CAADRIA 2023
DETAILED AGENDA
CEPT UNIVERSITY, INDIA
DAY 1 / TUESDAY, MARCH 21ST, 2023

09:00 Opening Ceremony at B N B Lecture Hall
09:15 Keynote Speaker 01: Martha Tsigkari at B N B Lecture Hall
10:15 Tea/Coffee Break

SESSION 1A: Generative, Algorithmic and Evolutionary Design at B N B Lecture Hall
Time: 10:30 - 12:00 (90 Minutes)
Chair: Mohhamed Makki

10:30 [22] Comparing Design Strategies: A system for optimization-based design exploration
Likai Wang, Patrick Janssen, Tung Do Phuong Bui, Kian Wee Chen

10:45 [40] Painterly Expansion
Marc Gibson

11:00 [121] Research on Plan Generation Design of Parking Lot Based on Integer Programming
Mengting Zhang, Peiwen Li, Gang Yu

Zhichao Lin, Shi Yin, Wei Liao, Yiqiang Xiao

11:30 [244] An Inverse Modeling Method to Estimate Uncertain Spatial Configurations From 2D Information and Time-Based Visual Discriminations
Pierre Cutellic

11:45 Discussion / Q & A

SESSION 1C: Urban Modelling and Simulation at CEPT Auditorium
Time: 10:30 - 12:00 (90 Minutes)
Chair: Jeroen van Ameijde

10:30 [57] Bottom-Up Approach for Creating an Urban Digital Twin Platform and Use Cases
Pradeep Alva, Martin Mosteiro-Romero, Wanyu Pei, Andrea Bartolini, Chao Yuan, Rudi Stouffs

10:45 [63] Assessment of the Visual Impact of a Tall Building on a UNESCO Listed Historic Urban Landscape
Klara Czyńska

11:00 [100] A Data-Driven Approach for Interpreting Human Preference in Urban Public Spaces: A case study in London
Yuxuan Liu, Wenzhao Xu

11:15 [137] Spatial Analytics of Housing Prices With User-Generated POI Data, A Case Study in Shenzhen
Muxin Jia, Taro Narahara

Faiz Ahmed Chundeli, Tania Berger

11:45 Discussion / Q & A
12:15 Buffer
SESSION 2A: Artificial Intelligence and Machine Learning in Design at B N B Lecture Hall

Time: 12:15 - 13:45 (90 Minutes)
Chair: Immanuel Koh

Immanuel Koh

12:30 [3] Predicting Amenities Distributions for Workers from the Built Environment Based on Machine Learning
Hongyu Wan, Anqi Pan, Yanwen Xue, Hao Zheng

12:45 [12] Elemental Sabotage: Diffusing functional morphologies
Dongyun Kim, Lloyd Sukgyo Lee, Hanjun Kim

13:00 [24] AI and Typology
Xiang Yin

13:15 [50] Communication with Detroit: Machine learning in open source community housing design
Mingrui Jiang, Chenyi Cai

13:30 Discussion / Q & A

SESSION 2B: Building Information Modelling at FA-101

12:15 - 13:45 (90 Minutes)
Chair:

12:15 [74] Metaverse Expands the Common Data Environment
Tsukasa Ishizawa

12:30 [204] Systematic Review of Organizing The Data Flow of Systems Using Building Information Modeling and Distributed Ledger Technology
Tomoya Izumi, Keisuke Toyoda

12:45 [289] Staircase Throughput Study With the Use of Agent-Based Modeling
Michał Jarzyna

13:00 [299] Conjugated Materiality - Reinstating material circularity via digital twins
Nipun Garg, Sheng-Yang Huang

13:15 Discussion / Q & A

SESSION 2C: Climate change and Sustainability at CEPT Auditorium

12:15 - 13:45 (90 Minutes)
Chair: Dagmar Reinhardt

12:15 [27] Crop-Centric Agricultural Potential of Urban Surfaces: A sunlight-based computational approach for food security
Alba Lombardia, Thomas Schroepfer, Arlindo Silva, Carlos Banon

12:30 [44] 3D Printed Soil-based Bioclimatic Envelopes for Tree Seedlings in Drylands
Ofer Asaf, Arnon Bentur, Tamir Klein, Aaron Sprecher
12:45 [53] Structure Made of One Tree - Digital Assistance to Put Natural Shape Wood in Practical Use
Megumu Ishiwata, Eri Sumitomo, Yasushi Ikeda

