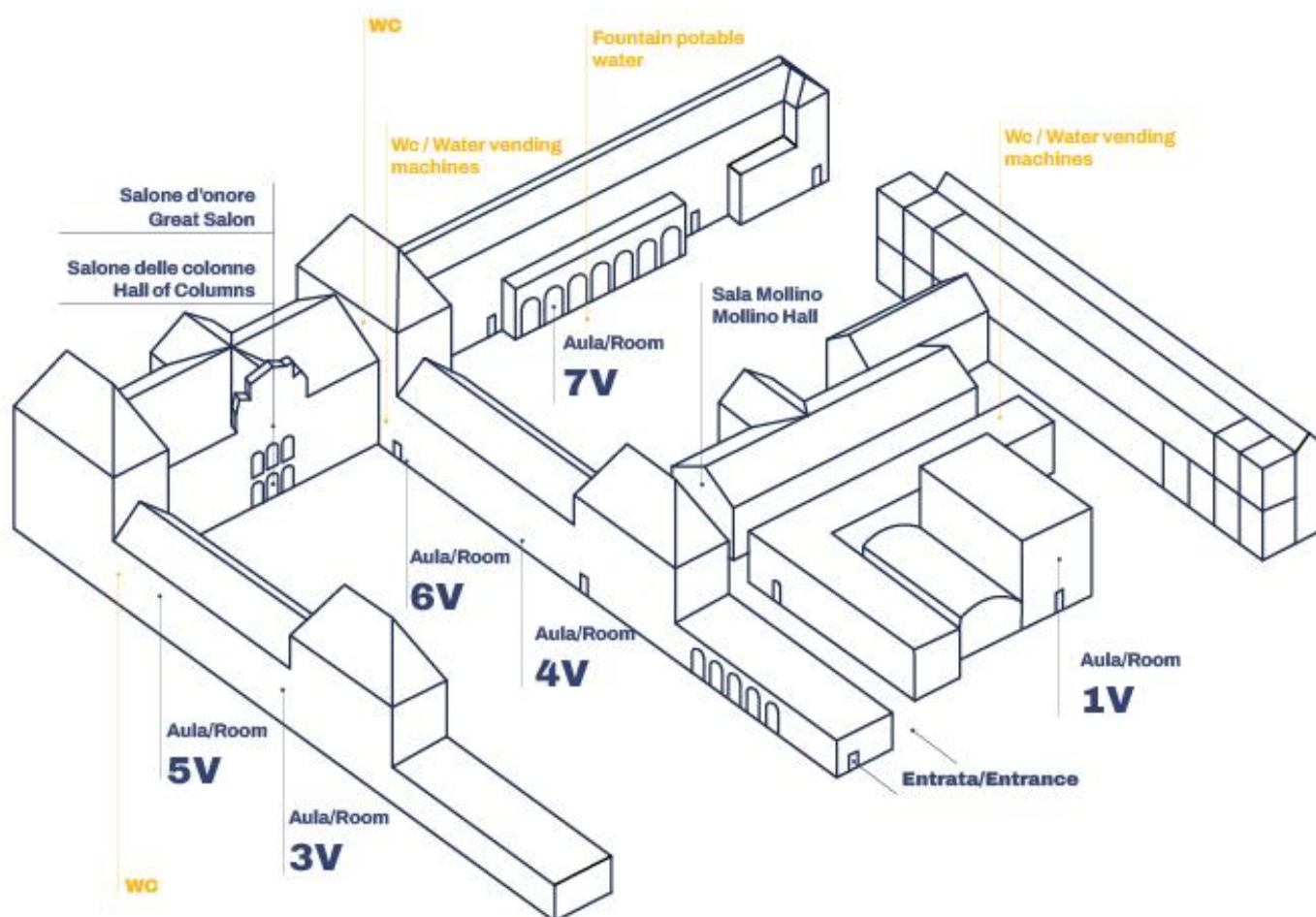


# URBAN MORPHOLOGY **IN THE AGE** OF ARTIFICIAL INTELLIGENCE

XXXII International Seminar On Urban Form  
16th-21st June 2025

## Map | Castello del Valentino



## Monday | June 16<sup>th</sup>

3:30-4:00 pm ISUF Council Welcome

4:00-7:00 pm ISUF Council Meeting

7:00-7:30 pm **GRAPH THEORY DIAGRAM Exhibition opening**

## Tuesday | June 17<sup>th</sup>

8:00 am Registrations

09:00-9:30 am Addresses  
*Politecnico di Torino (Stefano Sacchi, Vice Rector for Society and Public Engagement, Community and Rector's Program Implementation)*  
*Torino Municipality (Chiara Foglietta, Councilor for ecological and digital transition, environment, mobility, transport and innovation)*  
*DAD Department of Architecture and Design at PoliTo (Michele Bonino, Director)*  
*Vitor Olivera (President of ISUF, International Seminar on Urban Form)*  
Salone D'Onore

09:30-10:30 am **KEYNOTE SPEECH #1 Attilio Petruccioli**  
The typo-morphological approach in the age of Artificial Intelligence  
Salone d'Onore

10:30-11:00 am Coffee break  
Sala delle Colonne

11:00-12:00 am Dialogue/interview  
**Barbara Caputo** (Artificial Intelligence Machine Learning)  
**Meta Berghauser Pont** (Spatial Morphology Group)  
News from the Future. Artificial Intelligence in the Age of Urban Form  
Salone d'Onore

12:00-1:00 pm **KEYNOTE SPEECH #2 Marco Trisciuglio**  
Urban Form and Architecture in Torino.  
The Chessboard as a Matrix of a Transitional Morphology  
Salone d'Onore

1:00-2:00 pm Lunch break

2:00-4:00 pm

Parallel Session A

**MAP A.1**

Chaired by: Martin Fleischmann

Room 3V

**Drone Vision and Machine Learning: Analysing Urban Morphology and Spatial Behaviour – Insights from Zurich**

*Francisco Alaniz Uribe, Marco Grond, Megan Horacheck*

