scientists have about 'real science' and about how science contributes to technological development[1]. More radically, I have argued that, in order to understand the contribution of science to problem-solving, an alternative to the traditional paradigm of what science 'really' is (the 'physics paradigm') needs to be found, which could be called 'an engineering paradigm of science'[2],[3]. Crucial to this alternative paradigm of science is the central role of 'models as epistemic tools' (and, rather than 'models as (literal) representations')[4]. The view on scientific (and conceptual) models within an engineering paradigm of science makes clear how the epistemological responsibility of researchers comes into play[5]. This alternative view of the interconnectedness of scientific research aimed at responsible engineering design and epistemological responsibility of researchers therein, has significant implications for ideas about engineering education aimed at preparing engineers to contribute to responsible futures. In this keynote, I will elaborate on the ideas summarized here and illustrate how these insights have led to a new educational design[6].
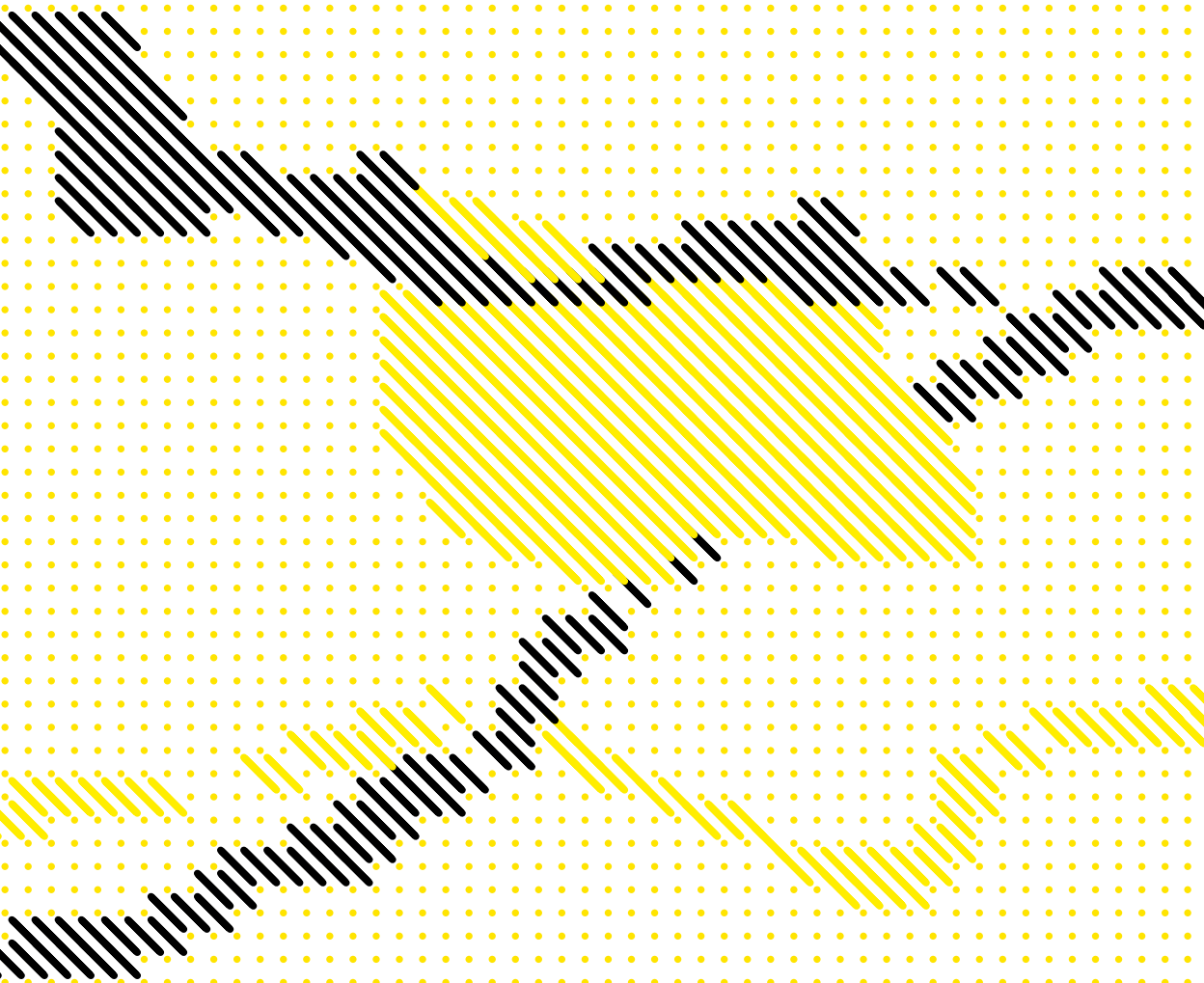
Astrid Linder
Chalmers University of Technology

Inclusive crash safety assessment – past, present, and future

Abstract   How is occupant safety in the event of a crash assessed today and what is needed to make it inclusive? Today, 2024, occupant safety of the occupant of a car is done using a model of an average male as the driver. How did we get there and what are the steps needed to be taken to address the whole adult population in the assessment of vehicle occupant safety? And why is it important (in addition to that women exist)? These questions will be addressed together with a description of the latest development in the assessment of crash safety. The results of a recent finished EU-funded project, VIRTUAL, that contain physical models representing us in the event of a crash, will be presented.

PROGRAM DETAILS

TIME	SESSION	📍
TUESDAY, 17TH OF SEPTEMBER		
09:00 – 12:00	**Registration**	
09:00 – 09:45	**First Coffee**	
09:45 – 10:20	**Welcome and Practicalities**	**A** HYBRID ROOM
10:20 – 11:10	**Session 1**	
	↦ **Keynote 1** **Necessary Conditions for the Duty Plus Respicere: Explicating the Capacity of Engineers to "Take More into Account"** Erik Fisher	**A** HYBRID ROOM
11:10 – 11:20	**Coffee Break**	
11:20 – 12:30	**Session 2A:** Chair: Christine Milchram Engineering Ethics Education 1 ↦ **Sarah Junaid:** Entrepreneurship as an Essential Vehicle for Ethical Skills Development* ↦ **Yuqi Peng:** A Rubik's Cube-Inspired Pedagogical Tool for Teaching and Learning Engineering Ethics* ↦ **Cynthia Pickering, Erik Fisher:** Cultural Experience as a Source of Ethical Reasoning in STEM Education* ↦ **Agostino Cera:** De-Metaphorizing Technology: The Question of Human-Technology Relation*	**A** HYBRID ROOM
	Session 2B: Chair: Jon Rueda AI and Health Technology ↦ **Sarah Carter:** That's Too Personal: Defining the Limits of Personalization in Mental Health Chatbots ↦ **Matthias Uhl, Sebastian Krügel:** Distrust in AI-Based Decision Support Systems and Ethical Implications in Medical Decision-Making	**B** ROOM
	Session 2C: Chair: Augustinus Setyo Wibowo Futures of Sustainable Engineering 1 ↦ **Florian Richter:** A Philosophical Note on the History of Technology and Progress ↦ **Thomas Siller, Gearold Johnson:** Where Does the Future End?	**C** ROOM

