

Monday, January 29th morning

8:00: Welcome breakfast and registration

8:45: Opening talk by the SIG Chairs

Session: Historical perspective Chair: Pascal Le Masson		
9:00 – 9:45	A history of Design Theory at Carnegie Mellon University	Eswaran Subrahmanian (CMU)
9:45 – 10:30	The battles of intellectual property and the conceptions of creation	Gabriel Galvez-Behar (Université de Lille)

☕ 10:30 – 11:00: Coffee break ☕

Session: design theory and formal models Chair: Akin Kazaki		
11:00 – 11:45	Creativity in Mathematics and Proofs.	Olivier Hermant (MINES ParisTech)
11:45 – 12:30	Why laws of fixation guide creation. Insights from C-K theory and topos theory	Armand Hatchuel (MINES ParisTech)

12:30 – 14:00 Lunch



Monday, January 29th afternoon

<p>Session: design theory and organization of the management of innovation Chair: Eswaran Subrahmanian</p>		
14:00 – 14:45	Theoretical explanation of “y-gaga” through general design theory	Oizumi Kazuya (The University of Tokyo)
14:45 – 15:30	When project management meets design theory: toward a management of exploratory projects"	Sylvain Lenfle (CNAM)

☪ 15:30 – 16:00: Coffee break ☪

<p>Discussion Sessions</p>	
16:00 -18:00	Design Theory & Culture, Philosophy, Art and Creation Chairs: Vincent Bontems, Maria Rosaria Stufano Melone
	Design Theory & Data Science, Chairs: Akin Kazakci, Ehud Kroll
	Design Theory, Psychology and Cognition Chairs: Anaelle Camarda, John Gero
	Design Theory & Management Chairs: Sophie Hooge, Frido Smulders

Tuesday, January 30th morning

8:30: ☕ | coffee and breakfast ☕

Parallel session

Design theory, design thinking and conceptual models in design: chair Pascal Le Masson

- 9h-9h30: A framework for positioning design methods and tools in prospective ergonomics. **André Liem (Norwegian University of Science and Technology)**
 - 9h30-10h: Building design theory: Morphology in the conceptual design phase. **Wim Zeiler (University of Technology Eindhoven)**
 - 10h – 10h30: Designing with axioms – a critical study. **Christopher Brown (Worcester Polytechnic Institute)**
- ☕ 10:30 – 11:00 Coffee break ☕**
- 11h-11h30: Model-based abduction in design. **Lauri Koskela (University of Huddersfield), Ehud Kroll (ORT Braude College)**
 - 11h30-12h: C-K theory for generating innovative alternatives in public policy making. **Irene Pluchinotta (LAMSADE), Akin Kazakci (MINES ParisTech) Raffaele Giordano (Water Research Institute), Alexis Tsoukiàs (LAMSADE)**
 - 12h-12h30: Analyzing the generative capacity of agronomic theories for both science and practice. **Chloé Salembier (INRA), Segrestin Blanche (MINES ParisTech), Berthet Elsa (INRA), Weil Benoît (MINES ParisTech), Meynard Jean-Marc (INRA)**

9:00 -12:30

Room V111

Parallel session (next)

DT and organisations: chair Akin Kazakci

- 9h-9h30: Business model design in corporate incubation: new perspectives on the cross-influence of cognitive schemas from established and entrepreneurial firms. **Dirk Schneckenberg (ESC Rennes)**
- 9h30-10h: Designing to decide: using design theory for fast value potential evaluation of an innovative project prior to resources allocation decision. **Antoine Thuillier, Matt Fuller, Albert David (Dauphine University)**
- 10h-10h30: Managing a toolbox of innovative design methods: the case of the IDEAS initiative for agri-food systems design. **Juliette Brun (Earlybird), Marianne Cerf, Marie-Hélène Jeuffroy, Jean-Marc Meynard (INRA)**

☉ **10:30 – 11:00 Coffee break** ☉

- 11h-11h30: Design theory for sustainable communities. **Yoram Reich (Tel Aviv University)**
- 11h30-12h00: The invention of the transistor: revisiting the “magic month” through the prism of C/K design theory. **Sylvain Lenfle, Loïc Petitgirard (CNAM)**
- 12h-12h30: The Dreamliner’s bumpy road to takeoff. Could Boeing have known? **Frido Smulders (TU Delft), Eswaran Subrahmanian (CMU), Yoram Reich (Tel Aviv)**