**Post-disaster documentation and geo-mapping the form of temporary settlements in emergency contexts**

*Ilaria Tonti*

**Decoding Historical Urban Fabric through Building Typology: A Morphometric Analysis of Architectural Patterns in Three Chinese Historic Districts**

*Lian Tang, Yijia Zhu*

**Old Buildings, New Opportunities: Exploring the Relationship between Building Age Diversity and Retail Patterns across Amsterdam, Rotterdam and The Hague**

*Onur Tümtürk, Hulusi Eren Efeoğlu, Mert Akay, Olgu Çalışkan*

**Research on intelligent optimization strategies of urban rail transit spatial morphology based on B-S Model (Betweenness - Solar Performance Model)**

*Yufei Liu, Yuan zhu*

**Assessing Urban Connectivity and Accessibility Using Open-Source workflows in Data challenging environments**

*Walid S. Abdeldayem, ilaria Geddes, Nadia Charalambous, Gareth Simons, Sepher Zhand*

**SHP A.2**

Chaired by: Nicola Marzot

Room 4V

**A Study on the Green Volume Evaluation Criteria and District Morphology Optimization Strategies for Historic Districts Based on Dual Comparative Analysis**

*Changjuan Hu, Cong Gong*

**Automated Site Planning Using Context-Aware Configuration Stable Diffusion (CAC-SD) Model**

*Wenqian Zhong, Bo Wan, Qiang Sheng*

*The Morphological Characteristics of Urban Micro Public Spaces for Guiding Proactive Health Based on Visual Perception*  
*Zihua Jin, Ping Shu, Wang Lijun*

*Characteristics and Metrics of Three-dimensional Urban Block Form*  
*Yacheng Song, Yuxuan Song, Xiaoxuan Wang, Ruoxan Wu, Jingchun Zhou*

*Hutong-Inspired Urban Morphology: Lessons from Dashilar for Sustainable Urban Design*  
*Yao Lu*

