# 14<sup>th</sup> International Workshop on DESIGN THEORY

Special Interest Group of the Design Society

Université de Montréal

Université Paris Descartes

Université Paris-Dauphine

University College London

University of Bath

University of Leicester

University of Liverpool

University of Orleans

University of Twente

USTO Oran

Development

ZEEBRA

York University

University of Zagreb FSB

Worcester PolytechnicInstitute

World Business Council for Sustainable

University of Liechtenstein

University of Lisbon (FA/ULisboa)

Université degli studi di Modena e Reggio Emilia

University "G. d'Annunzio" of Chieti-Pescara

University Bourgogne Franche-Comté

# 25<sup>th</sup> – 26<sup>th</sup> January 2021

Aalto University School of Business Aarhus BSS ACPR AIRBUS Ariel University Bocconi University Milan Brigham Young University Carnegie Mellon University CayaK Innov CEA CentraleSupélec CESI CNAM Dassault Systèmes Dauphine Université Delft University of Technology Ecole des Ponts Ecole Polytechnique ENSA - Paris La Villette ESC Rennes School of Business

Fraunhofer Institute for Integrated Circuits Graduate School of Architecture Nantes Grenoble Ecole de Management Henkel KGaA i3-CRG **IKBM Sprl IKOS** Consulting INRAF INSERM Jagiellonian University Johannes Kepler University Linz Karlstad University Kitami Institute of Technology Linkôping University LIU Loughborough University Lund University MAACC

Maalardalen University MHCS MINES ParisTech

Nottingham University Business School **Open University** ORT Braude College Panthéon-Sorbonne Paris-Saclay University Politecnico di Bari Politecnico di Milano Politecnico di Torino RMIT SNCF Tel Aviv University Telecom ParisTech TU Darmstadt TU Delft Ulm University Umrk UNCC Université Bourgogne Franche-Comté

Université Bourgogne Franche-Comté Université de Lorraine



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the **Design Society**a worldwide community
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Organized by the Chair of Design Theory and Methods for Innovation I CGS – I3 – MINES ParisTech – PSL University

Contact: stephanie.brunet@mines-paristech.fr



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# **Workshops Guidelines**

# To join the platform(s)

You will find all conference connection information on:

### https://designtheory.sciencesconf.org/

Be careful: you need to be logged in to access information on sessions virtual rooms, program and kumospace.

To join the Design Theory Workshop sessions please click here <u>https://designtheory.sciencesconf.org/resource/page/id/4</u> If you cannot reach this page, it means that you are not logged in. Please proceed.

To join kumospace for breaks and chat in small groups, please click here:

https://www.kumospace.com/design-theory-2021

To reach this page, you need to first create an account here: https://www.kumospace.com/

# **Recommendations for on-line participation**

#### Software

• Zoom will be used for the parallel sessions and plenary sessions. Please make sure you have installed Zoom. You can install the free application or web browser plugin. The plugin does not need any admin rights on your computer.

#### Equipment

- Comfortable and good quality headset and microphone. This eliminates audio feedback, distracting noises.
- Camera either built-in to your computer or an external webcam that is able to be placed to give a good view of you.

#### Environment

- Put your mobile on silent during the session
- Mute sounds on your PC (e.g. incoming mail)
- Please make sure your full name is used on your Zoom account, with also your institution name
- When not speaking, please mute your mic

#### Session

- Connect to Zoom at least 10 minutes in advance. A waiting list will be active, you will be accepted quickly if your information is visible
- Do not hesitate to ask questions in the chat or to make comments. The chair will then

#### Breaks

We have configured a place for breaks to chat in small group.
 If you want to join us during the breaks please create an account here <a href="https://www.kumospace.com/">https://www.kumospace.com/</a>
 Then please click on this link: <a href="https://www.kumospace.com/design-theory-2021">https://www.kumospace.com/</a>
 Then please click on this link: <a href="https://www.kumospace.com/design-theory-2021">https://www.kumospace.com/</a>
 If you use KUMOSPACE you need to turn off your microphone in ZOOM.

