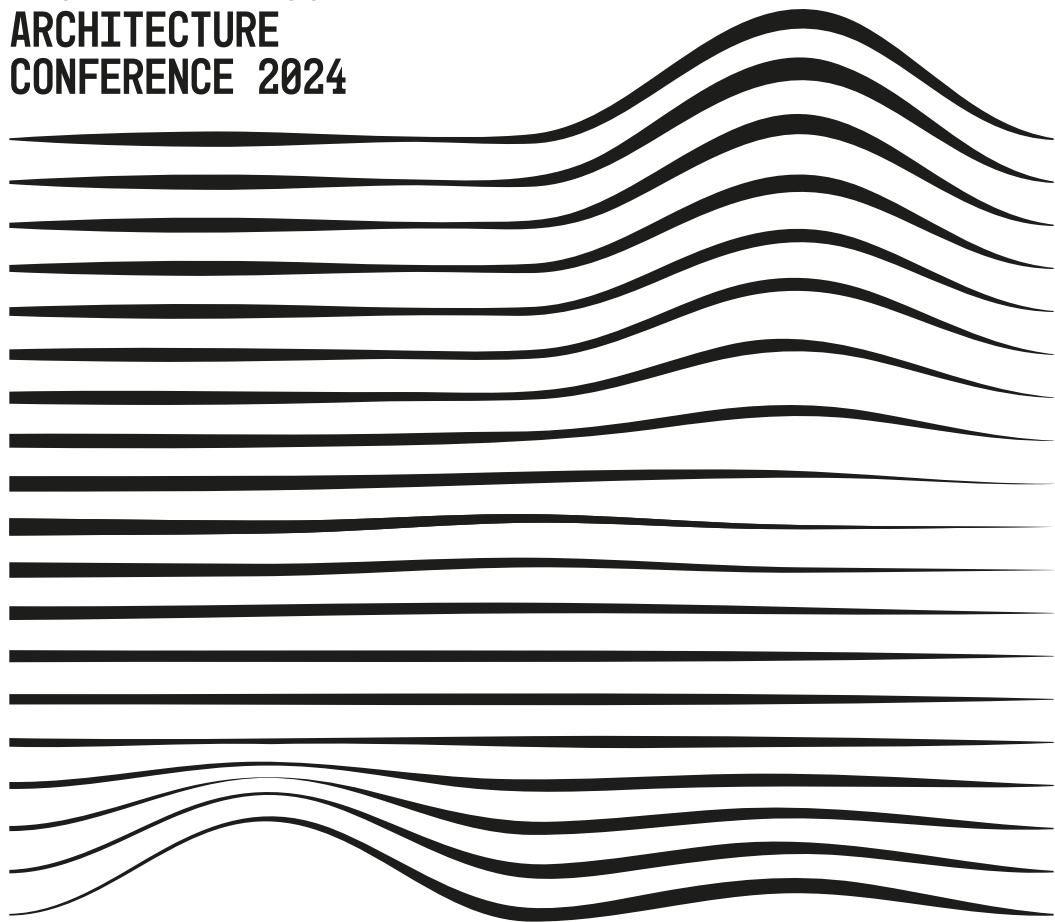


DIGITAL LANDSCAPE  
ARCHITECTURE  
CONFERENCE 2024





# DIGITAL LANDSCAPE ARCHITECTURE CONFERENCE 2024

DIGITAL LANDSCAPE ARCHITECTURE CONFERENCE 5-7 JUNE 2024 TU WIEN

## WELCOME TO DLA 2024! CONFERENCE LOCATION

Address:

**TU Wien**

Karlsplatz 13

1040 Vienna, Austria

Subway station/ U-Bahn station: Karlsplatz

### **Room 1: Kuppelsaal**

TU Wien, Karlsplatz 13, 1040 Wien, 4. floor, Room Code: AA 0 448

Directions Room 1:



TU Wien Maps: <https://tuw-maps.tuwien.ac.at/?q=AA0448>

### **Room 2: Begleitraum Kuppelsaal**

TU Wien, Karlsplatz 13, 1040 Wien, 4. floor, Room Code: AA 0 428

Directions Room 2:



TU Wien Maps: <https://tuw-maps.tuwien.ac.at/?q=AA0428>

# DIGITAL LANDSCAPE ARCHITECTURE CONFERENCE 2024

DIGITAL LANDSCAPE ARCHITECTURE CONFERENCE 5-7 JUNE 2024 TU WIEN

## DLA 2024 CONFERENCE PROGRAM

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### WEDNESDAY 05. JUNE 2024

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08:30 – 19:30      **Reception & Registration | Room 1**

