

## Monday, February 3<sup>rd</sup> 2025

8:00: Welcome breakfast and registration (Espace V117 – Maurice Allais)

8:45: Opening talk by Pascal Le Masson (**Mines Paris-PSL University**) and Eswaran Subrahmanian (**CMU**)(Room amphitheater V107)

### Plenary Session: Design theory in Science

Chair: Armand Hatchuel  
(Room amphitheater V107)

9:00 – 9:45	Meta-engineering: designing evolutionary processes for open-ended biodesign	Michiel Stock ( <b>Ghent University</b> ), Tom Gorochofsky, Simeon Castle ( <b>University of Bristol</b> )
9:45-10:30	Toposes and 'bridges' for mathematics and artificial intelligence	Olivia Caramello ( <b>Istituto Grothendieck, Università degli Studi dell'Insubria</b> )



☕ **10:30 – 11:00 break** ☕

(Space Salle des Colonnes – V213 – second floor)



<p style="text-align: center;">Parallel session 1: <b>Design theory and cognition</b></p>	<p style="text-align: center;">Room V111</p>
<p style="text-align: center;"><i>Chair: Maxime Thomas</i></p> <ul style="list-style-type: none"> <li>• 11:00 – 11:30. Are designing product and product-service systems different? A cognitive and neurocognitive investigation. Neramballi Abhijna (<b>Linköping University</b>)</li> <li>• 11:30 – 12:00. How much Intuition is in Design Methods? Udo Kannengiesser (<b>Johannes Kepler University</b>)</li> <li>• 12:00 – 12:30. Potential Neurophysiological Foundations of the FBS Ontology. John Gero (<b>UNCC</b>)</li> </ul>	
<p style="text-align: center;">Parallel session 2: <b>Design theory, arts, education</b></p>	<p style="text-align: center;">Room V112-113-114</p>
<p style="text-align: center;"><i>Chair: Flora Mercat</i></p> <ul style="list-style-type: none"> <li>• 11:00 – 11:30. Knowledge Diversity – Towards an Overlooked Nexus of Education and Design. Michael Funk (<b>Faculty of Computer Science, University of Vienna</b>)</li> <li>• 11:30 – 12:00. Intelligence in Architectural Representation Cycles. Mateljan Marija (<b>Delft University of Technology</b>)</li> <li>• 12:00 – 12:30. Inverted Pedagogy, Project Based Learning and ZPD. Mithra Zahedi (<b>Université de Montréal</b>)</li> </ul>	
<p style="text-align: center;">Parallel session 3a: <b>Design theory and AI</b></p>	<p style="text-align: center;">Room V115</p>
<p style="text-align: center;"><i>Chair: Antoine Bordas</i></p> <ul style="list-style-type: none"> <li>• 11:00 – 11:30. AI Big Data Analytics for Decision Making Quality: Leveraging Human-AI Capabilities and Design Thinking. Ahmad Rizwan (<b>University de Venise Ca' Foscari</b>)</li> <li>• 11:30 – 12:00. Challenges of Design for AI and AI for Design. Barbara Tversky (<b>Stanford University</b>)</li> <li>• 12:00 – 12:30. Real vs. Artificial Scenario-Building in Planning: Some GPT-Based Experimental Notes. Maria Rosaria Stufano Melone (<b>Politecnico di Bari</b>)</li> </ul>	

