08:30 – 9:30 Registration

09:30 – 10:00 Opening Session · Hall 109

KEYNOTE Hall 109
10:00 - 11:15 · Built Ecologies · Anna Dyson & Ahu Aydogan Akseli

11:15 – 11:30 Coffee Break

11:30 - 12:45 · Session 1a – **SHAPE STUDIES I** · Hall 109
Chair: Mine Özkar

Shape Computations without Compositions
Iestyn Jowers, Chris Earl and George Stiny

Rectilinear Floor Plans
Krishnendra Shekhawat and Jose Duarte

Weaving, Folding and the Tension Between Them: A Discourse on a Structural Ideation Method
Rizal Muslimin

The Marching Shape: Extensions to the Ice-Ray Shape Grammar
Alexandros Tsamis

11:30 - 12:45 · Session 1b – **ANALYZING and MODELLING URBAN ENV. I** · Hall 127
Chair: Bauke de Vries

An Experimental Methodology for Urban Morphology Analysis
Anetta Kepczynska-Walczak and Anna Pietrzak

Automatic Parameterisation of Semantic 3D City Models for Urban Des. Optimisation
Kian Wee Chen, Patrick Janssen and Leslie Norford

CIM-St: A Parametric Design System for Street Cross Sections
Rui De Klerk and José Nuno Beirão

Question of Perspective: Information Visualisation in Games and its Possible Application in Planning Communication
Sarah Louise Jenney and Frank Petzold

12:45 – 14:00 Lunch Break

14:00 - 15:15 · Session 2a – **BUILDING PERFORMANCE STUDIES I** · Hall 109
Chair: Salih Ofluoğlu

Shaping Design with Sound Performance Prediction: A Case Study for Exploring the Impact of Early Sound Performance Prediction on Architectural Design
Pantea Alambeigi, Canhui Chen, Jane Burry and Eva Cheng

RhinoRstab: Introd. and Testing a New Structural Analysis Plugin for Grasshopper3D
Sebastian Dietrich, Sven Schneider and Dimitry Demin

Computational Decision Support for an Airport Complex Roof Design: A Case Study of Evolutionary Optimization for Daylight Provision and Overheating Prevention
Elif Ensari, Bilge Kobaş and Can Sucuoglu

A Mathematical Model Linking Form and Material for Sound Scattering: Design, Robotic Fabrication, and Evaluation Of Sound Scattering Discs: Relating Surface Form to Acoustic Performance
Dagmar Reinhardt, Densil Cabrera and Matthew Hunter

14:00 - 15:15 · Session 2b – **DESIGN GEOMETRY AND FORM STUDIES** · Hall 127
Chair: Benay Gürsoy

Kinetic Origami Surfaces: From Simulation to Fabrication
Filipa Osorio, Alexandra Paio and Sancho Oliveira

Teaching Design by Coding in Architecture Undergraduate Education: A Case Study with Islamic Patterns
Asli Agirbas

Spherical Perspective: Notational Drawing System for Non-Euclidean Geometry
Chao Yan and Philip F. Yuan

Kerfing with Generalized 2D Meander-Patterns: Conversion of Planar Rigid Panels into Locally-Flexible Panels with Stiffness Control
Saeid Zarrinmehr, Ergun Akleman, Mahmood Ettehad, Negar Kalantar, Alireza Borhani and Shinjiro Sueda

15:15 – 15:30 Coffee Break

15:30 - 16:45 · Session 3a – **BUILDING INFORMATION MODELLING** · Hall 109
Chair: Halil Erhan

A Comprehensive Application of BIM Modelling for Semi-Underground Public Architecture: A Study for Tiantian Square Complex, Wuhan, China
Yi He, Marc Aurel Schnabel, Rong Chen and Ning Wang

Plugins State of Art in BIM Software: Repositories Assessment and Professional Use Perspective
J. Lima Da Silva, Andréa Quadrado Mussi, Lauro André Ribeiro

AS&BIM – A Unified Model of Agent Swarm and BIM to Manage the Complexity of the Building Process
Francesco Livio Rossini, Gabriele Novembri and Antonio Fioravanti

Why Do We Need Building Information Modeling (BIM) in Conceptual Design Phase?
Ömer Halil Çavuşoğlu and Gülen Çağdaş

15:30 - 16:45 · Session 3b – **DECISION SUPPORT SYSTEMS AND HCI I** · Hall 127
Chair: Birgül Çolakoğlu

Interactive Projection Mapping in Heritage: The Anglo Case
Gabriela Barber, Marcos Lafluf, Pablo Accuosto and Fernando García Amen