13:00 [111] Multi-Objective Optimization of Gymnasium Layout Based on Genetic Algorithm - Balance of energy consumption and indoor thermal comfort
Zhaoxiang Fan, Shuoning Tang, Mengxuan Liu

Ella Hetherington, Guillem Perutzet Olesti, Ben Lee, Pradeep Devadas

13:30 Discussion / Q & A

13:45 Lunch Break

SESSION 3A: VR/AR/XR at B N B Lecture Hall

14:30 - 16:00 (90 Minutes)
Chair: Tatjana Crossley

14:30 [16] Augmented Robotic Bricklaying
Yang Song, Soomeen Hahm

14:45 [41] Holographic Construction in Circular Design: A literature review
Mia Tedjosaputro

15:00 [102] Intelligent Packing and Unpacking Navigation of Prefabricated Metal Joint Timber Frame
Yanfeng Wang, Taku Iizumi, Sohei Yoshida, Yasushi Ikeda

15:15 [127] Informing User-Centred Approaches to Augmented Custom Manufacturing Practices
Anthony Franze, Glenda Caldwell, Muge Belek, Fialho Teixeira, Markus Rittenbruch

15:30 [129] The Re-creation of a Demolished House Based on Collective Memory
Yisi Liu, Nick Webb, Andre Brown

15:45 Discussion / Q & A

SESSION 3B: Collective, Collaborative and Interdisciplinary Design at FA-101

14:30 - 16:00 (90 Minutes)
Chair: Tim Schork

Wei Wu, Qi Ning Chen

14:45 [38] Towards a Decision Framework Integrating Physics-Based Simulation and Machine Learning in Conceptual Design
Qingru Mirah Xu, Jose Luis García del Castillo y López, Holly Wasilowski Samuelson

15:00 [43] Remote Sharing System for 3D Real Objects with Point Cloud Reconstruction Using Deep Learning Point Cloud Completion
Ryo Onishi, Tomohiro Fukuda, Nobuyoshi Yabuki

15:15 [94] Rectangular Floorplans with Block Symmetry
Shiksha Shiksha, Krishnendra Shekhawat, Sujay Rastogi, Aishwarya Kondaveeti, José P. Duarte

15:30 [43] Annotation on Interactive Design Data in Design Analytics Tools
SESSION 4A: Robotics at B N B Lecture Hall

16:30 - 18:00 (90 Minutes)
Chair: Philip Yaun

Toshiki Hirano

16:45 [17] Initiating Additive Manufacturing of Mud Houses in India: Reviving the vernacular cob houses in Kutch
Likhinya Kvs, Avishek Das

17:00 [73] Construction of a Free-Form Pavilion Using on-Site Plywood Bending with the Development of Fabrication Tools
Hiroki Awaji, Sei Hayashi, Tomoyuki Gondo

17:15 [141] Automatic Robotic Construction for Customisable Rammed Earth Walls
Guanqi Zhu, Xinyi Zhou, Jun Zhang, Guogang Liu, Shimeng Hao, Dan Luo

17:30 [157] 3D Knitted Fabric Formwork for Concrete Casting
Paul Loh, Jenny Underwood, David Leggett

17:45 Discussion / Q & A

SESSION 4B: Digital Heritage at FA-101

16:30 - 18:00 (90 Minutes)
Chair: Bob Martens

16:30 [80] Exploring the Application of the Digital Gamification Mechanisms to the Experience of Physical Architectural Exhibitions
Weiqiong Li, Tiantian Lo, Xiangmin Guo

16:45 [116] Integrating Heritage Preservation And City Development
Yue Ying Zhang, Hao Ran Wang, Ke Zhu

17:00 [179] Interpreting Gender Differentiation in Urban Consumption Places Based on the Preference Level of Spatial Perception
Xiaoyi Zu, Chen Gao, Zhixian Li

17:15 [240] Spatial Adaptation Rules of Extension Building in Traditional Architecture: Case study of Batak Toba houses and their extensions in North Sumatera, Indonesia
Jonathan Yoas, Rizal Muslimin

17:30 [449] El Retablo Digital (the Digital Altarpiece): Restoration of mortuary rituals with deep learning
Giovanna Pillaca, Daniel Escobar

17:45 Discussion / Q & A

16:30 EXCO meeting at CEPT Auditorium
09:00 Workshop Presentations at B N B Lecture Hall