*These talks last 15 minutes (including Q&A)

11:20 – 12:30

Session 2D:
AI Developments and Challenges 1

Chair: Emma Cavazzoni

↦ **Beyza Nur Guler, Qin Zhu:** Navigating Access: The Impact of AI Recruitment Tools on People With Disabilities in the Workplace
↦ **Marc Heimann:** Bridging Heidegger, Psychoanalysis, and Large Language Models*
↦ **Wolfgang Eppler, Reinhard Heil:** Towards a Pragmatical Grounding of Large Language Models*

ROOM D

Session 2E:
Engineering Knowledge and Understanding 1

Chair: Marianne von Panhuys

↦ **Martin Stacey:** On the Cartography of Engineering Knowledge
↦ **Zachary Pirtle:** What Does it Mean to Do Peer Review at a 'System Level?' Exploring Life Cycle Reviews and the Independent Assessment of Complex Systems Engineering Projects

ROOM E

Session 2F:
Military Technology Ethics

Chair: Christine Boshuijzen-van Burken

↦ **Michael Haiden, Florian Richter:** Autonomous Weapons: Considering the Rights and Interests of Soldiers
↦ **Nathan Wood:** Explainable AI in the Military Domain

ROOM F

12:30 – 14:00 Lunch

14:00 – 05:45

Session 3A:
Engineering Knowledge and Understanding 2

Chair: Giovanni Frigo

↦ **Martin Stacey, Claudia Eckert:** Engineering Knowledge and Soft Skills
↦ **Yafeng Wang:** Criteria of Success for Engineering Accident Investigations: A Question-Centered Account
↦ **Michael Poznic, Vivek Kant:** Structuring of Information for Human Machine Interaction: Engineering Understanding, Complex Sociotechnical Systems, and Interface Design

HYBRID ROOM A

Session 3B:
Political and Ethical Issues in AI, Gender, and Health

Chair: Joan Llorca Albareda

↦ **Ozan Gurcan:** Equality and Reprogenetic Autonomy in the Genomic Era
↦ **Adam Briggle:** Evaluating the Ethics and Politics of Gender Affirming Care for Trans Youth
↦ **Zhang Tongkuo:** Reflection on the Ethical Issues of Brain Computer Interface from the Perspective of Responsibility Ethics*

ROOM B

14:00 – 05:45

Session 3C:
Futures of Sustainable Engineering 2

Chair: Clément Lasselin

↦ **Gearold Johnson, Thomas Siller:** Utopian Visions: A Critique of Mega City 2070
↦ **Katherine Goodman:** The Good of Engineering: From a Current State to a Preferred One
↦ **Xue Yu:** The Emerging Forms of Human-Machine Relation and Its Philosophical Reconstruction in the Era of Deep Intelligence

ROOM C

Session 3D:
AI Developments and Challenges 2

Chair: Daria Jadreškić

↦ **Johannes Brinz:** Neurormophic AI: From Simulating Towards Replicating the Brain
↦ **Beatrice Bonami:** Social Organic Authenticity and Non-Western Southern Epistemology as a Core Pathway for Future Artificial Intelligence
↦ **Arzu Formanek, Robert Miehe, Klaus Erlach, Yannick Baumgarten:** Are Biointelligent Systems Intelligent? The Onion Model for Biointelligence*

ROOM D

Session 3E:
The Role of the Engineer

Chair: Andrea Gammon

↦ **Klaus Erlach, Thomas Bauernhansl:** How to Formulate a Research Question in Applied Engineering Science: A Systematic Approach
↦ **Daniel Marom:** To Educate Is Not to Engineer – Why It Is Important to Make the Distinction in the Education of Engineers
↦ **José Antonio Perez-Escobar, Deniz Sarikaya:** Epistemic Butlers and Critical Thinking

ROOM E

Session 3F:
Values in the European Union's Transition and Transformation Policies

Chair: Anna Jacyszyn

↦ **Martijn Wiarda, Tristan de Wildt, Neelke Doorn:** Do Missions Change Values of Mission-Oriented Innovation Projects? A Responsible Research and Innovation Perspective
↦ **Irene Niet:** EU Public Values Governing the Twin Transition Exposed

ROOM F

Session 3G EXP. SESSION:

Chair: Session Convenor

Interdisciplinary Speculations for the Future of Biohybrid Robots
↦ Rafael Mestre, Ned Barker, Sergey Astakhov, Aníbal M. Astobiza, Maria Guix, Joana Burd, Matt Ryan

ROOM G

15:45 – 16:15 Coffee Break

*These talks last 15 minutes (including Q&A)

16:15 – 17:25

Session 4A: Chair: Christine Milchram
New Methods in Engineering Education

↦ **Albrecht Fritzsche, Stan Kranc:** Science Fiction in Engineering Education: Learnings From the EELISA Initiative
↦ **Inga-Maria Eichentopf, Hans Kasperidus:** Education for a Sustainable Future – Bridging Knowledge and Action

A
HYBRID ROOM

Session 4B: Chair: Udo Pesch
AI in Sensitive Domains

↦ **Jon Rueda:** Reproductive Autonomy in the Age of Artificial Intelligence
↦ **Martina Philippi:** How to Address Ethical Problems in a Multi-Perspective Context: Interdisciplinary Challenges of XAI*

B
ROOM

Session 4C: Chair: Ivano Zanzarella
Futures of Sustainable Engineering 3

↦ **Augustinus Setyo Wibowo, Johanes Narasetu Widyatmanto:** Navigating Through Hydrogen Policymaking by Means of Poiesis

C
ROOM

Session 4D: Chair: Avigail Ferdman
Theoretical Issues in the Philosophy of Engineering and Technology 1

↦ **Rafael Coimbra, Édison Renato:** Generative AI, Mixed Reality, and the Simulation Hypothesis