Parallel session 4 <b>Design theory for sustainable innovation and transitions</b>	Room V116
<i>Chair: Chipten Valibhay</i>	
<ul style="list-style-type: none"> <li>• 11:00 – 11:30. Generativity in design: The challenge of balancing global and local knowledge in the era of AI. Sudhir Varadarajan (<b>IIITDM Kancheepuram</b>) Albrecht Fritzsche (<b>IEDC-Bled School of Management</b>), Eswaran Subrahmanian (<b>CMU</b>)</li> <li>• 11:30 – 12:00. Designing with and for practitioners to tackle societal challenges. Matti Rossi (<b>Aalto</b>)</li> <li>• 12:00 – 12:30. How does Sensor Technology Influence Behavioral Change and Value Creation in the development of “Smart Product Service Systems”? André Liem (<b>Norwegian University of Science and Technology</b>)</li> </ul>	
Parallel session 5 <b>Deepening the foundations of design theory</b>	Room V107
<i>Chair: Elise Ratier</i>	
<ul style="list-style-type: none"> <li>• 11:00 – 11:30. Contradictory Logics: How Cognitive Scripts Shape Business Model Design in Corporate Incubators. Dirk Schneckenberg (<b>Rennes School of Business</b>)</li> <li>• 11:30 – 12:00. Formal Process Theory as a meta design theory. Vladimir Sedenkov</li> <li>• 12:00 – 12:30. Non-Economics as a Design Science Informed by Utopian Hope: The Role of Feeling/Emotion/Desire, Fiction, Artistic/Scientific Abduction, Modeling, Virtual Reality, Hypothesis and Framed Evidence. Ira Monarch (<b>retired, Software Engineering Institute</b>) John Mowitt (<b>retired, University of Leeds</b>)</li> <li>• 12:30 – 13:00: On the design of a clock synchronization protocol for the Solar System Internet. Alan G. Hylton (<b>NASA</b>)</li> </ul>	
Parallel session 6 <b>Design theory and managing the unknown</b>	Room V106A
<i>Chair: Malik Terfous</i>	
<ul style="list-style-type: none"> <li>• 11:00 – 11:30. BAUSTEIN: A design tool for configuring and representing design research. Chandra Kruse Leona (<b>University of Agder</b>)</li> <li>• 11:30 – 12:00. Towards a theoretical framework about social interaction for generative collaborative design in healthcare. Smulders Frido, Vandekerckhove Pieter (<b>Delft University of Technology</b>)</li> <li>• 12:00 – 12:30. Contemporary engineering challenges and the benefit of advanced mathematics as category theory. Yves Keraron (<b>ISADEUS</b>), Eswaran Subrahmanian (<b>CMU</b>)</li> </ul>	


**12:30 – 14:30 Lunch**
  
 (Space Salle des Colonnes, V213)

## Monday, February 3<sup>rd</sup>, 2025

<b>Plenary Session: Design theory and institutions for design</b> <i>Chair: Pascal Le Masson</i> (Room amphitheater V107)		
14:30 – 15:15	Designing institutions for inclusive technology: Episodes from India's experience with information technology	Balaji Parthasarathy <b>(International Institute of Information Technology)</b>
15:15 – 16:00	Understanding Science-Industry Interactions: Insights from C-K Theory	Quentin Plantec <b>(TBS Education)</b>

☕🎧 **16:00 – 16:30: break** ☕🎧  
 (Space Salle des Colonnes, V213)

<b>Plenary Session: Design Theory and systems in transitions</b> <i>Chair: Chris McMahon</i> (Room amphitheater V107)		
16:30 – 17:15	Engineering Systems Design handbook	Anja Maier <b>(University of Strathclyde)</b> , Pieter Vermaas <b>(Delft University of Technology)</b> , Josef Oehmen <b>(DTU)</b>
17:15 – 18:15	Design Theory today: modelling generativity in the age of transition  Introduction by Gaetano Cascini <b>(Politecnico di Milano)</b> Contribution of the DT SIG to Design Society 2040 Vision project	Pascal Le Masson <b>(Mines Paris – PSL University)</b> Eswaran Subrahmanian <b>(CMU)</b>

18:15-20:30	Cocktail (Space Salle des Colonnes, V213)
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## Tuesday, February 4th 2025

From 8:30: Breakfast (Espace V117 – Maurice Allais)

### Parallel session 1: Design theory and cognition

Room V111

*Chair: Chipten Valibhay*

- 9:00-9 :30. Studying fixation effects regarding food systems: A pathway to foster consumers' innovation in the food transition. Victor Lasquelles (CNRS)
- 9:30-10:00. Total Creativity. Lauri Koskela (Tallinn University of Technology)
- 10:00-10:30. Innovation Appreciation Model based on Attractive Quality and Value Propositions: Case of a Novel Knowledge Management System Design and Community Platform Ecosystem. Ulrich Schmitt (Stellenbosch Business School)

### Parallel session 2: Design theory, arts, education

Room V112-113-114

*Chair: Gaetano Cascini*

- 9:00-9 :30. Hinduist Tandava – from a design theory of dance towards a dance theory of design. Albrecht Fritzsche (IEDC-Bled School of Management), Eswaran Subrahmanian (CMU)
- 9:30-10:00. Narrative Engineering: How to construct systems that fit a narrative. Andreas Makoto Hein (University of Luxembourg)
- 10:00-10:30. Sentiment as a learning factor in design studio education: A case study of sentiment analysis in student-tutor crits. Sopher Hadas, Chen Hajaj (Ariel University) John Gero (UNCC)