09:15 Keynote Speaker 02: Sigrid Brell-Cokcan at B N B Lecture Hall

10:15 Tea/Coffee Break

**SESSION 5A: Generative, Algorithmic and Evolutionary Design** at B N B Lecture Hall

10:30 - 12:00 (90 Minutes)

Chair: Likai Wang


Chenxiao Li, Ding Wen Bao, Xin Yan, Renhu Wu, Chenming He

10:45 [339] Articulating Facade Microbiomes at Human Scale

Christiane M. Herr, Chenxiao Li

11:00 [354] Urbanising Mars: Establishing an urban framework for Martian settlement through sequential evolutionary simulations

Le Anh Giang, Minh Triet Tran, Stefano Balossino, Mohammed Makki


Yu Li, Lingling Li, Naihua Yue

11:30 [398] Stylized Space Synthesis: Exploring the stylized generative design Method of architecture based on wave function collapse algorithm

Wanzhu Jiang, Jiaqi Wang

11:45 Discussion / Q & A

**SESSION 5B: Pedagogical shifts in computational design** at FA-101

10:30 - 12:00 (90 Minutes)

Chair: Marc Aurel Schnabel

10:30 [178] Creative Impact of an Event-Driven Visual Scripting Tool

Praneet Mathur

10:45 [260] Data-Driven Urban Research Tools within Design Education: New perspectives on complex urban data and processes

Jeroen van Ameijde, Sifan Cheng, Haowen Wang

11:00 [325] Evaluation of Interactive VR Environments for Architecture

Anastasia Globa, Muhammed Yildirim, Kun Lyu, Ozgur Gocer

11:15 Discussion / Q & A
SESSION 5C: Urban Analytics at CEPT Auditorium

10:30 - 12:00 (90 Minutes)
Chair: Nimish Biloria

10:30 [60] Convolutional Neural Network (CNN) Supported Urban Design to Reduce Particle Air Pollutant Concentrations
Zishen Bai, Chengzhi Peng

10:45 [65] Separation of Tall Greenery Component in 3D City Models Based on Lidar Data
Paweł Rubinowicz

11:00 [84] Analyst Patterns of Influence Between a Commercial Distribution and Neighbourhood Dynamic in a Residential Neighbourhood
Bowen Chen, Pui Kuan Lao, Zhiyi Dou, Wai-Shan Qiu, Dan Luo

11:15 [312] Assessing Spatial Accessibility to Public Facilities for Vulnerable People towards 15-Minute City in Hong Kong
Fangning Wu

11:30 [358] Digital Application of Typo-morphology in the Conservation and Renewal of Historic Areas
Zhehao Song, Peng Tang, Yacheng Song

11:45 Discussion / Q & A

12:00 Buffer

SESSION 6A: Artificial Intelligence and Machine Learning in Design at B N B Lecture Hall

12:15 - 13:45 (90 Minutes)
Chair: George Guida

12:15 [88] Prediction and Optimisation of the Typical Airport Terminal Corridor Façade Shading Using Integrated Machine Learning and Evolutionary Algorithms
Yinyi Shi, Jinhui Chen, Guangzi Hu, Cunyuan Wang

12:30 [106] Research on Architectural Sketch to Scheme Image Based on Context Encoder
Yuqian Li, Weiguo Xu

12:45 [143] Text-to-Garden: Generating traditional chinese garden design from text-descriptions at scale with multimodal machine learning
Siyuan Zhang, Yifan Li, Siqi Zhang, Xuexin He, Runjia Tian

13:00 [161] Integration of EEG and Deep Learning on Design Decision-Making: A data-driven study of perception in immersive virtual architectural environments
Mingming Zhao, Cao Ding, Tatjana Crossley

13:15 [197] Incorporating Physical Experimentation into Creative DI-Driven Design Space Exploration
Shermeen Yousif, Yagmur Akyuz, Luisa Giffoni, Matthew Craven

13:30 Discussion / Q & A
SESSION 6B: Interactive Environments at FA-101

12:15 - 13:45 (90 Minutes)
Chair: Tomohiro Fukuda

12:15 [31] Designing for the Living Building Challenge: An integrated material environment visibility framework for new zealand designers
   Chitrakala Muthuveerappan, Marc Aurel Schnabel, Ryan Simpson

12:30 [45] Searchlight Space- A Sentient Space Having Exploratory Behaviour
   Pan-Pan Shuang, June-Hao Hou