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09:00 – 10:30      **Presentation „Spatial Simulation Lab – Digital City Science and Planning Support“ | Room 2**  
**Julia Forster & Stefan Bindreiter**, TU Wien

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10:30 – 11:30      **Coffee Break | Room 2**

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11:30 – 13:00      **Workshop „BIM Workflow and Parametric Design with RhinoLands“ | Room 2**  
**Elham Ghabouli**, Landscape Architect, Product Manager, Asuni

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15:00 – 15:10      **Welcome | Room 1**  
**Michael U. Hensel, Susann Ahn, Thomas E. Hauck**

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15:10 – 15:40      **The DLA and JoDLA | Room 1**  
**Erich Buhmann & Stephen Ervin**

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**Special Event „Visionary Perspectives: Computational Modelling of Complex Urban and Landscape Systems“ | Moderation: Michael U. Hensel | Room 1**

15:40 – 15:45      **Michael U. Hensel**: Introduction

15:45 – 16:20      **Gerhard Schmitt**: „Beyond Sustainability: Digital Urban Landscape Twins for Generative Future Cities“

16:20 – 16:55      **Viktoria Sandor**: „Hybrid Co-creation: Towards Sustainable Urban Transformation“

Break

17:15 – 17:50      **Jakub Tyc**: „Tackling Complexity: Integrative Computational Design Approaches to Support Sustainable Design Strategies“

17:50 – 18:25      **Fabian Pitscheider**: „Understanding Building“

18:25 – 19:15      Podium Discussion

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THURSDAY 06. JUNE 2024

08:00 – 18:00 Reception & Registration | Room 1

08:30 – 09:00 Welcome | Room 1  
Norbert Trolf, Dean of Studies for Architecture and Building Science, TU Wien

09:00 – 10:00 Keynote Lecture „Patterns of Interaction: Computational Design Across Scales“ | Room 1  
Pia Fricker, Professor of Computational Methodologies in Landscape Architecture and Urbanism, School of Arts, Design and Architecture, Finland

10:00 – 10:15 Coffee Break | Room 1

Session 1: Immersive and responsive Design: Crafting Landscapes in Virtual Realms  
Moderation: Matthias Vollmer, Susann Ahn | Room 1

10.15-10.35 Jaeyoung Ha: „Implementation of Augmented Reality in Landscape Architectural Education: Enhancing Understanding of Three-Dimensional Space“

10.35-10.55 Afshin Ashari: „WE[AR]- Dynamic Interaction in Public Spaces Using AR/MR“

10.55-11.15 Rümeyza Merve Öksüz: „Effects of Visual Cues on Depth Perception in Virtual Landscapes“

11.15-11.35 Adolfo Martinez: „Determining the Effect of Alleyway Design on Perceived Safety Through Virtual Reality“

Break

12.00-12.20 Peter Connolly: „Re-thinking How Representation Can Be Employed to Engage with Landscape Experience – and How Point Clouds Can Contribute to This“

12.20-12.40 Ulrike Wissen Hayek & Brent Chamberlain: „Eye Tracking in VR to Analyse Physiological Responses to Peri-urban Landscape Elements“

12.40-13.00 Frank Suurenbroek: „The Non-Experts’ Experience of 3D City Visualisations: Lessons for Urban Design Practice“

Session 2: Geodesign Approaches, Technologies and Case Studies  
Moderation: Michael U. Hensel | Room 2

10.15-10.35 Ata Tara: „From Geodesign to Geoart: Maximising Research Impact in a Georesilience Framework“

10.35-10.55 Maximilian Schob & Jörg Rekitke: „Geodesign Beyond the Shores of Landscape Architecture“

10.55-11.15 Emily Schlickman: „Employing Generative Technology in Urban Design: An Aid or a Threat?“

11.15-11.35 Hanwen Xu: „An Interactive Terrain Design Method Combining Augmented Reality Sandbox and Multi-objective Optimization Assistance“

Break

12.00-12.20 Emily Schlickman: „Spot the Bots: Analyzing Text-to-Image Outputs for the Field of Landscape Architecture“

12.20-12.40 Austin Dunn: „On Spatial Data, Computation, and Public Participation for Regional Multi-Use Trail Design“

12.40-13.00 Mark Heller: „A Semi-automated Workflow for Computationally Generating Perspectival Renderings of Geographic Scale Landscapes“

13:00 – 14:00 Lunch Break | Room 1  
(The lunch buffet on site is included in the full conference ticket & 1-day conference June 6).