*New urban forms in the periphery of Madrid through the inclusion of the concept of Urban Green Infrastructure in relation to housing*  
*Eva Juana Rodriguez Romero, Rocío Santo-Tomás Muro*

**ENV A.3**  
Chaired by Marco Maretto  
Room 5V

*15-minute Prague: A Methodological Framework for the Applied Concept of the 15-minute City*  
*Lukas Kopp*

*From Types to Patterns: A Hierarchical Approach to Understanding Urban Form*  
*Mariana Diniz, Silvia Spolaor*

*Urban Morphology of Food and Beverage and the Impact on Urban Vitality*  
*Nihansu Banu Albayrak Evren, Ömür Barkul*

*Territorial Archetypes*  
*Alessandro Camiz*

*Embodied Urbanism: A Bodily Phenomenology in the Age of Artificial Intelligence*  
*Alessandro Cece, Roberto Podda*

*Urban form and Drones: Mapping Indian cities*  
*Arathy Gopal*

**AI A.4**  
Chaired by Tolga Ünlü  
Room 6V

*From Pixels to Participation: A Blueprint for Integrating Generative AI in Community Consultations*  
*Mirko Guaralda, Ksenia Nikolaeva, Dan Nyandega*

*Predicting Changes in Elderly Housing Needs Using AI and Large-Scale Model Training*

*Li Bao, Siyuan Sun*

**Typomorphological Studies of Chinese historical areas Driven by Artificial Intelligence: Precision Restoration and Evolution Analysis**

*Ruotong Hu, Yuzhu Wen, Wenshuo Zhang, Zhihao Zhou*

**Utilizing AI for the Digitization and Analysis of Collective Memory: The Case of İznik, Turkey**

*Ebru Kamaci Karahan, Sinem Tapkı*

**Integrating Artificial Intelligence in Urban Design: Balancing Innovation with Human Sensitivity**

*Luciano Falcao da Silva*

**GEO AI tools for urban spaces and their built heritage**

*Marco Cappellazzo, Giacomo Patrucco, Antonia Spanò*

4:00-4:30 pm

Coffee break  
Sala delle Colonne

4:30 - 6:30 pm

Parallel Session B

MAP B.1

Chaired by Ilaria Geddes  
Room 3V

**Towards a global morpho-typology of urban river spaces**

*Claudiu Forgaci, Francesco Nattino, Yehan Wu*

**Quantifying Pedestrian Accessibility in Urban Networks: A Graph-Based Analysis of Walking Routes from Residential Building Entrances to Metro Stations**

*Lian Tang, YangYu Zhao*

**Optimizing Walkability in Vertical Cities: Spatial Morphology Assessment and Design Strategies for High-Density Urban Districts in China**

*Jun Jin, Siming Lin, Jue Zhou*

**The invisible circle, mapping the complex shape of transfer isochronous circle in suburban TOD area**

*Min Feng, Youpei Hu*

**Mapping morphotypical urban areas in Almaty, Kazakhstan: combining historical plan analysis with machine-based street pattern clusterization**

*Ivan Riaposov*

**Adaptation and Transformation of Commercial Spaces: An Integrated Analysis of Morphological Characteristics, Business Synergy, and Vitality Mechanisms**

Qi Qin

## **SHP B.2**

**Chaired by Alessandro Venerandi**  
**Room 4V**

*Holistic Environmental Design and Management for Sustainable Urbanism:  
Learning From the Idea of “Satoyama”*  
**Takashi Ariga**

*The implications of artificial intelligence in morphogenesis processes: a critical  
methodology for urban regeneration strategies*  
**Alessandro Cece, Roberto Podda**

*Density and Atmosphere: Urban Regeneration and Spatial Morphology in  
Southern Nanjing*  
**Li Bao, Yu Gan, Chenyang Jin**

*Design by scenarios. Urban form through computational approach*  
**Rossella Gugliotta, Michela Barosio, Massimiliano Lo Turco, Andrea Tomalini**