12:45 [177] RemoSharp: Exploring solutions for remote real-time collaboration in computational design
   Arastoo Khajehee, Yasushi Ikeda, Jose Luis García del Castillo y López

13:00 [182] Implementation of a Human-Centric Interactive Smart Space using EEG and Face Emotion Al
   Seung Yeul Ji, Mi Kyoung Kim, Jin Cheol Bae, Se Yeon Kang, Han Jong Jun

13:15 [264] (In)visible Cities: What generative algorithms tell us about our collective memory schema
   Eduardo Rico Carranza, Sheng-Yang Huang, Julian Besems

13:30 Discussion / Q & A

SESSION 6C: Climate change and Sustainability at CEPT Auditorium

12:15 - 13:45 (90 Minutes)
Chair: Harsh Thapar

12:15 [329] Identifying the Effect of Wind Condition on Canopy Urban Heat Island: A case study in Nanjing
   Xinyuan Hao, Ziyu Tong

12:30 [379] Rethinking Breeze Blocks - A study of form and performance complexity in Hong Kong's building designs
   Hiroyuki Shinohara

12:45 [381] Multi-species Building Envelopes: Developing a multi-criteria design decision-making methodology for cohabitation
   Surayyn Uthaya Selvan, Saoultana T. Saroglou, Francesca Mosca, Jakub Tyc, Jens Joschinski, Mariasole Calbi,
   Verena Vogler, Wolfgang W. Weisser, Yasha J. Grobman, Shany Barath

13:30 Discussion / Q & A

13:45 Lunch Break

SESSION 7A: VR/AR/XR at B N B Lecture Hall

14:30 - 16:00 (90 Minutes)
Chair: Sky Lo Tian Tian

14:30 [134] Of Stones and Words - Computational framework for multifaceted historical narration of wadi salib
   Eytan Mann, Jonathan Dortheimer, Alona Nitzan-Shiftan, Aaron Sprecher

14:45 [149] Towards Hyper-Reality - A case study mixed reality art installation
   Garvin Goepel, George Guida, Ana Gabriela Loayza Nolasc

15:00 [151] Planting Design Scenario Analysis with 3D Vegetation Models Generated from L-system
Algorithm
Wei Zhang, Jiaxue Hao

Alvaro Lopez Rodriguez, Igor Pantic

15:30 [362] Fabrication of Complex Clay Structures Through an Augmented Reality Assisted Platform
Jiaxiang Luo, Efthymia Mastrokalou, Rahaf Aldabous, Sarah Aldaboos, Alvaro Lopez Rodriguez

15:45 Discussion / Q & A

SESSION 7B: Collective, Collaborative and Interdisciplinary Design at FA-101
14:30 - 16:00 (90 Minutes)
Chair: Anastasia Globa

14:30 [170] Real-time Gaze-sharing for Enhancing Student-instructor Communication: Technology-facilitated critique in architectural design studios
Weiheung Hu, Yuval Kahlon, Momoko Nakatani, Haruyuki Fujii

14:45 [172] A Multiplayer Game for Participatory Planning
Naomi Marcelle Bachtiar, F. Peter Ortner

15:00 [238] Indispensable Effects of Surrounding Avatars in VR-based Wayfinding Experiments
Shuyang Li, Chengyu Sun, Mingyan Zou

Muhammad Rafif Cahyadi, Miktha Farid Alkadri, Francesco De Luca

15:30 [376] Quantifying the Impact of Pedestrian-level Greening on the Perception of Walking
Haowen Wang, Jeroen van Ameijde

15:45 Discussion / Q & A

SESSION 7C: Digital Representation and Visualisation at CEPT Auditorium
14:30 - 16:00 (90 Minutes)
Chair: Paul Loh

14:30 [87] Fractal-Based Computational Approach and Visual Complexity Analysis of Indian Traditional Stepwell Chand Baori
Iasef Md Rian, Mansi Bapna

14:45 [114] Behaviour Simulation Optimization Based on The Influence of Microclimate on Crowd Perception - A case study of urban waterfront public space
Mengxuan Liu, Chunxia Yang, Zhaoxiang Fan

15:00 [133] Feature Space Exploration as an Alternative for Design Space Exploration Beyond the Parametric Space
Tomas Cabezón Pedroso, Jinmo Rhee, Daragh Byrne

15:15 [298] Virtual Reality Applications in Housing Insecurity Research
Duane McLemore, Kateryna Malaia, Silvina Lopez-Barrera