### Parallel session 3a: Design theory and engineering science

Room V115



*Chair: Jacob Collard*

- 09:00-09:30. A Metrology System Using Image Processing for the Accuracy of 3D-Printed Objects. Takuya Okamoto (Kitami Institute of Technology)
- 09 :30-10 :00. Enhancing Informed Adoption of Emerging Technologies in Organizations: An approach for decision-making in the case of unknown alternatives. Sara Vannelli, Filippo Visintin (University of Florence), Maxime Thomas (Mines Paris – PSL)
- 10 :00-10 :30. On the Cartography of Engineering Knowledge. Claudia Eckert (The Open University)

Parallel session 4 <b>Design theory for sustainable innovation and transitions</b>	Room V116
<i>Chair: Marion Deshoulières</i>	
<ul style="list-style-type: none"> <li>• 9:00-9 :30. Managing design heritage - Grandfather rights as a precursor for creative preservation. Gunnar Holmberg, Nicolette Lakemond (<b>Linköping University</b>)</li> <li>• 09 :30-10 :00. Sustainable urban mobility in Laval in 2050: four prospective scenarios of creative preservation around Vélis. Florent Begue, Christophe Abrassart (<b>Université de Montréal</b>) <b>Laurent Simon (HEC Montréal)</b></li> <li>• 10 :00-10 :30. Teaching Axiomatic Design for Industry 5.0. Christopher Brown (<b>Worcester Polytechnic Institute</b>)</li> </ul>	

Parallel session 5 <b>Deepening the foundations of design theory</b>	Room V119
<i>Chair: Antoine Bordas</i>	
<ul style="list-style-type: none"> <li>• 9:00-9 :30 On Transposing C-K Theory into Quantum Framework - A brief introduction to quantum design innovation. Patrick Corsi (<b>IKBM</b>)</li> <li>• 09 :30-10 :00. The hidden third dimension of the CK Theory? Christian Pierre Barde (<b>Chonnam National University / Parafe</b>)</li> <li>• 10 :00-10 :30. Does an antifragile system design itself? An analysis of antifragility and C-K theory. Yoram Reich, Jordan Peer (<b>Tel Aviv University</b>)</li> </ul>	

Parallel session 6 <b>Design theory and managing the unknown</b>	Room V107
<i>Chair: Alexandre Azoulay</i>	
<ul style="list-style-type: none"> <li>• 9:00-9 :30. Pragmatism and C-K theory for organizational research. Frido Smulders, Steffen Ristau (<b>Delft University of Technology</b>)</li> <li>• 09 :30-10 :00. Towards a Design Theory of Leadership. Albrecht Fritzsche (<b>IEDC-Bled School of Management</b>)</li> <li>• 10 :00-10 :30. THINKING AROUND THE BOX to turn your innovation into reality in your family business. Thomas Lambert (<b>HEC Montréal</b>)</li> </ul>	


**10:30 – 11:00 break**
  
 (Space Salle des Colonnes, V213)

<b>Plenary Session: Design theory in scientific research</b> <i>Chair: Eswaran Subrahmanian</i> (Room amphitheater V107)		
11:00 – 11:45	Generativity in Material Science	Benoit Roman <b>(ESPCI)</b>
11:45 – 12:30	Small scale, Big tools: bridging Design, Engineering, and Biomedical research to drive innovation	Albane Imbert <b>(The Francis Crick Institute)</b>

🕒 **12:30 – 14:00 Lunch** 🕒  
 (Space Salle des Colonnes, V213)

<b>Plenary Session: design theory in the design of complex systems</b> <i>Chair: Yoram Reich</i> (Room amphitheater V107)		
14:00 – 14:45	Engineering Better Care	John Clarkson <b>(University of Cambridge)</b>
14:45 – 15:30	Project generativity and the rapid regime creation - history of SAGE	Sylvain Lenfle <b>(CNAM)</b>

☕ **15:30 – 16:00 break** ☕  
 (Space Salle des Colonnes, V213)

<b>Plenary Session: Contemporary challenges for design theory</b> <i>Chair: Gaetano Cascini</i> (Room amphitheater V107)		
16:00 – 16:45	Standards as discourse	Jacob Collard <b>(NIST)</b> Eswaran Subrahmanian <b>(CMU)</b>
16:45 – 17 :30	The value of design theory	Yoram Reich, Emilia Lavi <b>(Tel Aviv University),</b> Kuti Shoham <b>(Afeka College of Engineering)</b>