THURSDAY 06. JUNE 2024

**Session 3: Technological Frontiers in Digital Landscape Analysis and Design**

**Moderation: Philipp RW Urech, Thomas E. Hauck | Room 1**

- 14.00-14.20 **Chiara Chioni:** „Feel the Context! Ex situ Horizon Reconstruction in Mountain Landscapes for Bioclimatic Design“
- 14.20-14.40 **Phil Fernberg & Zihao Zhang:** „Problematizing AI Omnipresence in Landscape Architecture“
- 14.40-15.00 **Daniel Münderlein:** „Putting Walkscapes on the Map: GIS-based Visualization for Mobile Methods in Landscape Research“
- 15.00-15.20 **Salvador Lindquist & Keenan Gibbons:** „Infrared Chorographies: Visualizing Thermal Disparities“
- 15.20-15.40 **Craig Douglas:** „Sensing the Landscape: Mapping the Dynamic Atmospheric Environment of the Urban Fabric“
- 15.40-16.00 **Matthias Pietsch:** „Monitoring as a Basis for the Development of resilient Landscapes – Where, How and Why?“

Break

- 16.30-16.50 **Ximing Zhong:** „AI as a Collaborative Partner in Landscape Form-finding“
- 16.50-17.10 **Brent Chamberlain & Benjamin George:** „Assessing the Value of AI in Plant Selection“
- 17.10-17.30 **Guoping Huang:** „Towards a Digital Landscape Twin: Insights from the Healthcare Industry“
- 17.30-17.50 **Ali Zana:** „Seismic Activity Hazard Assessment Using GIS Techniques in a Vulnerable Urban Area of the Iraq Kurdistan Region“
- 17.50-18.10 **Ziqian Cheng:** „Research on the Spatial Structure of Landscape Architecture from Design Intention to Function Use“

**Session 4: Digital Co-Creation: Empowering Participation in Landscape Architecture and Planning | Moderation: Susann Ahn, Katrin Hagen | Room 2**

- 14.00-14.20 **Henrik Schultz:** „Entangling Physical and Virtual Practices in Co-creative Processes?“
- 14.20-14.40 **Gabriel Wurzer:** „Urban Transformation Using Cellular Automata Specified by the Public“
- 14.40-15.00 **Peter Zeile:** „A Multisensory Toolbox for Active Citizen Participation in Cycling Planning on Shared Real and Virtual Roads: A Case Study in Herrenberg, Germany“
- 15.00-15.20 **Howard Hahn:** „Integrating Teaching, Research, and Community Engagement Using a GIS-oriented Web Hub“
- 15.20-15.40 **Beata Dreksler:** „Co-creation in Immersive Virtual Reality: Insights from a Multi-Stakeholder Planning Workshop in Jabal Moussa Biosphere Reserve, Lebanon“
- 15.40-16.00 **Malte Schünemann:** „The Audience in Mind: An Attempt of a Target-Group-Specific Application to Communicate Climatic Hazards to Decision Makers“

Break

- 16.30-16.50 **Chien-Yu Lin:** „Unraveling Collaborative Formation: A Framework of Investigating Key Factors Shaping Landscape Architecture Professions in the Era of Digital Visualization“
- 16.50-17.10 **Andrew Lovett:** „Developing Online Mapping and Analysis Tools for the Spatial Integration of Energy and Environmental Policies in England“
- 17.10-17.30 **James F. Palmer:** „The Perception of Landscape Visual Quality by Environmental Professionals and Local Citizens“
- 17.30-17.50 **Evangelia Polyzou:** „Use of Open-Source Software for Landscape Co-Design“
- 17.50-18.10 **Mehmet Onur Senem:** „Generating Landscape Layouts with GANs and Diffusion Models“

18:15 – late **Apéro & Informal Get-Together | Room 1**  
(Food and drinks on site are included)

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**FRIDAY 07. JUNE 2024**

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08:00 – 17:00      **Reception & Registration | Room 1**

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08:20 – 08:30      **Welcome | Room 1**  
**Susann Ahn, Thomas E. Hauck, Michael U. Hensel**, TU Wien