D
ROOM

Session 4E: Chair: Martin Stacey
Boundary Objects and Category Theory

↦ **Matthew Wragg:** Constructing Bridges Using Boundary Objects
↦ **Claudia Eckert, Mark Addis:** Explanatory Frameworks in Complex Change and Resilience System Modelling

E
ROOM

Session 4F: Chair: Mareike Smolka
Futures, Technological Visions, and Imaginaries 1

↦ **Philipp Neudert:** The Politics and Poetics of Imagination: Scrutinizing the 'Quality' of Imagination
↦ **Maximilian Roßmann:** The Different Understandings of Hype: Over-Generalization, Over-Selling, Over-Promising, Over-Resonance, and Over-Shadowing

F
ROOM

17:30 – 18:30 **Session 5**

Poster Session ZKM

Vernissage of fPET Art Exhibitions HFG

18:30 – 21:30 **OPENING SPEECHES, ZKM EXHIBITION, AND RECEPTION**

*These talks last 15 minutes (including Q&A)

TIME	SESSION	📍
WEDNESDAY, 18TH OF SEPTEMBER		
08:30 – 12:00	Registration	
08:30 – 18:30	**Posters and fPET Art Exhibitions (available all day)**	ZKM HFG
09:00 – 10:10	Chair: Christine Milchram **Session 6A:** AI Developments and Challenges 3 ↦ **Stefan Rinner:** Large Language Models and Linguistic Understanding: A Modal Argument ↦ **Hans Voordijk:** AI and User Agency in Civil Engineering Practice: A Postphenomenological Approach* ↦ **Sabine Thuermel:** Dancing with Generative AI*	A HYBRID ROOM
	Chair: Camilla Quaresmini **Session 6B:** Responsible Technology Development ↦ **Udo Pesch:** The Acceptability of Technological Debates ↦ **Yunxuan Miao:** The (Re)Formation of Collective Values in Technology Development: Saliences and Agenda Setting	B ROOM
	Chair: Diane Michelfelder **Session 6C:** Political Philosophy of Engineering and Technology 1 ↦ **Maarten Franssen:** How the Philosophy of Technology Can Support the Politics of Technology ↦ **Avigail Ferdman:** AI, Capacity Deskilling and Public Reason	C ROOM
	Chair: Mark Addis **Session 6D:** Theoretical Issues in the Philosophy of Engineering and Technology 2 ↦ **Malvina Ongaro, Daniele Chiffi, Lorenza Petrini:** A Pragmatist Approach to Causation in Multi-Risk Research ↦ **Daria Jadreškić:** Inductive Risk Meets Engineering Risk: What Can Quality Control in Engineering Teach Us About Managing Values in Science? Lessons From Studying Technical Reviewing at CERN	D ROOM
	Chair: Deniz Sarakaya **Session 6E:** Global Perspectives on Engineering Education ↦ **Emmanuel Caillaud, Océane Salignon:** The Integration of Ethics Education in French "Grandes Écoles": An Option or a Necessity? ↦ **Qin Zhu, Beyza Nur Guler, Andrea Gammon, Rockwell Clancy, Scott Streiner, Ryan Thorpe:** Exploring How First-Year Chinese Engineering Students Perceive Public Welfare Beliefs and Professional Values	E ROOM

09:00 – 10:10	Chair: Neelke Doorn **Session 6F:** Futures, Technological Visions, and Imaginaries 2 ↦ **Sabine Ammon, Nils Neuhaus:** Metaphors as Conceptual Vehicles for Ethical Vision Design: A Case Study on the Role of Metaphors in Research and Development ↦ **Lidia Yatluk:** How to Make a New Science: Organizational Imaginaries of Decentralized Science	F ROOM
	Chair: Session Convenor **Session 6G EXP. SESSION:** **Civic-Minded Engineers and Wicked Problems** ↦ Erhardt Graeff, Guru Madhavan	G
10:10 – 10:45	**Coffee Break**	
10:45 – 12:30	Chair: Giovanni Frigo **Session 7A:** Limitations of Technological Progress ↦ **Nikita Lin:** Aesthetic Engineering of the Virtual: A Case Study of Jeffrey Shaw's Media Artworks Between 1989–1998 ↦ **Enrico Piergiacomi:** Moral Technology in Francis Bacon: Ancient Atomism and the Sins of Prometheus ↦ **Aaron Schultz:** The Domination of Distraction	A HYBRID ROOM
	Chair: Sebastian Krügel **Session 7B:** AI Ethics ↦ **Joan Llorca Albareda:** The Ethical Paradox of Automation: The End of Human Work in the Age of AI ↦ **Marcell Sebestyén:** Moral Mirrors: Lessons for AI Ethics From the Shortcomings of Animal Rights ↦ **Heike Felzmann:** Designing for Relationship: Ethically Relevant Factors in the Design of Long-Term Relational AI	B ROOM
	Chair: Irene Niet **Session 7C:** Political Philosophy of Engineering and Technology 2 ↦ **Lena Fiedler:** The Ethical Problem of Gendered Robots ↦ **Paige Benton:** Democratic AI: Justification for a Broad View of Public Reason ↦ **Hernán Borisonik:** Exploring the Political Philosophy of Cryptocurrencies* ↦ **Carl Mitcham:** Technology Assessment From the Perspective of Political Philosophy*	C ROOM

*These talks last 15 minutes (including Q&A)

10:45 – 12:30

Session 7D:
Chair: Rafael Coimbra
Theoretical Issues in the Philosophy of Engineering and Technology 3

↦ **Natasha Lushetich:** Energetic Circuits of Non-Binary Machines
↦ **Dilek Yargan, Ludger Jansen, Manfred Drack:** A Conceptual Framework to Understand the Unique Position of Biomimetics
↦ **Albrecht Fritzsche:** Who Revolves? Around Whom? Reading Günther Anders in the Digital Age

ROOM **D**

Session 7E:
Chair: Beatrice Bonami
Theoretical Perspectives on AI

↦ **Daniele Chiffi, Giacomo Zanotti, Viola Schiaffonati:** A Philosophical Insight Into Uncertainty in AI
↦ **Deniz Sarikaya, José Antonio Perez-Escobar:** Epistemic Diversity in Education and AI Tools: How We Create Better Tools, by Thinking in Terms of Epistemic Virtues*

ROOM **E**

Session 7F:
Chair: Philipp Neudert
Principles and Practices of Responsible Research and Innovation 1