*The role of urban form for the Productive City*  
**Teresa Marat Mendes**

*Mapping the Solar Pattern. A reasoning about spatial data accuracy and  
availability.*  
**Riccardo Ronzani, Ilaria Tonti**

## **ENV B.3**

**Chaired by Alessandro Camiz**  
**Room 5V**

*Virtual recurrences. About building typologies in the AI era*  
**Silvia Gron, Cristiano Tosco**

*Urban Morphology of Romani Ghettos: A Cross-Border Study*  
**Nihansu Banu Albayrak Evren, Murat Berk Evren**

*Envisioning Residual Spaces: Integrating Analytical Approaches and Emerging  
Technologies in Urban Morphology*  
**Alessandra Di Cerbo, Kayvan Karimi, Sepher Zhand, Marco D'Ambrogio**

*From Traditional Courtyard House to Modern Private House: Analysis of  
Morphological Elements in the Typological Process*  
**Wowo Ding, Yidan Liu**

*Morphogenesis Driven by Deep Learning: Graph-Based Decoding and  
Generative Design*  
**Cui Liu, Yuxuan Pan, Bin Tang**

The role of road network in describing natural cities: a percolation model application

*Giampiero Lombardini*

**AI B.4**

**Chaired by Nadia Charalambous  
Room 6V**

*From Retrieval to Generation: Multi-Modal AI System for Context-Aware Urban Renewal in Historic Districts*

*Yuqiang Ben*

*AI-Driven Streetscape Perception: Analyzing Urban Morphology and Public Sentiment through Social Media Data*

*Yike Hu, Zhihao Kang, Nadeem Ullah*

*Mapping the Habitation Patterns and Socio-ecological Dynamics of Kittiwakes along the River Tyne*

*Jiayi Jin, Bing Zhai*

*Preservation of historical cities and the regeneration of cultural contexts during 80 years after the WW2 - Responding to the challenges of resilience and re-purposing in the face of unstable environmental change*

*Yosuke Mano*

*Creation of an Urban Morphology Archive in a Symbiotic Region Combining “Shan Shui (Mountain–Water)” and AI-Driven Interactions: A Case Study of the Huong River Basin in Hue, Vietnam*

*Shigeru Satoh, Keisuke Sugano, Huy Nguyen Quang, Tomoyuki Mashiko, Hieu Bui Thi Tung Nguyen, Truong Hong Truong, Yukihiro Hirai, Susumu Kawahara, Kenta Kitani, Shigeo Tanaka*

*Transforming Urban Planning with LLMs: A GPT Model for Plan Notes in Türkiye*

*Damla Balci, Can Aydin, Gizem Erdoğan Aydın, Murat Kılıç*

6:30-7:30 pm

**Anne Vernez Moudon (1945-2025). A Tribute**



## Wednesday | June 18<sup>th</sup>

8:00 am Registrations

8:30 - 10:30 am **Parallel Session C**

### MAP C.1

Chaired by Nicola Marzot  
Room 3V

*Pretrained Convolutional Neural Networks vs. Experts in settlement type classification: friend or foe?*  
Maja Debevec, Tomaž Pipan

*Territory as heritage: socio-morphological mapping of the arrangement and network of indigenous and quilombola nuclei in central-western Brazil*  
Patricia Silva Gomes

*Digital tools for the analyses of riverbed and built heritage interaction*  
Federica Ravizza, Antonia Spanò

*A Study on Parking Choice Behavior in Campus Parking Lots Based on Space Syntax*  
Yuhan Chen, Wen Zhang

*Exploring the Spatiotemporal Patterns and Nonlinear Driving Mechanisms of Campus Spatial Morphology Perception: An Empirical Study Based on Multisource Big Data from Nanjing Universities*  
Yi Chen, Hua-xing Sheng, Ting-jin Wu

*Assessing citizen services provision across urban and rural areas based on accessible density measures*  
Ilaria Geddes, Walid S. Abdeldayem, Nadia Charalambous, Ana Ricchiardi, Iason Giraud