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08:30 – 09:30      **Keynote Lecture „Autonomy and Wildness“ | Room 1**  
**Bradley Cantrell**, Professor and Chair of Landscape Architecture  
University of Virginia School of Architecture USA

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09:30 – 09:50      **Coffee Break | Room 1**

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**Session 5: Teaching Digital Landscape Architecture**  
**Moderation: Thomas Schauppenlehner | Room 1**

09.50-10.10      **Ervin Lin Shengwei**: „Extreme Scaffolding - An Application of Blended Learning in Teaching Digital Landscape Architecture“  
10.10-10.30      **Ulrike Wissen Hayek, Pia Fricker & Rosalea Monacella**: „Inclusions - Landscape Narratives for Enhancing Landscape Architecture Pedagogy“  
10.30-10.50      **Florian Zwangslleitner & Arabella Knegendorf**: „AI as a Tool in the Landscape Architecture Design Process“  
10.50-11.10      **Chaelin Lee**: „Harnessing Artificial Intelligence for Designers: Conversion of Design Sketches into Digital Images Using AI Image Generators“  
11.10-11.30      **Jela Ivankovic-Waters**: „Advancing Planting Design Through Digital Technologies in Teaching Landscape Architecture“  
11.30-11.50      **Mengting Ge**: „Enhancing Design Concept Initiation of Landscape Practice Using VR and AR Representation“

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**Session 6: Heritage Horizons: Preserving Culture in Landscape Transformation**  
**Moderation: Boris Salak | Room 2**

09.50-10.10      **Maximilian Schob**: „From Radiance to Geometry: Identifying European Forest Clearings with Potential Heritage Value“  
10.10-10.30      **Alessandra Battisti**: „Wine Cultural Landscape's Adaptation: A Methodological Framework for the Dynamic Conservation of Cultural Heritage“  
10.30-10.50      **Brendan Harmon**: „3D Printing of Heritage Trees“  
10.50-11.10      **Mingyi He**: „Digital Frontier: Construction and Application of Landscape Database for Border Towns in Heilongjiang Province from the Perspective of Spatial Humanity“  
11.10-11.30      **Karl Bittner**: „Real-Time VR Landscape Visualization for Wind Farm Repowering: A Case Study in Eastern Austrian World Heritage Sites“  
11.30-11.50      **Peter Stempel**: „Interpreting Dynamic Landscapes: Animated Landscape Visualizations to Improve Communication of Changing Coastal Conditions“

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11:50 – 13:00      **Group Photo and Lunch Break | Room 1**  
(The lunch buffet on site is included in the full conference ticket & 1-day conference June 7)

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FRIDAY 07. JUNE 2024

**Session 7: Ecological Innovations: Nurturing Nature through Digital Solutions**

**Moderation: Thomas E. Hauck, Milica Vujovic | Room 1**

- 13.00-13.20 **Yuxin Yang & Adam Mekies:** „EcoCircuit, a Text2Flow Application: Deciphering Environmental Metabolism Through Staging and Collaborating with Language Models“
- 13.20-13.40 **Francesca Mosca:** „A Conceptual Framework for the Optimization of Environmentally Sustainable Nature-based Solutions“
- 13.40-14.00 **Elham Ghabouli:** „Enhancing Urban Greenery: Integrating Environmental Data into 3D Urban Tree Models“
- 14.00-14.20 **Jozef Sedlacek:** „Advancing Urban Ecology Research with UAV: A Study on NDVI and Individual Tree Vitality Assessment in Species-rich Parks“
- 14.20-14.40 **Wei Zhang:** „Construction of Environment-Sensitive Digital Twin Plant Model for Ecological Indicators Analysis“
- 14.40-15.00 **Medria Shekar Rani:** „Canopy Interception Assessment of Urban Park Greenery: A Case Study of Ganesha Park, Bandung, Indonesia“

Break

- 15.15-15.35 **Ceylan Sözer:** „A Computational Methodology for Proposing the Distribution of Marine Environment with Incomplete Data“
- 15.35-15.55 **Hans-Georg Schwarz-v. Raumer:** „Are Urban Biotope Networks Well Connected to Open Space? A Case Study“
- 15.55-16.15 **Ferdinand Ludwig:** „Digital Workflow for Novel Urban Green System Design Derived from a Historical Role Model“
- 16.15-16.35 **Hadi Yazdi & Qiguan Shu:** „GroTree – A Novel Toolbox for Simulating and Managing Urban Tree Canopy Growth“
- 16.35-16.55 **Vincent Javet:** „Exploring Sustainable CNC Model Making Materials for Landscape Architecture“