↦ **Karl Dagher, Erik Fisher:** Ethics as Trojan Horse
↦ **Beatrice Bonami:** Principles and Practices of Responsible Research and Innovation Towards Foundational Structures for a Technology Decolonization Methodology in the Global South
↦ **Karen Moesker:** Responsible Innovation Principles in Large Infrastructure Systems: Expanding the 'Leaving Ajar' Approach for Practice*

ROOM **F**

Session 7G EXP. SESSION:
Chair: Session Convenor

Ways to Get Philosophy of Engineering Taken Seriously by Engineers
↦ David Goldberg, Katherine Goodman, Zachary Pirtle, Diane Michelfelder, Daniel Marom

ROOM **G**

12:30 – 14:00 Lunch

14:00 – 15:45

Session 8A:
Chair: Giovanni Frigo
AI and Responsibility

↦ **Karen Lancaster:** Capacity, Consent, and AI
↦ **Dane Leigh Gogoshin:** Taking Charge of AI
↦ **Joan Llorca Albareda:** Challenging the Agential Nature of AI Responsibility Problems

HYBRID ROOM **A**

14:00 – 15:45

Session 8B:
Chair: Katherine Brichacek
Digital Ethics and AI

↦ **Camilla Quaresmini, Eugenia Villa, Valentina Breschi, Viola Schiaffonati, Mara Tanelli:** Modelling Epistemic Injustice in Innovation Diffusion: A Case Study on Electric Mobility
↦ **Eugen Pissarskoi:** Ethics of Digital Twins of Online Social Networks*
↦ **Bauke Wielinga:** Balancing AI Rigidity and the Need for Exceptions: A Virtue-Theoretical Approach*

ROOM **B**

Session 8C:
Chair: Joost Mollen
Sustainable Engineering and Technology Assessment

↦ **Diane Michelfelder, Sharon Jones:** Sustainable Communities and the Challenge of Caring for Future Generations
↦ **Elliott Woodhouse:** Environmental Ethics and Philosophy of Technology – The Problem of Artificiality and the Acceptability of Geoengineering in Climate Strategy
↦ **Elisabeth Does, Anna Rifat Klassen:** Moralizations in the Debate About Genetic Engineering in Agriculture

ROOM **C**

Session 8D:
Chair: Muhammad Abubakr
Engineering Design and Innovation 1

↦ **Alexander Herwix:** A Paradigmatic Framework for Responsible Design Science Research
↦ **Nico Formanek:** Scaling Things Up! The Philosophy of Technology at Scale
↦ **Eswaran Subrahmanian, Albrecht Fritzsche:** Approaching Design Theory From the Perspective of Indian Jaina Logic

ROOM **D**

Session 8E:
Chair: Claudia Eckert
Know How and Tacit Knowledge

↦ **Michael Funk, Albrecht Fritzsche:** Engineering Digital Sovereignty? – A New Deal on The Tacit Source
↦ **Juho Lindholm:** The Argumentative Structure of Know How*

ROOM **E**

Session 8F:
Chair: Max Roßmann
Principles and Practices of Responsible Research and Innovation 2 – Socio-Technical Integration Research

↦ **Kasper Ampe, Gert Goeminne:** Interdisciplinarity in Action: Reflections From Engaged Research With Chemical Engineers
↦ **Gert Goeminne, Kasper Ampe:** Unveiling Narratives of Innovation: A Psychoanalytic Take on Engaged STS Research
↦ **Lahari Yaddanapudi, Erik Fisher, Julia Hahn:** Socio-Technical Integration With Early-Career Researchers in a Large Scale German COVID-19 project

ROOM **F**

*These talks last 15 minutes (including Q&A)

14:00 – 15:45

Session 8G EXP. SESSION: Chair: Session Convenor

Innovating Educational Approaches in Engineering Ethics:
Experiencing Space, Power, and Social Relations
↪ Filippo Santoni de Sio, Jordi Viader Guerrero, Aarón Moreno Inglés, Andrea Gammon

G ROOM

15:45 – 16:15   Coffee Break

16:15 – 17:25

Session 9A: Chair: Christine Milchram
Design and Values

↪ **Ordel Brown, Katherine Brichacek, Laura Pigozzi:** Operationalizing Empathy in Engineering Design via an Epistemic Tool to Support Equitable Design Outcomes
↪ **Anna Melnyk:** Design for Value Change as a Climate Action Approach

A HYBRID ROOM

Session 9B: Chair: Nils Neuhaus
(Ethics of) Autonomous Vehicles

↪ **Sebastian Krügel, Matthias Uhl:** The Global Perspective on the Risk Rthics of Autonomous Vehicles
↪ **Nick Corvino:** Randomness as a Solution to the Self-Driving Car Dilemma*

B ROOM

Session 9C: Chair: Ibo van de Poel
Fundamental Questions in Technology Ethics

↪ **Alexander Bagattini, Michael W. Schmidt:** Moral Expertise for Emerging Technologies
↪ **Jon Rueda:** Techno-Moral Progress: Exploring the Technological Mediation of Better Morality

C ROOM

Session 9D: Chair: Carl Mitcham
Engineering Design and Innovation 2

↪ **Colum Finnegan:** Engineering Online Communication Using Mindshaping Theory
↪ **Ivano Zanzarella:** Mori's Uncanny Valley Historicized. The Epistemological Validity of HRI Quantitative Models on the Test-Bench of the History of Science

D ROOM

Session 9E: Chair: Inga-Maria Eichentopf
New Approaches in Engineering Education

↪ **David Goldberg:** Co-Contraries and Change in Higher Education
↪ **Andrés Santa-María:** Contemporary Philosophy of Technology and Its Pedagogical Opportunities

E ROOM

16:15 – 17:25

Session 9F: Chair: Zach Pirtle
Epistemology and Ethics in Design

↪ **Sabine Ammon:** Ethical Co-Design for Responsible Technology Futures: On the Epistemology and Ethics of Integration in Research and Development
↪ **Tilke Devriese:** Productive Misunderstanding in Multidisciplinary Design: The Influence of Different Epistemic Backgrounds on Model Comprehension

F ROOM

Session 9G PANEL: Chair: Session Convenor

Roundtable Discussion: The Role of Theoretical Foundations of the Philosophy of Technology and Engineering Ethics in Engineering Education
↪ **Tom Børsen, Diana Martin, and Gunter Bombaerts**

G ROOM

17:40 – 18:30   **Session 10**

↪ **Keynote 2**
Epistemological Responsibility of Engineers
Mieke Boon

A HYBRID ROOM

18:30 – 19:00   Break

19:00 – 22:00   Conference Dinner   ZKM

*These talks last 15 minutes (including Q&A)