Rule-based Security Planning System for Practical Application
Eonyong Kim, Kibum Kim, Seungyeon Choo and Jikeun Ryu

BIM-based Interdisciplinary Collaborations in a Student Project Competition
Salih Ofluoglu

A Matter of Sequence: Investigating the Impact of the Order of Design Decisions in Multi-Stage Design Processes
Julia Tschetwertak, Sven Schneider, Alexander Hollberg, Dirk Donath and Jürgen Ruth

19:00 Conference Reception

09:00 – 10:00 Registration

KEYNOTE Hall 109
10:00 - 11:15
Complex Modelling Martin Tamke

11:15 – 11:30 Coffee Break

11:30 - 13:00 — Session 4a – **FABRICATION AND MATERIALITY** Hall 109
Chair: Ethem Gürer

Robot-Aided Fabrication of Interwoven Reinforced Concrete Structures
Elif Erdine, Alexandros Kallegias, Angel Fernando Lara Moreira, Pradeep Devadass and Alican Sungur

Computing Stitches and Crocheting Geometry
Özgüç Bertuğ Çapunaman, Cemal Koray Bingöl and Benay Gürsoy

Soft Computing in Design: Developing Automation Strat. from Mat. Indeterminacies
Rachel Dickey

Constructive Design: Rule discovery for 3D Printed Decomposed Large Objects
Paloma Gonzalez and Lawrence Sass

Igneous Tectonic: Turning Disaster into Resource through Digital Fabrication
Sergio Araya, Felipe Veliz, Sylvana Quest and Ricardo Trufello

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11:30 - 13:00 — Session 4b – **DECISION SUPPORT SYSTEMS AND HCI II** Hall 127
Chair: Dagmar Reinhardt

Association Rule Mining to Assess User-Generated Content in Digital Heritage: Participatory Content Making in 'The Museum of Gamers'
Serdar Aydin, Marc Aurel Schnabel and Iman Sayah

Making Sense of Des. Space: What Designers Do with Large Numbers of Alternatives?
Naghmi Shireen, Halil Erhan, Robert Woodbury and Ivy Wang

Designing as a Team by Utilizing Analogue Media versus a Computational Tool for Parametric Modeling Lessons Learnt from a Study in an Educational Setting
Elif Sezen Yağmur Kilimci and Leman Figen Gül

Flat Form: A Software Design for Capturing the Contribution of Personality and Ordinary Activities in Early Design
Marilena Sorrou and Mark Meagher

Juxtaposed Design Models: A Method for Parallel Exploration in Parametric CAD
Halil Erhan and Naghmi Shireen

13:00 – 14:00 Lunch Break

14:00 - 15:15 — Session 5a – **PARAMETRIC TOOLS AND MODELS** Hall 109
Chair: Rizal Muslimin

Practical Trajectories of Parametric Tools in Small and Medium Architectural Firms
Adeline Stals, Elsen Catherine and Sylvie Jancart

Polymorphic Adaptation
Mallika Arora, Sergio Pineda, P. Andrew Williams, Kenneth D.M. Harris and Benson M. Kariuki

CAMBRIA: Interacting with Multiple CAD Alternatives
Sinisa Kolaric, Halil Erhan and Robert Woodbury

Algorithm Driven Design: Comparison of Single-Objective and Multi-Objective Genetic Algorithms in the Context of Housing Design
Serkan Kocabay and Sema Alaçam

14:00 - 15:15 — Session 5b – **PEDAGOGICAL APPROACHES TO CAAD** Hall 127
Chair: Joao Rocha

Virtual and Augmented Reality in Architectural Design and Education: An Immersive Multimodal Platform to Support Architectural Pedagogy
Julie Milovanovic, Guillaume Moreau, Daniel Siret and Francis Miguet

Challenges in Raising Digital Awareness in Architectural Curriculum
Güzden Varinlioğlu, Lale Başarır, Özgur Genca, and Zeynep Vaizoğlu

Imitation in Action: A Pedagogical Approach for Making Kinetic Structures
Dina El-Zanfaly and Sherif Abdelmohsen

Meno in the Studio: Design Computation in a Pedagogical Dialogue
Desantila Hysa and Mine Özkar

15:15 – 15:30 Coffee Break

15:30 - 16:45 — Session 6a – **SHAPE STUDIES II** Hall 109
Chair: Alexandros Tsamis

Computing with Watercolor Shapes: Developing and Analyzing Visual Styles
Onur Yüce Gün

From Costuming and Dancing Sculptures to Architecture: The Corporeal and Computational in Design and Fabrication of Lightweight Mobile Structures
Vernelle A. A. Noel

