Design Modelling Symposium Paris 2017
Humanizing Digital Reality
PROGRAMME

15th Sept. FRIDAY
9:00 - 18:00
DYNAMO USER GROUP
La Nef
17:30
WORKSHOP & MASTERCLASS
LEADERS MEETING
Cour de la Forge

16th Sept. SATURDAY
8:00
CHECK-IN
9:00 - 18:00
WORKSHOPS
La Nef

17th Sept. SUNDAY
8:00
CHECK-IN
9:00 - 18:00
WORKSHOPS
La Nef
16:00 - 20:00
EARLY REGISTRATION FOR THE SYMPOSIUM
Cour de la Forge
16:30
VISIT OF THE CHATEAU DE VERSAILLES
Cour de la Forge
18:00
ART OPENING
Cour de la Maréchalerie
18th Sept.
MONDAY

8:00  CHECK-IN

9:00  JEAN-CHRISTOPHE QUINTON Welcome Speech
9:10  NADER TEHRANI Opening Lecture

STRUCTURAL INNOVATION

9:45  OLIVIER BAVEREL Introduction
9:55  JEAN-FRANÇOIS CARON Make Complex Structure Affordable

11:30   PAPER PRESENTATIONS
  •  LA MAGNA R. — Tailoring the bending behaviour of material patterns for the induction of double curvature
  •  FRIEDRICH J. — Locally varied auxetic structures for doubly-curved shapes
  •  POINET P. — A Multi-Scalar Approach for the Modelling and Fabrication of Free-form Glue-laminated Timber Structures
  •  BHOOSHAN S. — Equilibrium-aware shape design for concrete printing

13:00  LUNCH BREAK

MATERIAL PRACTICE

14:00  CHRISTOPH GENGNAGEL Introduction
14:10  ACHIM MENGES Computational material cultures
14:50  CAITLIN MUELLER Keynote
15:45  PAPER PRESENTATIONS
  •  USAI S. — La Seine Musicale – a case study on design for manufacture and assembly
  •  SMIGIELSKA M. — Application of Machine Learning within the integrative design and fabrication of robotic rod bending processes.
  •  EVERSMAANN P. — Robotic Fabrication Techniques for Material of Unknown Geometry
  •  AYRES P. — Enlisting Clustering and Graph-Traversal Methods for Cutting Pattern & Net Topology Design in Pneumatic Hybrids
  •  BERGIS L. — Free-form wooden structures. Parametric optimization of double-curved lattice structures
  •  DANHAIVE R. — Structural Patterning of Surfaces
  •  POPESCU M. — Automated generation of knit patterns for non-developable surfaces

18:00  BREAK

18:30  SHORT SPEECHES
  •  CANHUI C. — Negotiating sound performance and advanced manufacturing in complex architectural design modelling
  •  RINDERSPACHER K. — Stone Morphologies: Erosion-Based Digital Fabrication through Event-Driven Control
  •  NAGY D. — Nature-based Hybrid Computational Geometry System for Optimizing Component Structure
  •  NICHOLAS P. — Localised and Learnt: Applications of Machine Learning for Robotic Incremental Sheet Forming
  •  RUNBERGER J. — Collaborative Models for Design Computation and Form Finding – New Workflows in Versioning Design Processes
  •  SITNIKOV V. — Ice Formwork for Ultra-High-Temperature Concrete (UHPC); Simulation of Ice Melting Deformations
  •  SCHNEIDER M. — Pneu&Shell - Constructing Freeform Concrete Shells with a Pneumatic Formwork
  •  CHALTIEL S. — Monolithic Earthen Shells Digital Fabrication: Hybrid Workflow
  •  AVIV D. — Thermally Informed Bending: Relating Curvature to Heat Generation through Infrared Sensing
  •  VESTARTAS P. — Design Tools and Workflows for Braided Structures

19:30  SOCIAL EVENT Workshops exhibition
19th Sept.  
TUESDAY

8:00  CHECK-IN

THERMODYNAMIC PRACTICE

9:00  PHILIPPE RAHM  Introduction
9:10  JANE BURRY  Capturing the dynamics of air in design
9:50  NADIR ABDESSEEMED  On the nature of thermodynamic models in architecture and climate
10:50  CHRIS MACKEY  The tools vs the toolkit
11:30  PAPERS PRESENTATIONS
  - RUMPF M. — Aspects of Sound as Design Driver - Parametric Design of an Acoustic Ceiling
  - VIDAL M. — A Computational Approach to Methodologies of Landscape Design
  - BEORKREM C. — (Kak-tos): A tool for optimizing conceptual mass design and orientation for rain water harvesting facades
  - KARDAN F. — Assessment of RANS turbulence models in urban environments: CFD simulation of airflow around idealized high-rise morphologies
  - SUZUKI S. — The design implication of form-finding with dynamic topologies

13:00  LUNCH BREAK

DATA FARMING

14:00  KLAAS DE RYCKE  Introduction
14:10  KASPER JORDAENS  Data Morphogenesis
15:30  USMAN HAYQUE  Mutually Assured Construction
15:45  TOMÁS DIEZ  Seven short reflections on cities, data, economy and politics
16:25  PAPERS PRESENTATIONS
  - BAILEY C. — This room is too dark and the shape is too long: quantifying architectural design to predict successful spaces
  - PEDERSEN J. — Navigating the Intangible: Spatial-Data-Driven Design Modelling in Architecture
  - XUEREB CONTI Z. — Enabling Inference in Performance-driven Design Exploration
  - RABAGLIATI J. — Bloomberg Ramp: Collaborative workflows sharing data and design logics

18:00  BREAK

18:30  SHORT SPEECHES
  - S. KOREN B. — Algorithmic Design of High-Frequency Diffusion Panels in the Grand Hall of the Elbphilharmonie
  - HANNEQUART P. — The potential of Shape Memory Alloys in deployable systems - a design and experimental approach
  - KLINGEMANN O. — Simulation and Real-Time Design Tools for an Emergent Design Strategy in Architecture
  - HUDSON R. — Modelling and Representing Climatic Data in The Tropics: a Web Based Pilot Application for Colombia
  - DUBOR A. — Energy Efficient Design for 3D printed Earth Architecture
  - VILLAGGI L. — Survey-based Simulation of User Satisfaction for Generative Design in Architecture
  - POULSGAARD K. — Modelling Workflow Data, Collaboration and Dynamic Modelling Practice

19:15  MAIN EVENT  Apéritif and food-trucks
20th Sept.
WEDNESDAY

8:00 CHECK-IN

DATA SHAPING CITIES

9:00 JANE BURY Introduction

9:10 PAPER PRESENTATIONS

- SAUDA E. — Data and Design: Using Knowledge Generation/Visual Analytic Paradigms to Understand Mobile Social Media
- PUUSEPP R. — Simulating pedestrian movement
- MARKOPOULOU A. — City Gaming and Participation
- JACK / JAMES M.P. — The Mere Exposure Effect in Architecture

10:50 CARLO RATTI What big data tell us about trees and the sky in the cities

11:40 ANTOINE PICON Urban sensing : towards a new form of collective consciousness ?

12:25 CLOSING SPEECH Announcements - acknowledgment