TIME	SESSION	📍
THURSDAY, 19TH OF SEPTEMBER		
08:30 – 12:00	Registration	
08:30 – 17:30	**POSTERS AND FPET ART EXHIBITIONS (AVAILABLE ALL DAY)**	ZKM HFG
09:00 – 10:10	**Session 11A:** Digital Ethics — Chair: Christine Milchram ↪ **Yuqi Peng:** Unveiling AI-Induced Vulnerabilities: The Case of Deepfake Technology* ↪ **Yuying Sun:** Ethical Considerations in the Construction of Digital Deceased People* ↪ **Ria Ariani:** Mapping Ethical Dynamics in Open Science: Data Sharing Challenges in Indonesian Qualitative Society*	A HYBRID ROOM
	Session 11B: Deep Fakes — Chair: Page Benton ↪ **Katherine Brichacek:** Teaching Effective Altruism in an Age of Deepfakes ↪ **Clint Hurshman:** Robust Social Goods: On the Value of Informational Privacy	B ROOM
	Session 11C: Experimental Approaches — Chair: Ashley Shew ↪ **Deniza Kera, Eilat Navon:** AI Standards as a Form of "Pastoral Power" and Biopower in SAE J3016 ↪ **Joost Mollen:** Experiments Without Borders: Research Ethics, Real-World Experimentation, and the Identification Problem*	C ROOM
	Session 11D: Theoretical Issues in the Philosophy of Engineering and Technology 4 — Chair: Nico Formanek ↪ **Emma Cavazzoni:** Sharing Data, Sharing Technologies. Data-Technology Communities in Haly.Id ↪ **Zehua Yu:** Why Does Similarity Works in Engineering?*	D ROOM
	Session 11E: Engineering Ethics Education 2 — Chair: Olena Gruba ↪ **Giovanni Frigo:** The Caring Engineer ↪ **Derek Schuurman:** Design Norms and Virtues for Engineering and Computer Science Education and Practice	E ROOM
09:00 – 10:10	**Session 11F:** Values in Technology — Chair: Kaspar Ampe ↪ **Alok Srivastava:** Tracing Responsiveness of Design Change to Value Changes in the Twelve Year History of a New Technology/Product – Semaglutide (Ozempic) Biopharmaceuitcals ↪ **Pieter Vermaas:** Black Boxing Quantum Technologies in a Value-Sensitive-Design Exploration of Security Threats in the Port of Moerdijk	F ROOM
	Session 11G EXP. SESSION: — Chair: Session Convenor **Workshop:** Reviewing for Early Career Scholars – A Bridge Towards Scholarly Expertise and Fair Practice ↪ **Behnam Taebi, Diana Martin**	G ROOM
10:10 – 10:45	**Coffee Break**	
10:45 – 12:30	**Session 12A:** Justice and Participation — Chair: Christine Milchram ↪ **Anna Melnyk, Eugen Popa:** The Utopian Search for Energy (In)justice and The Need for Moral Pluralism ↪ **Janine Gondolf, Stefanie Enderle, Sophie Kuppler:** Contested Engagement: A Conceptual Analysis of "the Stakeholders" in Large Infrastructure Projects ↪ **Elisabeth Shrimpton, Nazmiye Balta-Ozkan:** Operationalising Justice Into Infrastructure Engineering Research: A Focus on Hydrogen Production Technologies* ↪ **Joost Alleblas:** Rethinking Sufficiency*	A HYBRID ROOM
	Session 12B: Risk and Trust — Chair: Andrés Santa-María ↪ **Eva Pöll:** Engineering the Trust Machine ↪ **Ibo van de Poel:** Acceptable Risk Under Moral Uncertainty	B ROOM
	Session 12C PANEL: — Chair: Session Convenor **Retrofitting: Maintenance and Philosophy of Technology** ↪ **Mark Thomas Young:** Beyond Winner's Bridge: Retrofitting and the Politics of Artifacts ↪ **Andrea Gammon:** Retrofitting: A Candidate Practice of Environmental Maintenance and Repair ↪ **Ryan Wittingslow:** Retrofitting Goodman to Talk About Retrofitting	C ROOM

*These talks last 15 minutes (including Q&A)

10:45 – 12:30

Session 12D:
Engineering and Religion

Chair: Colum Finnegan

↦ **Muhammad Abubakr:** Are Engineered River Basins Sentient? A Perspective From Islamic Philosophy
↦ **Daniel Marom:** The Contribution of Theology to the Philosophy of Engineering: The Example of the Story of the Tower of Babel

D ROOM

Session 12E:
Engineering Ethics Education 3

Chair: Sarah Carter

↦ **Diana Martin:** Teaching Engineering Risk and Uncertainty as Ethical Concepts
↦ **Jesse Pappas:** Character Ethics Education for a Metamodern World

E ROOM

Session 12F:
Digitalization and AI

Chair: Tilke Devriese

↦ **Mareike Smolka, Bas Boom:** Imagining AI in Context: (Re-) Analysis of an Interdisciplinary Student Project
↦ **Paula Gürtler, Artur Bogucki, Berta Mizsei:** Ethical, Legal, and Socioeconomic Aspects in AI Projects*
↦ **Matthias Razum, Anna Jacyszyn, Linda Nierling, Felix Bach:** Leibniz ScienceCampus Digital Transformation of Research*
↦ **SaeBom Song, Andreas Lösch:** Openness as Smartness?: Sociotechnical Evolution and Imaginaries of Open Data Initiative and Smart City in the Republic of Korea

F ROOM

Session 12G PANEL:

Chair: Session Convenor

The Multiple Languages of Engineering I
↦ Peter Pelz, Viet-Anh Nguyen Duc, Alfred Nordmann, Aleksandra Kazakova, Dazhou Wang, Andreas Brenneis

G ROOM

12:30 – 14:00 Lunch

14:00 – 15:45

Session 13A:
Engineering Design and Innovation 3

Chair: Giovanni Frigo

↦ **Clément Lasselin:** Engineering Research as a Science: Perspectives From the Philosophy of Science
↦ **Ritesh Bansal:** Distinguishing Between Nudging and Usability in the Context of Product Designs*

A HYBRID ROOM

14:00 – 15:45

Session 13C EXP. SESSION:

Chair: Session Convenor

Transdisciplinary and Participatory Research and Innovation: Philosophical Questions and Practical Challenges
↦ Joost Mollen, Elisabeth Does

C ROOM

Session 13E EXP. SESSION:

Chair: Session Convenor

Interactive Exploration of Possible Climate Actions With the En-ROADS Simulator
↦ Hans Dieter Kasperidus, Inga-Maria Eichentopf

E ROOM

Session 13F:
Interdisciplinary Studies of Technologies and Infrastructures

Chair: Pieter Vermaas

↦ **Arian Mahzouni:**
The Role of Electric Vehicle Batteries in Shaping Multi-System Interactions in Urban Energy Systems: A Socio-Technical Approach
↦ **Manuel Baumann, Marcel Weil, Jens Peters, Hüseyin Ersoy, Merve Erakca, Haruna Bismark:** Constructive Technology Assessment to Support Sustainable Battery Development
↦ **Miriam Vetter, Sonja Haug, Karsten Weber, Caroline Dotter:** Acceptance and Willingness to Use Smart Meter Applications. Results From a German Population Survey*

F ROOM

Session 13G PANEL:

Chair: Session Convenor

The Multiple Languages of Engineering II
↦ Andreas Brenneis, Dazhou Wang, Alexandra Kazakova, Alfred Nordmann, Peter Pelz, Viet-Anh Nguyen Duc

G ROOM

15:45 – 16:15 Coffee Break

16:15 – 17:05 Session 14

↦ Keynote 3
Inclusive crash safety assessment – past, present, and future
Astrid Linder

A HYBRID ROOM

17:05 – 17:30 **Closing, End of fPET**

A HYBRID ROOM

*These talks last 15 minutes (including Q&A)

POSTER SESSION

List of Posters

Lee-Ryeok Han
A Two-timed Strategy for State Identification

Michael Mayer, Bettina Kamm, Jan Rabold
Approaches to Increasing Explicit Opportunities for the Acquisition of Professional Ethical Competencies in Higher Education

Diana Martin
Integrative Engineering Education: Exploring the Responsibility of Technological Universities

Nick Treanor
The Epistemic Role of Testing and Certification in the Construction Industry

Florian Richter
From Human-System Interaction to Human-System Co-Action: Ethical Assessment of Generative AI

Elisabeth Does
Ethics in Transdisciplinary Research Formats: Reflection Guidelines for Responsible Research Practice in Real-World Labs

Anja Bodenschatz
Does the Implementation by Autonomous Systems Make Randomization in Ethical Dilemmas More Acceptable?

Maximilian Schultz
And now we're doing such an AI project: On the State of Non-Governmental Organizations' Engagement with Artificial Intelligence – Opening a New Field of Research

Johannes Willem Heesbeen
Design Practice as a Test-Bed for Institutional Logics

Oliver Shuey
What can Post-Phenomenology Tell Us about Engineering Knowledge?

Katja Nau, Christoph Steinbach, Harald F. Krug, Dana Kuehnel, Alexis Bazzanella, Matthias Finkbeiner, Jessica S. Hoffmann, Andreas Mattern
MANTRA - Data on Innovative Materials for Sustainability and Transfer

Andreas Lösch, Janine Gondolf, Christian Büscher, Ulrich Ufer
Transformation Assessment – Observing and (Co)Shaping Sociotechnical Transformations

Christine Boshuijzen – van Burken, Deane Baker, Ned Dobos, Milad Ghasri, Erandi Hene Kankanamge, Twan Huybers, Oleksandra Molloy, Jo Plested, Shreyansh Singh
Understanding Ethical Implications of AI Enabled Decision Support Systems on the Battlefield
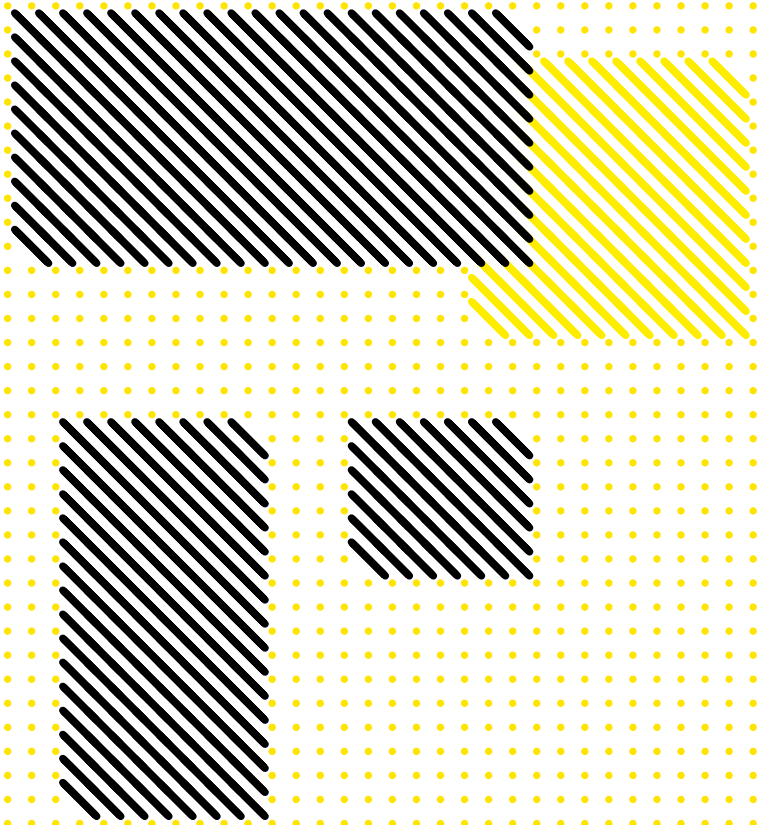
Anna Jacyszyn
AI4DiTraRe: How significant and Influential Artificial Intelligence is in the Digital Transformation of Research? A Multilevel Interdisciplinary Approach

Johanna Teresa Wallenborn, Maximilian Roßmann
Myths of Sustainable AI Futures – A Multimodal Metaphor Analysis

fPET ART EXHIBITIONS

Mark Bessoudo

Google Street View: Ethics, Creative Freedom and the Future of Street Photography

—

"Today everything exists to end in a photograph."

Susan Sontag, New York Review of Books, 1974

Google Street View is a popular online mapping tool integrated with Google Maps that provides users with a 360-degree street-level view of city streets, back alleys and dirt roads around many parts of the globe. While it provides users with unprecedented utility, it also raises some unique philosophical questions about ethics, creative freedom and the future of technology.