15:30 [320] Exploring Creative AI Thinking in the Design Process: The design intelligence strategy
SESSION 8A: Robotics at B N B Lecture Hall

16:30 - 18:00 (90 Minutes)
Chair: Johannes Braumann

16:30 [267] Structural Performance of Bio-Clay Cobot Printed Blocks
Maryam Shafiei, Fred Fialho Teixeira, Guanqi Zhu

16:45 [311] Extrusion-to-Masoning: Robotic 3D concrete printing of concrete shells as building floor system
Hao Wu, Sijia Gu, Xiaofan Gao, Jiaxiang Luo, Philip F. Yuan

17:00 [343] Biomanufacturing of Architectural Prototypes With Cyanobacteria
Perla Armaly, Shay Kirzner, Yechezkel Kashi, Shany Barath

17:15 [353] Kigumi Shelf By Data-Driven Circular Saw: Integrated development of design construction and tool for digital handcraft
Tai-sei Yabe, Arastoo Khajehee, Shun Kimura, Sota Tanaka, Kentaro Iwamoto, Koki Ito, Rena Yamanaka, Eri Sumitomo, Yasushi Ikeda

17:30 [365] Imprinting Concrete Graded Transparency in 3D Concrete Printing Walls
Wei-Ting Chen, Liya Sunny Anthraper, Eleni Skevaki, Lex Reiter, Ana Anton

17:45 [380] Integrating Large-Scale Additive Manufacturing and Bioplastic Compounds for Architectural Acoustic Performance
Avraham Cohen, Shany Barath

18:00 Discussion / Q & A

SESSION 8B: Innovative material systems and manufacturing methods at FA-101

16:30 - 18:00 (90 Minutes)
Chair: Urvi Sheth

16:30 [136] Robotic Crocheting: From handcraft to digital fabrication
Tamar Nix, Aaron Sprecher

16:45 [191] Bending-Active Metal Panel Deformation - Control through computational simulation and pattern development
Chia-Hsuan Chao, Kane Yanagawa

17:00 [210] Designed to Grow: 3D printing of seeds
Gitit Linker, Elisheva Gillis, Danny Freedman, Adi Segal, Noa Zermati, Or Naim, Rebecca Hila Partook, Nof Nathansohn

17:15 [373] A Large Scale 3D Printing Method for Skeletonized Surfaces Based on Graph Theory
Xinjie Zhou, Lei Gong, Philip F. Yuan

17:30 [395] Research on the Exploration of Sprayed Clay Material and Modeling System
Jiaxiang Luo, Efthymia Mastrokalou, Sarah Aldaboos, Rahaf Aldabous
17:45  [434] Cobotic Matters - Collaborative robots and discrete assembly design: from stacking to self-interlocking of reciprocal components
      Sina Mostafavi, Benjamin N. Kemper, Manuel Kretzer, Ali Etemadi, Hosam A. Mahmoud, Alia Yaseen, Mehrnoush Nabizadeh, Tannaz Balazadeh, Sayan Chatterjee

18:00  Discussion / Q & A

**SESSION 8C: Theory, Philosophy & Methodology of Computational Design Research** at CEPT Auditorium

16:30 - 18:00 (90 Minutes)
Chair: Mollie Claypool

16:30  [55] A Human-centric Approach To a Design-to-fabrication Process: A case of homeless housing design in Melbourne, Australia
      Nadia Anam, Linus Tan

16:45  [70] Campusim: An integrated parametric BIM for campus design simulation and optimization
      Firas Al-Douri, Wei Yan, Edin Jahic

17:00  [150] Exploring Relationships Between Locations of Daily Activities and Permeability of Spaces Using Visibility Graph Analysis
      Kenichi Shinozaki, Haruyuki Fujii

17:15  [217] Automating the Architectural Design of Apartment Point Block
      Igor Jansen, Łukasz Piątek, Marta Cygan, Jakub Hlebowicz, Bartosz Krajewski, Agata Miszewicz, Agnieszka Nowacka, Bartłomiej Roguski, Marta Szabelewska

17:30  [243] Can Architecture Be Cybernetic Machine: From cedric price's fun palace to the pompidou centre
      Yuming Hou

17:45  [423] Decoding the Evolution of Digital Design and Manufacturing through Data Scrapping and Digital Bibliometrics
      Claudio Fredes, Felix Raspall