9:00 -12:30

Room V112-V113-
V114

Parallel session (next)

DT and methods: chair Benoit Weil

- 9h-9h30: PSI as KCP method extension: opportunities to improve the design Process. **Milena Klasing Chen, Dominique Laousse (SNCF), Yoram Reich (Tel Aviv University), Eswaran Subrahmanian (CMU)**
- 9h30-10h: Designing as playing games of make-believe. **Michael Poznic (ITAS), Claudia Eckert (The Open University)**
- 10h-10h30: Composition rules and creativity in architecture. **Maria Rosaria Stufano Melone, Stefano Borgo (Technical University of Bari)**

9:00 -12:30

Room V115

☉ **10:30 – 11:00 Coffee break** ☉

- 11h-11h30: Designing a design community to regenerate an academic society exploration strategy. The case of the innovation thematic group of the french chemical engineering society. **Laousse, Dominique (SNCF); Potier, Olivier (LRGP, CNRS, Université de Lorraine, SFGP); Klasing Chen, Milena (SNCF); Brun, Juliette (Mines ParisTech); Camargo, Mauricio (ERPI, Université de Lorraine) Guillou, Florent (IFPEN); Marchal, Philippe (LRGP, CNRS, Université de Lorraine); Uhlemann, Jens (Bayer a.g.)**
- 11h30-12h: A framework for biomimetic design in architecture. **Natasha Heil, Camila Freitas Salgueiredo (MAP-MAACC)**
- 12h-12h30: Model-based system engineering for systems of systems projects. **Dominique Ernadote (AIRBUS)**

Parallel session (next)

Design Theory, Cognition and Humanities: chair Armand Hatchuel

- 9h-9h30: Design and Science: Could the Design approach be better suited for complex problem solving. **Konstantinos Kentrotis (Cranfield University)**
 - 9h30-10h: What is the empirical support for design theories and where can it come from? **John Gero (UNCC)**
 - 10h-10h30: To catch a moment –photo-elicitation in participatory design. **Yvonne Eriksson (Mälardalen University)**
- ☉ 10:30 – 11:00 Coffee break ☉**
- 11h-11h30: The role of creativity in designing social innovations in transactional economies. **Gasparin Marta (University of Leicester)**
 - 11h30 -12h: Obsesses by perspective: paths and overviews. **Barbara Tversky (Columbia/Stanford)**
 - 12h-12h30: Design and poetics. **Georges Amar (chaire TMCI)**

9:00 -12:30

Room V116

Parallel session (next)

Design theory, AI computation: chair Eswaran Subrahmanian

- 9h-9h30: Spatial Cognition and AI for Design On Technology Mediated Synthesis of Embodied Cognitive Experiences. **Mehul Bhatt (University of Bremen, Örebro University)**

- 9h30-10h00: Designing as computing. **Andreas M. Hein (Centrale-Supélec)**

9:00 -12:30

- 10h-10h30: The idiot proposition, **Delfina Fantini van Ditmar (Royal College of Art)**

Room V119

☉| **10:30 – 11:00 Coffee break** |☉

- 11h-11H30: Genericity in/by Design: Material, Economic and Ethical Perspectives. **Ira Monarch (CMU), Muriel Mambrini-Doudet (IHEST), Anne Francoise Schmid (chaire TMCI), Eswaran Subrahmanian (CMU)**

- 11h30-12h00: Surprise-triggered reformulation of design goals. **Mary-Lou Maher (UNCC)**

12:30 – 14:00 Lunch



Tuesday, January 30th afternoon

Session: Design theory and new inspirations Chair : Ehud Kroll		
14:00-14:45	A reflexive view on PSI	Yoram Reich (Tel Aviv University), Eswaran Subrahmanian (CMU)
14:45 – 15:30	Deep generative network	Akin Kazakci (MINES ParisTech)

☉ 15:30 – 16:00: Coffee break ☉

Session: « design theory and creativity » Chair : Akin Kazakci		
16:00 – 16:45	Design Theory and biomimetics	Jacquelyn K.S. Nagel (James Madison University)
16:45 – 17:30	Theory driven experiences in creativity	Anaëlle Camarda (MINES ParisTech / Sorbonne)

17:30 Closing and Future Program, chair Eswaran Subrahmanian