Google compiles their Street View image database by using their own proprietary vehicles mounted with special cameras which collect images every few meters. Billions of photos are then stitched together to create a vast visual library capturing the elements of the built environment: people, buildings, signage and infrastructure. Like more traditional street photography, Street View serves as a time capsule into public life by capturing the banal and mundane moments of everyday ordinary life in the process: a roadside market in Daka, Senegal; the densely packed Shibuya district of central Tokyo; humble mountain villages of Bhutan; tiny chapels in fishing outposts dotted along the Greenland coast.

It is for this reason that Google Street View has amassed a legion of fans. But it also raises some unique philosophical questions about ethics and creative freedom.

If using Google Street View as a surrogate for "street photography", are the screenshots captured from it a form of aesthetic consumerism? After all, "to photograph people is to violate them," claimed the cultural critic Susan Sontag in her 1977 classic On Photography. "It turns

people into objects that can be symbolically possessed." Are millions (billions?) of people "symbolically possessed" by Google's Street View database?

Furthermore, has creative freedom simply been outsourced to an algorithm? Art is always a balance between the tensions of freedom and constraint. With Street View photography users have ultimate freedom in that they can visit almost any street on Earth, but are limited to capturing only what Google's cameras have – for example, you cannot achieve better lighting, get a different angle or wait for a more interesting subject to wander into frame. You must work with what you've been given.

This experimental art exhibit will explore the nature of these ethical and creative questions. Through a series of Google Street View "photographs" that I have compiled from around the world, this exhibit will invite viewers to consider the ethical implications not just of traditional street photography and Google Street View of the past and present, but of the coming (and inevitable?) introduction of far more advanced and intrusive technologies such as Artificial Intelligence, Augmented Reality, drone photography and 24/7 mass surveillance.

While Sontag's observations were meant as a critique of the growing aesthetic consumerism of the 1970s her criticism still resonates, perhaps even more so today: "The camera makes everyone a tourist in other people's reality, and eventually in one's own."

Carolina Ibarra Castro

Art Exhibition about Ethics, Autoperception and Representation of Indigenous Peoples in Image Generation Programs with Artificial Intelligence

This artistic exhibition seeks to make visible the biases and prejudices of representation and the digital self-perception of indigenous peoples within the digital landscape generated by an artificial intelligence and machine learning language model, programs where the user introduces a prompt or description in natural language, and from where an image emerges from an artificial intelligence model.

With a focus between engineering philosophy - centered on the algorithm - and STS studies, this work addresses the digital self-perception by users of indigenous peoples in machine learning programs and, in turn, the cultural biases and prejudices that images from these programs, such as Gencraft, Dall-E and other open access programs, promote reflection from the hypothesis that for the global south, colonialism continues in the digital world, while it is from the north that are generated the data models and algorithms that shape an image of Latin America, just like the drawings of explorers from the early 19th century.

The exhibition exhibits visual material from the interaction with indigenous communities in Chile and images generated by artificial intelligence programs. It is composed of at least 10 small screens with testimonies and data visualizations on the one hand, in accordance with the ZKM exhibitions, and printed images as photographs, with the proposal - not yet realized - of objects that function as visualizations of 3D data. This exhibition is part of a digital ethnography study to investigate how generative

Carolina Ibarra Castro

art platforms interpret and generate visual content when provided with some keywords, to explore how concepts about the notion of Latin American indigenous communities are interpreted.

Usually, and as has been discussed with local communities, indigenous representation in programs like Gencraft is cartoonish.

By unpacking the biases present in generative art, we aim to foster a more inclusive, culturally sensitive, and equitable approach to AI-driven creative expression.
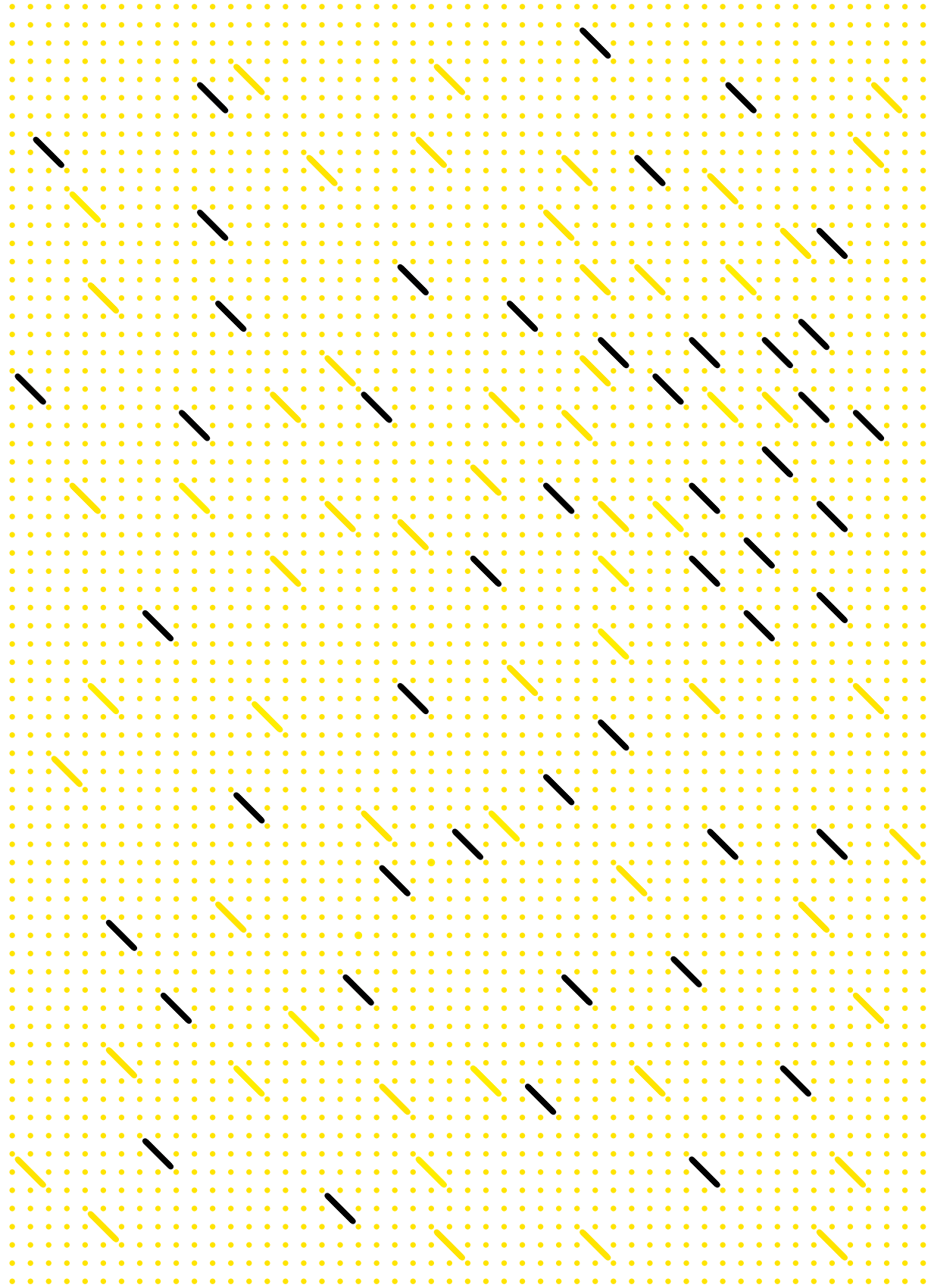
ENERGY ETHICS WORKSHOP