18:00  Discussion / Q & A
DAY 3 / THURSDAY, MARCH 23RD, 2023

SESSION 9A: Bio-Designs at BNB Lecture Hall

09:00 - 10:30 (90 Minutes)
Chair Claudia Pasquero

09:00 [4] HELIOBOTS
Harpreet Sareen, Yasuaki Kakehi, Pattie Maes, Joseph Jacobson

09:15 [62] Improving the Overhang of 3D-printed Concrete Shells by Wrinkle Structures
Shuyi Huang, Weiguo Xu, Yudong Yin

09:30 [213] Programmed Growth: A living mycelium and clay composite
Kunaljit Chadha, Natalia Ramos Montilla, Ingrid Maria Paoletti, Olga Beatrice Carcassi

09:45 [257] Hybrid Bio-Based Architectural Systems: Living organisms and upcycled waste materials for 3D printing and robotic deposition
Nancy Diniz, Frank Melendez

10:00 Discussion / Q & A

SESSION 9B: Creativity, Design thinking and Human Computer Interaction at FA-101

09:00 - 10:30 (90 Minutes)
Chair: Christiane M Herr

09:00 [26] Desk Mate: A collaborative drawing platform
Zain Karsan

09:15 [250] Metaverse Magnifique: Making meaningful metaverses
Surapong Lertsitichai

09:30 [304] Design of Bistable Deployable Scissor Structures Consisting of Translational Units Based on Flat Retraction Logic
Bing-Xuan Lin, June-Hao Hou

09:45 [319] BridgeSlicer: A creative slicer for 3D printing perforated shells
Yoav Sterman, Shahar Asor, Yuval Gur, Ezri Tarazi

10:00 [446] Multimodal Architecture: Applications of language in a machine learning aided design process
George Guida

10:15 Discussion / Q & A

SESSION 9C: Urban Analytics at CEPT Auditorium

09:00 - 10:30 (90 Minutes)
Chair: Nicole Gardner

09:00 [167] The Many Faces Of The Metropolis: Unsupervised clustering of urban environments in Mumbai based on visual features as captured in city-wide street-view imagery
Rohit P. Sanatani, Takehiko Nagakura
09:15  [253] Multisource Analysis of Big Data on Street Vitality Using Gis Mapping and Deep Learning: A case study of Ding Shu, China
   Jinze Li, Peng Tang

09:30  [296] Geographic Information System Based Analysis on Walkability of Commercial Streets at Growing Stage
   Yoonjung Choi, Hyunsoo Lee

09:45  [303] Development of a Method for Assessing the View Index of Plants of Interest Using Deep Learning
   Anqi Hu, Nobuyoshi Yabuki, Tomohiro Fukuda

10:00  [305] Generative Pre-Trained Transformers for 15-Minute City Design
   Rutvik Deshpande, Sayjel Vijay Patel, Camiel Weijenberg, Maciej Nisztuk, Miriam Corcuera, Jianxi Luo, Qihao Zhu

10:15  Discussion / Q & A

10:30  Tea/ Coffee Break

SESSION 10A: Artificial Intelligence and Machine Learning in Design at B N B Lecture Hall

10:45 - 12:15 (90 Minutes)
   Chair: Matias Del Campo

   Bowen Qin, Hao Zheng

11:00  [283] An Integrated Application of Building Information Modeling, Computer-Aided Manufacturing, Machine Learning, and the Internet of Things - A hybrid stadium as a case study
   Bowen Qin, Tianyu Wang, Winka Dubbeldam, Justin Korhammer, Cong Huang, Dengguo Wu, Hongming Jiang

11:15  [292] Cross-disciplinary Semantic Building Fingerprints – Knowledge graphs to store topological building information derived from semantic building models (BIM) to apply methods of artificial intelligence (AI) throughout the life cycle of buildings
   Christoph Langenhan, Jessica Bielski, Christoph Ziegler, Viktor Eisenstadt, Klaus-Dieter Althoff, Andreas Dengel

11:30  [293] Synthesizing Style-Similar Residential Facade From Semantic Labeling According to the User-Provided Example
   Jiaxin Zhang, Tomohiro Fukuda, Nobuyoshi Yabuki, Yunqin Li

11:45  [300] Variability in Machine Learning for Multi-criteria Performance Analysis
   Victor Okhoya, Marcelo Bernal