### Monday, January 25th

Zoom link for the whole day

https://zoom.us/j/98133547363?pwd=Y0R5NWlgek9nSk5jbXJIOVpgWU90UT09

#### 11:45: Opening talk by the SIG Chairs

#### Plenary Session: digitalization and design theory

Chair: Armand Hatchuel / Chat moderator: Raphaëlle Barbier

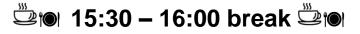
12:00-12:45	"Digital Transformation in Complex Systems – Implications and Avenues for Further Research."	Nicolette LAKEMOND, Gunnar HOLMBERG (Linkoping University)
12:45-13:30	Design of and with sensor integrating machine elements – What are the design challenges in next generation technical systems	Eckhard KIRCHNER, Gunnar VORWERK- HANDING <b>(TU Darmstadt)</b>

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### Plenary Session: design theory in organization

Chair: Eswaran Subrahmanian / Chat moderator: Quentin Plantec

14:00-14:45	Rational Heuristics for Hypothesis Generation in Design Problems	Anna Grandori <b>(Bocconi University)</b>
14:45-15:30	Mobilizing experts in collective inventive rationality in crisis management: a creative and activating "war room" in the face of Covid19	Design and Logistics Research Team on ESP (electric syringe pump)- Covid19 (MINES ParisTech)



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Zoom link for the whole day <a href="https://zoom.us/j/98133547363?pwd=Y0R5NWlqek9nSk5jbXJIOVpqWU90UT09">https://zoom.us/j/98133547363?pwd=Y0R5NWlqek9nSk5jbXJIOVpqWU90UT09</a>

Plenary Session: Design tools and design theory Chair: Ehud Kroll / Chat moderator: Honorine Harlé		
16:00-16:45	What is Knowledge in Industry 4.0?	Sharif ULLAH <b>(Kitami Institute of Technology)</b>
16:45-17:30	What is Generative in Generative Design Tools? Uncovering Topological Generativity with a C-K model of evolutionary algorithms.	Maxime THOMAS <b>(MINES ParisTech)</b>

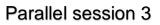
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Plenary Session: Design theory in other societies and SIGs Chair: Yoram Reich / Chat moderator: Caroline Jobin		
18:00-18:45	Main threads of information systems design research or Engaging with practitioners through design research	Matti ROSSI (AALTO, past president of the Association of Information Systems)
18:45-19:30	Exploring Sketching Theory(s)	Bryan HOWELL (Brigham Young University) Jan Willem HOFTIJZER (Delft University of Technology) Mauricio NOVOA (Western Sydney University)

# Tuesday, January 26<sup>th</sup>

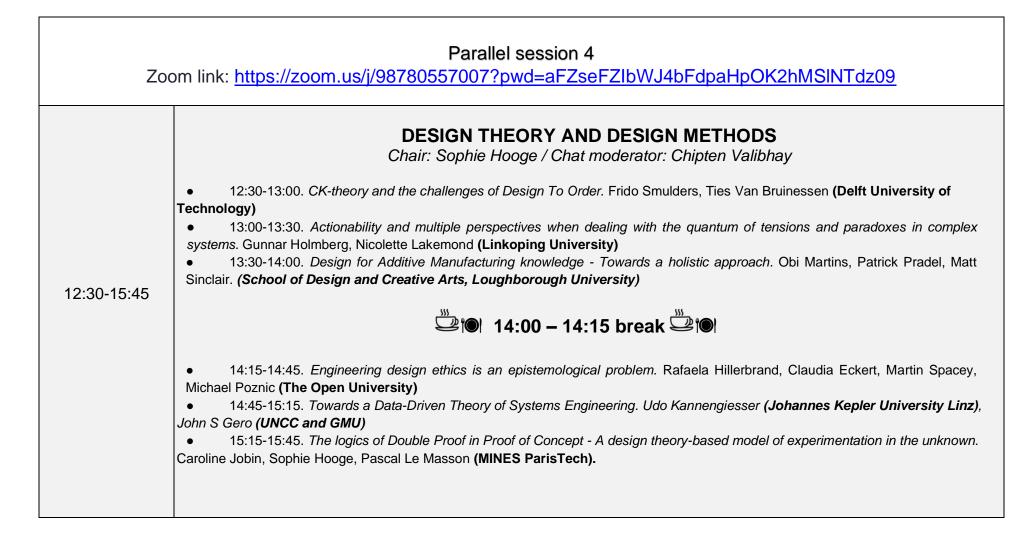
Zoo	Parallel session 1 om link: <u>https://zoom.us/j/93706343201?pwd=cUNud0RsYVMyK2svaU5sRmV0eHpzUT09</u>	
	DESIGN THEORY AND INDUSTRIAL DESIGN, ART AND PHILOSOPHY Chair: Chris McMahon / Chat moderator: Agathe Gilain	
12:30-15:45	<ul> <li>12:30-13:00. Design Archaeology for Design Theorizing. Leona Chandra Kruse (University of Liechtenstein)</li> <li>13:00-13:30. Al and the Horizon of Design. Jesse Benjamin. (University of Twente)</li> <li>13:30-14:00. Generativity in Design Theory - Why 'New Things' Do Exist and Generativity in Fixed Sets is &gt;0. Andreas Makoto Hein (CentraleSupélec)</li> </ul>	
	<ul> <li>14:15-14:45. Transcending Engineering Practice – NOR Logic on the Path from TransistorTechnology to Universal Indeterminacy. Albrecht Fritzsche (Ulm University)</li> <li>14:45-15:15. The role of theory for research through design. Mithra Zahedi, Virginie Tessier (Université de Montréal)</li> <li>15:15-15:45. Transducing the power in the flow of collective design. Eswaran Subrahmanian (CMU), Anne-Françoise Schmid (Chaire TMCI), Ira Monarch, Muriel Mambrini (INRAE)</li> </ul>	