EthnoComputation: An Inductive Shape Grammar on Toraja Glyph
Rizal Muslimin

Discrete Heuristics
Diego Pinochet

15:30 - 16:45 — Session 6b – **AUGMENTED AND VIRTUAL REALITY ENV. ST.** Hall 127
Chair: Güzden Varinlioğlu

The Expansion of Virtual Landscape in Digital Games: Classification of Virtual Landscapes Through Five Principles
Ikhwan Kim, Injung Lee and Ji-Hyun Lee

Integration of a Structure from Motion into Virtual and Augmented Reality for Architectural and Urban Simulation: Demonstrated in Real Architectural and Urban Projects
Tomohiro Fukuda, Hideki Nada, Haruo Adachi, Shunta Shimizu, Chikako Takei, Yusuke Sato, Nobuyoshi Yabuki and Motamedi Ali

Studying Co-design: How Place and Representation Would Change the Co-design Behavior?
Leman Figen Gül, Can Uzun and Müge Halici

19:00 Conference Dinner

09:00 – 10:00 Registration

10:00 - 11:15

KEYNOTE   Hall 109
Human behavior and cognition of architectural space –
assessing psychological building performance   Christoph Hölscher

11:15 – 11:30 Coffee Break

11:30 - 13:00	Session 7a – **GENERATIVE DESIGN SYSTEMS** Hall 109 *Chair: Jose Beirao*

Interactive Design of Shell Structures Using Multi Agent Systems: Design Exploration of Reciprocal Frames Based on Environmental and Structural Performance
  David Jason Gerber, Evangelos Pantazis and Alan Wang

Stair Design Using Quantified Smoothness
  Abel Groenewolt

Towards Intelligent Control in Generative Design
  Manuel Muehlbauer, Andy Song and Jane Burry

Dense Urban Typologies and the Game of Life: Evolving Cellular Automata
  Theodoros Dounas, Benjamin Spaeth, Hao Wu and Chenke Zhang

SILVEREYE: The Implementation of Particle Swarm Optimization Algorithm in a Design Optimization Tool
  Judyta Cichocka, Agata Migalska, Will N. Browne and Ed. Rodriguez

13:00 – 14:00 Lunch Break

14:00 - 15:00	Session 8a – **ANALYZING and MODELLING URBAN ENV. II** Hall 109 *Chair: Marc Aurelia Schnabel*

Automatic Generation of Semantic 3D City Models from Conceptual Massing Models
  Kian Wee Chen, Patrick Janssen and Leslie Norford

Interactive Urban Synthesis: Computational Methods for Fast Prototyping of Urban Design Proposals
  Reinhard Koenig, Yufan Miao, Katja Knecht, Peter Buš and Chang-Mei-Chih

Urban Data Mining with Natural Language Processing: Social Media as Complementary Tool for Urban Decision Making
  Nai Chun Chen, Yan Zhang, Marissa Stephens, Takehiko Nagakura and Kent Larson

15:00 – 15:30 General Assembly - **Closing Session**   Hall 109

16:00 - Leaving for the boat
17:00 - 18:30 Boat tour on the Bosphorus

11:30 - 13:00	Session 7b – **BUILDING PERFORMANCE STUDIES II** Hall 127 *Chair: Leman Figen Gül*

Body Patterning: A Model for Responsive and Interactive Building Envelope
  Hülya Oral and Gülen Çağdaş

Solar Collection Multi-isosurface Method: Computational Design Advanced Method for the Prediction of Direct Solar Access in Urban Environments
  Francesco De Luca and Hendrik Voll

Remembrane: A Shape Changing Adaptive Structure
  Ji Won Jun, Matteo Silverio, Josep Alcover Llubia, Areti Markopoulou, Angelos Chronis and Alexandre Dubor

Neighbourhood Shading Impacts on Adaptive Façade Collective Behaviour
  Sarah Mokhtar, Christopher Leung and Angelos Chronis

Investigating the Role of Entropy in Design Evaluation Process: A Case Study on Municipality Buildings
  Orkan Zeynel Güzelci

13:00 – 14:00 Lunch Break

14:00 - 15:00	Session 8b – **RETHINKING DESIGN IN DIGITAL CONTEXT** Hall 127 *Chair: Onur Yüce Gün*

Models of Subjectivity and Intentionality in Computational Architecture: From Centralized to Distributed Approach
  Duygu Tüntaş Karaman

OUTLINING TERRAGNI: Calculating the Danteum's and Mambretti Tomb's Form and Meaning
  Hayri Dortdivanlioglu and Athanassios Economou

Design and Architecture for the Dawn of the Personal Computer: The Pioneer Vision of Adriano Olivetti
  Joao Rocha