Wednesday 18 May

All Paper Presentations and Keynotes take place at the
Conference Venue in Findelgasse 7-9
All plenary sessions will be in Room 0.015

14:00 - 14:15
Opening Session

14:15 - 15:15
Keynote by Rafaela Hillerbrand "Technology and human wellbeing. Towards a values sensitive design of the Energiewende (German Energy turn)"

15:15 - 15:30
Coffee Break

15:30 - 17:30		
Room 0.015	Room 0.016	Room 2.024
New Ways of Engineering (the new)	**Architecture and Reasoning**	**Medicine & Biology**
chair: Andreas Kaminski	***chair: Sabine Thürmel***	***chair: Aida Boukhris***
Ronald Zehmeister, Matthias Barbian: "Engineering 2050" - The philosophical aspects of a unique platform for the production of the future	Sabine Ammon: Drawing Inferences: Image-based reasoning in engineering sciences	Alena Wackerbarth: Ethical and social Assessment of Medical Simulation – a Contribution to responsible Research and Innovation
Viola Schiaffonati: Philosophy of Engineering and the Quest for a Novel Notion of Experimentation	Michael Poznic: Persuading, Designing and Representing with Architectural Models	Édison Renato Silva, Roberto Bartholo, Domício Proença Jr.: Learning from Medicine: towards dialogical interdisciplinary Engineering
José Antonio Aravena-Reyes: Techné, Lógos and Métis: Elements for a Philosophy of Engineering	Sjoerd Zwart, Peter Kroes, Maarten Franssen: A Semantic Model For Engineering	Michael Funk: Bioengineering and Synthetic Biology – Towards an Epistemology and paradigmatic Shift in Engineering-Methodology

19:00 - 21:00
Evening Reception Theater Salz & Pfeffer, Frauentorgraben 73 play by meinhardt, krauss, feigl drinks sponsored by TMS

Thursday 19 May

9:00 - 9:10
Announcements

9:10 - 10:40		
Room 0.015	Room 0.016	Room 2.024
Ethics and Engineering I	**Computers and Humans**	**The Future of Technology**
chair: Glen Miller	***chair: Sabine Thürmel***	***chair: Geoff Crocker***
Cecilia Moloney, Cecile Badenhorst, Janna Rosales: Fostering Subjectivity in Engineering Education: Philosophical Framework and Pedagogical Strategies	Sascha Julian Oks: Cyber-physical systems - Can technology be smart?	Diane P. Michelfelder: The Conceptual Contours of Post-Normal Engineering
Nolen Gertz: From Engineering Nihilism to Engineering Responsibility	Wang Guoyu, Li Lei: Artificial Intelligence and Human Intelligence Seen from a Neurophenomenological Perspective –Taking AlphaGo as an Example	Manuel Fernández López: Long-term scenarios and self-perspectives. Exploring ethical considerations in the context of technological innovation for equality and well-being
Wilhelm E. J. Klein: Riding the Absent Technophant — About the Ethical Obligations that Flow from Technologists' Expertise-Enabled Moral Intuitions	Ole Kliemann: Husserl contra Turing	Mauricio Villaseñor Teran: Forging a concept for emerging technologies

10:40 - 11:00
Coffee break

11:00 - 12:30		
Room 0.015	Room 0.016	Room 2.024
Ethics and Engineering II	**Computer Simulation**	**Risk and Technology**
chair: Cecilia Moloney	***chair: Zachary Pirtle***	***chair: Wang Nan***
Hidekazu Kanemitsu: Some new trends in engineering ethics: A Consideration from Japanese Point of View	Juan M. Durán: Computer simulations and big-data science: reviewing similarities and differences	Dennis Köhnke, Moritz Riemann: An Engineering and Normative Approach to Surface Storage of High Level Radioactive Waste
Christelle Didier: Professions and Ethics: The Case of Engineers	Hildrun Lampe: Computer simulations as basis for political decisions	Zhang Zhihui: Discuss on the Genetic Epistemology and Expansion Mechanism of Engineering risk —A case Study of the Three Gorges Project
Glen Miller: What Ethics Owes Engineering	Nico Formanek: Does computer simulation require a novel epistemology?	Neelke Doorn: Distributing responsibilities in risk management: The example of flood risk governance