Zoom	Parallel session 2 link: <u>https://zoom.us/j/94366852804?pwd=RXdRNIILSTRJWWpRNWIHcVNaK2hYUT09</u>
	DESIGN THEORY AND INNOVATION MANAGEMENT Chair: Pascal Le Masson / Chat moderator: Louise Taupin
12:30-15:45	<ul> <li>12:30-13:00. The nature of entrepreneurship: A design-based approach. Ken Starkey. (Nottingham University Business School)</li> <li>13:00-13:30. Rethinking rules and social practices. The design of urban spaces in the post-Covid-19 lockdown. Rosaria Maria Stufano Melone (Politecnico di Bari) Stefano Borgo (CNR ISTC-LOA Trento)</li> <li>13:30-14:00. The effect of immersive communication medium on design crits - implications for design theory. Sopher Hadas (Arial University), John Gero (UNCC and GMU)</li> </ul>
	<ul> <li>14:15-14:45. Experiential Lessons from the Distance Redesign of a Socio-Political Scheme: The European Green Deal Transformative Case. Patrick Corsi (IKBM) Jacques de Gerlache (GreenFacts &amp; Institut Paul Lambin - Haute École Léonard de Vinci)</li> <li>14:45-15:15. The interference of the law in the User Experience design: toward new restrictions? Jonathan Keller (Telecom ParisTech)</li> <li>15:15-15:45. Designing new rules in factory: a CK/topos model of an industrial creation heritage. Honorine Harlé, Pascal Le Masson, Benoit Weil (MINES ParisTech)</li> </ul>



Zoom link: <a href="https://zoom.us/j/97001941457?pwd=c3kvNG4xU0NDMEpKbERSemJyWFVMQT09">https://zoom.us/j/97001941457?pwd=c3kvNG4xU0NDMEpKbERSemJyWFVMQT09</a>

	DESIGN THEORY AND THE DESIGN OF COLLECTIVE ACTION Chair: Marta Gasparin / Chat moderator: Estelle Remondeau	
	• 12:30-13:00. Vista Alegre, Traditional culture, contemporary uses. Rita Filipe (CIAUD - architecture, urbanism and design research centre)	
	<ul> <li>13:00-13:30. « Out of the dusty labs ». Really? Ge, bell labs and the myth of isolated research. Sylvain Lenfle (CNAM, CRG)</li> <li>13:30-14:00. The production of law, what kind of design regime and what consequences? Iris Champagne (Dauphine Université)</li> </ul>	
12:30-15:45		
	≥ 14:00 - 14:15 break ≥ 10	
	<ul> <li>14:15-14:45. Expanding innovation fields through triple layer expert conversations: an experiment on amyotrophic lateral sclerosis. Albert David (Dauphine Université), Ségolène Ayme (Institut du Cerveau et de la Moëlle Epinière), Céline Mounier (Institut Charles Cros), Dominique Lafon (Cayak-Innov)</li> <li>14:45-15:15. Transforming data into added-value information: the design of scientific measurement models through the lens</li> </ul>	
	<ul> <li>of design theory. Raphaelle Barbier, Pascal Le Masson, Benoit Weil (MINES ParisTech).</li> <li>15:15-15:45. Designing Digital Ecosystems During the Pandemic. Marta Gasparin, William Green, Martin Quinn (University of Leicester) Murod Ganiyev (Czech University of Life Sciences Prague (CZU))</li> </ul>	





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# Tuesday, January 26th

Zoom link

https://zoom.us/j/97105097521?pwd=L0lxYnV4QzNKb2JLOWZWMHBDN2dCZz09

### Plenary Session: Design theory and social networks

Chair: Pascal Le Masson / Chat moderator: Justine Boudier

16:15-17:00	Design theory beyond generativity	Eswaran SUBRAHMANIAN (CMU) Yoram REICH (Tel Aviv University) Chris McMahon (University of Bristol)
17:00-17:45	A computational approach for using social networking platforms to support creative idea generation	Ji HAN (University of Liverpool)

Chair: Eswaran Subrahmanian	
17:45	Closing and Future Program