12:00  Discussion / Q & A

SESSION 10B: Structural performance-based design and optimisation at FA-101

10:45 - 12:15 (90 Minutes)
   Chair: Nic Bao

10:45  [108] An investigation into Water-Soluble 3D Printed Formwork informed by Finite Element Analysis Reusable 3D Printed Formwork
Erin Hunt, Jonathan Grinham

11:00 [148] Towards a tool kit for Membrane Tensegrity Shells: Exploring the relationship between struts and geometry
Lance Marco Yu, Ying Yi Tan, Sachin Sean Gupta, Kenneth Joseph Tracy

11:15 [286] Computational Design for Additive Manufacturing of a Doubly Curved Gyroid Lattice Wall
Thian-Siong Choo, Bryan Wang, Danielle Berboso, Shalynn Ng, Lee Jun Rae Koh

11:30 [432] TwistedLam: A robotic fabrication method for hyperbolic paraboloid glulam and clt blanks
Chi Zhang, Lauren Franco, Lawson Spencer, Sasa Zivkovic

11:45 Discussion / Q & A

SESSION 10C: Urban Modelling and Simulation at CEPT Auditorium
10:45 - 12:15 (90 Minutes)
Chair: Marco Poletto

Geoff Kimm, Marcus White, Mark Burry

11:00 [403] An Urban Building Energy Simulation Method Integrating Parametric BIM and Machine Learning
Jong Bum Kim, Seongchan Kim, Jayedi Aman

11:15 Discussion / Q & A

12:15 Buffer

SESSION 11A: Artificial Intelligence and Machine Learning in Design at B N B Lecture Hall
12:30 - 14:00 (90 Minutes)
Chair: M. Hank Haeusler

12:30 [331] Skyways versus Sidewalks Evaluating the Perceptual Qualities and Environmental Features of Elevated Pedestrian Systems in Hong Kong
Sifan Cheng, Pu Jiang, Francesco Rossini, Jeroen van Ameijde

12:45 [347] Bespoke 3d Printed Chair: Research on the digital design and fabrication method of multi-body pose fusion
Keke Li, Hao Wu, Xiangwen Ding, Haowei Li, Philip F. Yuan

13:00 [359] Traditional Chinese Village Morphological Feature Extraction and Cluster Analysis Based on Multi-source Data and Machine Learning
Xiao Wang, Peng Tang, Chenyi Cai

13:15 [406] Gesture modeling - In between nature and control
Chor-Kheng Lim

Yuanyuan Li, Chenyu Huang, Jiawei Yao

13:45 [442] An Attention Economy Theme Park
Daniel Escobar, Carlos Navarro, Evangelia Papaspyrou
**SESSION 11B: VR/AR/XR + Interactive environments** at FA-101

12:30 - 14:00 (90 Minutes)

*Chair: Sky Lo Tian Tian*

12:30  [384] Urban Cultural Inheritance: Generative adversarial networks (gans) assisted street façade design in virtual reality (vr) environments based on hakka settlements in Hong Kong

*Jiahua Dong, Qingrui Jiang, Anqi Wang, Yuankai Wang*

12:45  [429] Chroma: A human-centric AR application connecting color space and users

*Anastasia Karaspiliou, Anna Karagianni, Dimitris Andreadakis, Helena G. Theodoropoulou, Nikolaos C. Spanoudakis, Christos Gerothodoros, Vasiliki Geropanta, Panagiotis Parthenios*

13:00  [437] Parametric Design and Analysis of Dynamic Louver for Optimized Daylighting in High-Rise Office Buildings

*Alireza Jahanara, Jae Yong Suk, Jae Yong Suk*

13:15  Discussion / Q & A

**SESSION 11C: Digital Representation and Visualisation + Theory** at CEPT Auditorium

12:30 - 14:00 (90 Minutes)

*Chair: Sherif Abdelmohsen*

12:30  [346] Mining High-Impact Authors From CAADRIA Conferences through Social Network Analysis and Information Visualization of the CAD Field

*Teng-Wen Chang, Yi-Sin Wu, Yu-Cyuan Fang*

12:45  [350] A Comparative Analysis of Architectural Experience in the Reality Continuum Based on Embodiment, Tactility and Affordance

*Avishek Das, Lars Brorson Fich, Claus Broendgaard Madse*

13:00  Discussion / Q & A

14:00  Lunch Break

14:30  Annual General Meeting + Closing Ceremony (CAADRIA) at B N B Lecture Hall

16:00  Tea/ Coffee Break

16:30  Keynote Speaker 03: Neil Leach at B N B Lecture Hall