

# ICDC 2018

The Fifth International Conference on Design Creativity

January 31st - February 2nd, 2018  
Bath, UK

## CONFERENCE PROCEEDINGS

Elies Dekoninck  
Andrew Wodehouse  
Chris Snider  
Georgi Georgiev  
Gaetano Cascini



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5th International Conference on Design Creativity  
31st January to 2nd February 2018, Bath, UK

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*University of Bath, UK*

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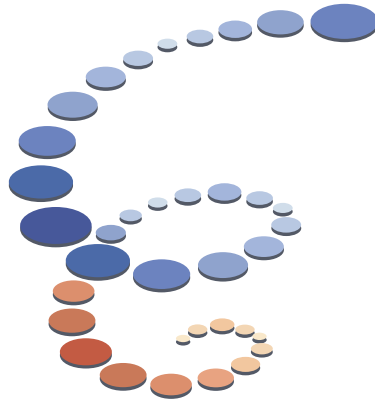
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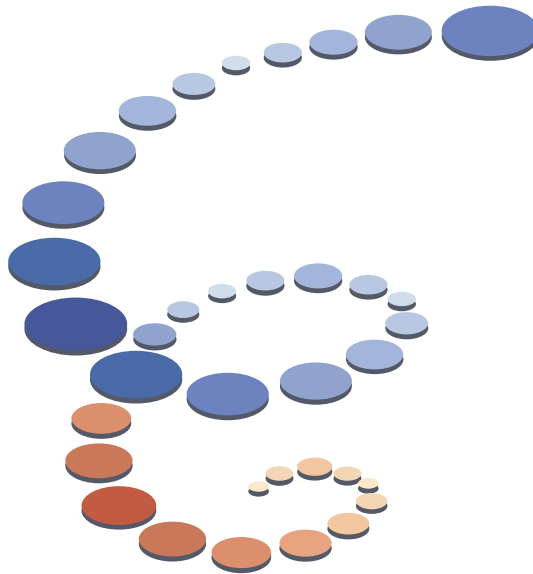
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Papers are here listed and numbered according to the session of the conference in which they were presented. These numbers correspond to the folder structure of the digital media, such that each session is listed as a folder and papers are numbered within.

As example, the first paper presented in the first session, Podium 1: Ideation, can be found in the folder labeled as Podium 1: Ideation, and is numbered as 1.1. The third paper presented in the fourth session, Podium 3: Creativity in Action, can be found in the folder labeled as Podium 3: Creativity in Action, and is numbered as 4.3.







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Japan Advanced Institute of Science and Technology, Japan
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Jianxi Luo  
Singapore University of Technology and Design, Singapore
- 1.3: A LOOK AT THE RESEARCH ON DESIGN IDEA GENERATION IN INDUSTRIAL DESIGN: LITERATURE REVIEW FROM 2003 TO 2017  
Ying Sun, Sander Münster  
Dresden University of Technology, Germany
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Lizhen Jia<sup>2</sup>, Niccolò Becattini<sup>1</sup>, Gaetano Cascini<sup>1</sup>, Runhua Tan<sup>2</sup>  
<sup>1</sup>Politecnico di Milano, Italy; <sup>2</sup>Hebei University of Technology, China

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Digital Creativity Lab, Aarhus University, Denmark
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Japan Advanced Institute of Science and Technology
- 2.4: EXPLORING WAYS TO SPEED UP THE APPLICATION OF METRICS TO ASSESS CO-CREATIVE DESIGN SESSIONS  
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<sup>1</sup>University of Bath, United Kingdom; <sup>2</sup>Université Grenoble Alpes, France; <sup>3</sup>Politecnico di Milano
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Dan Shao<sup>1,2</sup>, Yukari Nagai<sup>1</sup>  
<sup>1</sup>Japan Advanced Institute of Science and Technology, Japan; <sup>2</sup>Dalian Polytechnic University, China
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Center for Ubiquitous Computing, University of Oulu, Finland



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Albert Albers<sup>1</sup>, Armin Grunwald<sup>2</sup>, Florian Marthaler<sup>1</sup>, Nicolas Reiß<sup>1</sup>, Nikola Bursac<sup>1</sup>

<sup>1</sup>Institute of Product Engineering, Karlsruhe Institute of Technology, Germany; <sup>2</sup>Institute for Technology Assessment and Systems Analysis, Karlsruhe Institute of Technology, Germany

### 2.8: CREATIVE DESIGN THINKING BY WALKING THROUGH VIRTUAL CONCEPT SPACE

Kaori Yamada, Katsuhiro Kishimoto, Toshiharu Taura  
Kobe University, Japan

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Anadolu University, Turkey

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Pirita Johanna Ihämäki<sup>1</sup>, Katriina Irina Heljakka<sup>2</sup>  
<sup>1</sup>Priztech Ltd., Finland; <sup>2</sup>University of Turku, Finland

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Dan Brian Trowsdale<sup>1</sup>, Gerard Duff<sup>1</sup>, Jacques Giard<sup>2</sup>  
<sup>1</sup>University of Leeds, United Kingdom; <sup>2</sup>Arizona State University, USA

### 2.12: ASSESS NOVELTY OF AN INVENTION USING THE CENTRAL-EXTREME NOVELTY MATRIX: A CASE STUDY OF JUVO LAB'S FIBRE-OPTIC SENSOR MAT

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Singapore University of Technology and Design, Singapore

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Alexandros Charidis  
Massachusetts Institute of Technology, United States of America

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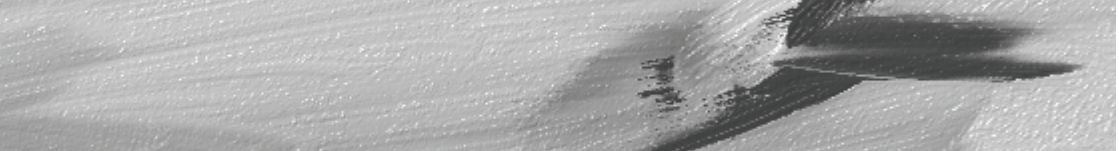
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<sup>1</sup>Monash University and AUT University, Australia; <sup>2</sup>Auckland University of Technology, New Zealand; <sup>3</sup>Cambridge University, United Kingdom; <sup>4</sup>Delft University of Technology, The Netherlands





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Politecnico di Milano, Italy

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<sup>1</sup>Clemson University, USA; <sup>2</sup>Florida Institute of Technology, USA
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<sup>1</sup>UNC Charlotte, USA; <sup>2</sup>Griffiths University, USA; <sup>3</sup>Virginia Tech, USA





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<sup>1</sup>LUCA School of Arts, Belgium; <sup>2</sup>University of Leeds, United Kingdom
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<sup>1</sup>University of Colombo, Sri Lanka; <sup>2</sup>University of Moratuwa, Sri Lanka
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<sup>1</sup>University of the Santa Catarina State, Brazil; <sup>2</sup>Federal University of Pernambuco, Brazil





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<sup>1</sup>TU Braunschweig, Institut für Konstruktionstechnik, Germany; <sup>2</sup>BMW AG, Germany
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York University, Canada
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<sup>1</sup>Georgia Tech, United States of America; <sup>2</sup>James Madison University, United States of America





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Cardiff Metropolitan University, United Kingdom

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Haibing Li, Paul Christoph Gembarski, Roland Lachmayer  
Institute of product development, Leibniz University Hannover, Germany

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Zoë Dankford, Luuk Roos, Milene Gonçalves  
TU Delft, The Netherlands