The day after the conference (Friday September 20th), there will be a satellite workshop on Normative Energy Ethics in room C. During this one-day event, three invited experts will present ethical analyses of current energy policies in different geographical contexts.

TIME	CONTENT	
09:00–9:45	Welcome	
09:45–10:45	Expert Talk Ran Ran	Focus: China
10:45–11:00	Coffee Break	
11:00–12:00	Expert Talk Adam Briggle	Focus: USA
12:00–13:00	Lunch	
13:00–14:00	Expert Talk Rafaela Hillerbrand	Focus: Germany/Europe
14:15–15:15	Breakout Sessions – Phase 1	
15:15–15:30	Coffee Break	
15:30–16:15	Discussion	
16:15–16:30	Coffee Break	
16:30–17:15	Breakout Sessions – Phase 2	
17:30–20:30	Post-workshop social at Kühler Krug	

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Ran Ran

Senior Research Fellow at Global Megacity Governance Institute, Shenzhen University. Her research interests are in Comparative Environmental Politics, Climate Change and Urban Governance. Prior to joining Shenzhen University, Dr. Ran held the position of Associate Professor at Renmin University of China. She earned the Ph.D. from the University of Duisburg-Essen in 2009 and in 2009–10 she was a postdoctoral fellow at the University of Southern California. Dr. Ran's publications have appeared in Journal of Environmental Policy & Planning, China Quarterly, Journal of Cleaner Production, among others. Her 2015 book systematically examined the paradox of the "Environmental Policy Implementation Gap" in China's local environmental politics. Dr. Ran was selected as one of the "Chinese Highly Cited Researchers in Political Science" by Elsevier in 2021, 2022, and 2023.

Her talk in the Energy Ethics Workshop will deal with the ethics of energy policy in China.

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Adam Briggle

Professor in the Philosophy and Religion Department at the University of North Texas. He has a PhD in Environmental Studies with an emphasis in Science and Technology Policy research from the University of Colorado, Boulder. Briggle spent three years as a post-doctoral fellow in the philosophy department at the University of Twente, the Netherlands. His interdisciplinary research lies at the intersections of science, technology, ethics, and politics. He is the author of several books, including A Field Philosopher's Guide to Fracking (2015) and Thinking through Climate Change: A Philosophy of Energy in the Anthropocene (2021). He is also active in the Public Philosophy Network, which seeks to advance the theory and practice of philosophy that engages with society. His most recent book, A Field Guide to Climate Change: Understanding the Problems (2024) deals with the issue of climate literacy and provides a guide for understanding how problems related to climate change are framed, debated, and resolved.

His talk in the Energy Ethics Workshop will deal with the ethics of energy policy in the United States.

* The three presentations will be followed by Q&A as well as interactive activities to foster discussions and create opportunities for exploring further international and interdisciplinary collaborations. This event will take place at the same venue as the fPET conference.

* If you are interested in the topic, feel free to visit the webpage of the *ITAS Normative Energy Ethics Lecture Series.*

Rafaela Hillerbrand

Professor of Ethics of Technology and Philosophy of Science, the head of the Philosophy of Engineering, Technology Assessment & Science (PhilETAS) Research Group at the Institute for Technology Assessment and Systems Analysis (ITAS) of the Karlsruhe Institute of Technology (KIT). She is also the Director of the Academy for Responsible Research, Teaching, and Innovation (ARRTI) at KIT. She holds PhDs in philosophy (2005) and theoretical physics (2008). From 2006 to 2008 she held a position as a senior research fellow at the University of Oxford. Before joining KIT, Rafaela Hillerbrand held professorships at TU Delft and RWTH Aachen University and was head of the interdisciplinary research group Ethics for Energy Technology (EET) at the Human Technology Centre (HumTec) at RWTH. She serves on expert committees to advise policy and industry on questions concerning the development of sustainable (energy) technologies.

Her talk in the Energy Ethics Workshop will deal with the ethics of energy policy in Germany and the broader European context.

PRACTICAL INFORMATION

Restaurants, etc.

↦ **Restaurants around Ludwigsplatz (Lehners, Aposto, Sen)**
↦ **Classical beer gardens in Kapellenstraße (Vogelbräu, Oxford)**
↦ **Badisches Brauhaus (local food)**
↦ **Mogogo (African, Eritrean restaurant)**
↦ **Taumi Asia Fusion**
↦ **Karla & gut**
↦ **Klauprecht Café**

Places to Visit

↦ **Günther-Klotz-Anlage (park)**
↦ **Gutenbergplatz (market square)**
↦ **Marktplatz (tourist information, market square)**
↦ **Turmberg in Durlach (nice for watching sunsets, panorama view)**
↦ **Karlsruhe Palace and Park**

Getting around Karlsruhe

↦ **Nextbike system**
1€ per 15 minutes per bicycle: available everywhere downtown → App
↦ **Public transport**
The conference venue is close to the tram station ZKM (reachable from main station with tram line 2)
↦ **Good public transport systems: Trams and busses (trams are partly underground)**
↦ **Most important tram line is line 2 (pay attention: "2" and "S2" are two different tram lines): You can take the tram line 2 from station ZKM in both directions, either to the western part of Karlsruhe (Europaplatz/ Gutenbergplatz) or to the Marktplatz and the eastern part of Karlsruhe via the main station (Durlacher Tor/ KIT)**
↦ **Good train connections to Stuttgart, Baden-Baden, Frankfurt, etc.**

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↦ **Zachary Pirtle (Independent scholar)**

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(For the workshop on normative energy ethics, KIT-ITAS)

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↦ **Please direct any queries related to the conference to fpet2024@itas.kit.edu.**

↦ **Please call: +49 721 608-28548**

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