12:30 - 14:00
Lunch

14:00 - 15:00
Keynote by Andy Neely "Grand Challenges in Industrial Engineering: Perspectives on Today and Tomorrow"

15:00 - 15:30
Coffee Break

15:30 - 17:00		
Paper Presentations IV		
Room 0.015	Room 0.016	Room 2.024
Ethics and Machines	**Interact with Machines**	**Art**
chair: Sabine Ammon	***chair: Andreas Kaminski***	***chair: Sascha Oks***
Janina Sombetzki: Responsible Algorithms and the transformation of the traditional concept of responsibility in the human-machine-interaction	Bruno Gransche: Assisting Ourselves to Death	Michael Mendyka: Technikethikwerkstatt
Erik W. Aslaksen: Technology, Ethics, and Survival	YU Xue, WANG Qian: Human-Machines-Relations: Analysis from the Perspective of Organicism based on Chinese Culture	Anne Krefting: Knowledge Factory. The Art of Cultural Hacking & Creative Disturbance in the Urban Planning
Kristen Psaty: Engineering for the Other: An Existential Examination of the Engineer's Role in Privacy by Design	Manuel Dietrich: Mediating Character of Machine Learning Technologies: Philosophy Concepts and Engineering Design Prospects	Abbas Gohari: Engineering Ethics in Iranian Philosophy, a Study on Iranian Buildings in 18 Centuries in Tehran

19:00 - 21:00
Conference Dinner Museum für Industriekultur, Äußere Sulzburger Str. 60-62 (Tram Line 8, Stop "Tafelhalle")

Friday 20 May

9:00 - 9:10
Announcements

9:10 - 10:40		
Room 0.015	Room 0.016	Room 2.024
From Design to Co-Design	**Wider Connections**	**Engineering, Technology and Science**
chair: Pieter Vermaas	***chair: Geoff Crocker***	***chair: Sabine Ammon***
Aida Boukhris, Kathrin Moeslein: Opening electronics to drive collaborative innovation	Li Sanhu: The Political Construction of Three Gorges Dam: Authority, Dissents and Framings of Engineering	Terry Bristol: The Engineering Knowledge Research Program
Sarah Bell, Charlotte Barrow, Vera Bukachi: Developing Community Collaboration: the Engineering Exchange	Tuna Baskoy: Thorstein B. Veblen's Philosophy of Technology and Modern Capitalism	Klaus Kornwachs: The Technological Basis of Natural Sciences
Zachary Pirtle, David Tomblin: Well Ordered Engineering?: Using Participatory Technology Assessment to Inform Major Engineering Decisions	Li Bocong, Bao Ou: Three Stages in an Artifact Life Cycle: Material, Product and Waste	Mark Thomas Young: Skill and Ineffability: Tacit Knowledge from an Engineering Perspective

10:40 - 11:00
Coffee break

11:00 - 12:30		
Room 0.015	Room 0.016	Room 2.024
Teaching, Designing and Evaluating Engineering Projects	**Politics of Technology**	**How engineers speak and know**
chair: Guru Madhavan	***chair: Klaus Kornwachs***	***chair: Hidekazu Karemitsu***
Sjoerd Zwart: A Classification of Innovative Engineering Projects	Wang Nan: A Dialectic between Expertise and Politics: A Case Study of the Chinese Academy of Engineering	Rick Evans: On the Philosophical Origins of Modern Engineering Communicative Practice: An Interpretive Reading of Wittgenstein's Notion of the "Language-game."
Pieter E. Vermaas: Benchmarking Engineering Design Research: Towards Criteria for Design Tools	Wang Dazhou: Competition of Engineering Paradigms: The High-speed Wheel-rail vs. Maglev Train in China	Wade L. Robison: Rules of skill, hard and soft
Zachary Pirtle, Jay Odenbaugh, Zoe Szajnfarber: Parallel Paths in Systems Engineering: Principles for Developing System and Technology Portfolios	Huang Yinghang, Yin Haijie: A Study on the Interactive Relationship Between the Development of Technology and the Social Construction in Prehistoric Age in China	John A. Meluso, Raymond Crough: Application of Design Ethnography to Identify the Database as a Mechanism of Effective Communication in Systems Engineering

12:30 - 14:00

14:00 - 15:00
Keynote by Alfred Nordmann "Working Knowledge"

15:00 - 15:30
Closing Session