**Session 8: Urban Green Futures: Green Spaces and Infrastructure**

**Moderation: Bianca Pfanner, Nikola Pohl | Room 2**

- 13.00-13.20 **Xiaohan Zhang:** „A Human-centered Approach for Calculating the Shade Benefits of Street Trees When Considering Pedestrian Mobility“
- 13.20-13.40 **Linda Haenchen:** „Indicators for Assessing the Supply, Demand and Accessibility of Urban Green Spaces in the Context of a Planning Instrument“
- 13.40-14.00 **Zamani Omid:** „Sustaining Urban Resilience through Adaptive Green Infrastructure Strategies: A Case Study of Istanbul-Kadikoy District“
- 14.00-14.20 **Vudipong Davivongs:** „Urban Forest for Green University Campus: Identifying Area Covered in Vegetation as Forest at Kasetsart University, Bangkok, Thailand“
- 14.20-14.40 **Zhengnan Liu & Jinpeng Yang:** „GAN-based Transportation Noise Prediction via Satellite Maps: A Case Study in New York“
- 14.40-15.00 **Ming Lu:** „A Coupled Structure-Function Evaluation Method for GI Construction Suitability of Shrinking Urban Vacant Land: A Case Study of Hegang, China“

Break

- 15.15-15.35 **Livia Calcagni & Sridhar Subramani:** „A Comprehensive Computational Tool for Performance-driven Reasoning in Floating Building Design and Its Evaluation“
- 15.35-15.55 **Travis Flohr:** „Exploring a Just and Diverse Urban Forests' Capacity for Mitigating Future Mean Radiant Temperatures“
- 15.55-16.15 **Yiqiao Wang:** „Boundary Green Infrastructure Patches: Bridging Spaces that Connect Natural and Built-up Spaces“
- 16.15-16.35 **Yaseen Hassan & Sandor Jombach:** „A Comparative Assessment of UGS Changes and Accessibility Using Per Capita Metrics: A Case Study of Budapest and Vienna“
- 16.35-16.55 **Wanyi Li:** „Analysis of Spatial-temporal Pattern Evolution of Carbon Stocks Based on Land Use Change: A Case Study of Guangzhou“

17:00 – 17:30

**Closing Ceremonies and DLA Preview 2025 | Room 1**

# DIGITAL LANDSCAPE ARCHITECTURE CONFERENCE 2024

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## Organization Scientific Committee

### Prof. Susann Ahn, PhD

Professor of Landscape Architecture and Landscape Planning, Research Unit Landscape Architecture and Landscape Planning, TU Wien, [susann.ahn@tuwien.ac.at](mailto:susann.ahn@tuwien.ac.at)

### Prof. Thomas E. Hauck, PhD

Professor of Landscape Architecture and Landscape Planning, Research Unit Landscape Architecture and Landscape Planning, TU Wien, [thomas.hauck@tuwien.ac.at](mailto:thomas.hauck@tuwien.ac.at)

### Prof. Michael U. Hensel, PhD

Professor of Digital Architecture and Planning, Research Unit of Digital Architecture and Planning TU Wien, [hensel@dap.tuwien.ac.at](mailto:hensel@dap.tuwien.ac.at)

### Boris Salak, PhD

Senior Researcher, Research Unit Landscape Architecture and Landscape Planning, TU Wien, [boris.salak@tuwien.ac.at](mailto:boris.salak@tuwien.ac.at)

### Stefanie Tischberger, Dipl.-Ing.

Researcher, Research Unit of Digital Architecture and Planning, TU Wien, [tischberger@dap.tuwien.ac.at](mailto:tischberger@dap.tuwien.ac.at)

## Scientific Board

Katrin Hagen, Senior Scientist Dipl.-Ing.in Dr.in, TU WIEN  
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Amanda Immler, Tutor, BSc TU Wien  
Navid Javan Shojamofrad, Student Assistant, Bsc TU Wien  
Clara Kessler, Student Assistant, Bsc TU Wien  
Dominik Schmidt, Student Assistant, BA TU Wien  
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Gabriel Wurzer, Privatdoz. Dipl.-Ing. Dr.techn. TU Wien



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