### SHP C.2

Chaired by Marco Maretto  
Room 4V

*Utilizing AI-Driven Technology and Geospatial Analysis to Explore Landscape Morphology, Social Vulnerability, and Child Neglect in Los Angeles*  
Gia Barboza-Salerno, Sharefa Duhaney

*Making sense of complexity: the changing role of human intelligence in urban morphological research*  
Lionel Eid, Daniel Elsea, George Garofalakis, Jane Manning

*Defining proxies for walkable urban design - four case studies in Łódź, Poland*

*Malgorzata Hanzl*

*Shaping Green Cities: The Impact of Urban Green Spaces on Fall Risk Among Older Adults and the Mediating Role of Mental Health*  
*Shenghao Huang*

*Facility-Morphology-Behavior Dynamics: Mapping The Interplay of Urban Form and Social Infrastructure in Social Incubation for Urban Renewa*  
*Xinkai Yang, Li Bao*

*Exploration of the "Atmosphere-First" Concept and Operational Methods in the Creation of Urban Cultural Tourism Consumption Spaces under the Context of Urban Renewal and Artificial Intelligence Technology*  
*Junjin Qiu*

### ENV C.3

Chaired by Sergio Porta  
Room 5V

Predicting morphology outcomes of regeneration policies at plot and building scale in historic areas  
*Zhiyu Pang, Yacheng Song*

Thematic trends in urban morphology 1994-2024: analysis of keywords from papers presented at ISUF conferences 1994-2024.  
*Paul Sanders, Sylvia Spolaor, Vitor Oliveira, Susanne Whitehand, Peter Larkham*

Beyond the Orthographic Map: Generative AI and Urban Morphological Analysis  
*Loris Rossi, James Stevens, Hazem Ziada*

Ecosystem Subregion: A regional framework for AI-assisted regenerative design examined through Japanese Castle Towns  
*Keisuke Sugano*

Correlation Study Between Traditional Courtyard Houses and the Historic Districts Morphological Characteristics  
*Wowo Ding, Lian Tang, Yijing Wang*

### AI C.4

Chaired by Santiago Gomes  
Room 6V

City Information Modeling (CIM): Computational urban morphology, digitizing urban design and Artificial Intelligence (AI)  
*Todor Stojanovski*

Research on the Photothermal Perception Mechanisms and Spatial Elements of Campus Public Spaces in Hot-Humid Regions Based on VR and Physiological Measurement Technologies  
*Min Wang, Tinjin Wu*

Quality Evaluation of Community Street Space from the Perspective of Children -  
- Based on Street View Images and Machine Learning  
*Di Guo*

AI Applications on Urban Morphology: Rethinking the City as a Device for  
Decarbonization and Transformative Research  
*Pegah Zamani*

Urban Form Between Persistence and Extinction: The Role of Artificial  
Intelligence in the Post-Disaster Reconstruction of Historic Urban Core of  
Antakya  
*Mert Nezih Rifaioğlu*

Research on the Optimization of Morphology and Atmosphere in Historical  
Streets Based on Multi-Source Data: A Case Study of Tangshan Old Street in  
Nanjing  
*Zhitong Sun, Yuting Chen, Hao Deng*

10:30-11:00 am      Coffee break  
Sala delle Colonne

11:00 - 1:00 pm      **Parallel Session D**

MAP D.1  
Chaire by Liu Cui  
Room 3V

Decoding the figure-ground plan. The spatial impact of urban regeneration  
projects on mass-housing estates  
*Alvaro Clua Uceda, Gonzalo Díaz Correias*

Exploring the Correlation Between Urban Form and Temporal Patterns of Block  
Vitality  
*Lexun WANG*

Employing Deep Learning to Unveil the Performance-Oriented Block-Scale UGS  
Structural Optimization in Urban Shrinkage  
*Jiayin Hou, Li Shen, Yongchan Zhang, Conghui Zhou*

Urban Green Space Morphology in Small-Medium Cities: A Multi-Dimensional  
Assessment from China's Lixiahe Region  
*Mengjun Hu, Xiaojun Wang*

Identification and Characteristic Cognition of Multi-station Aggregated Areas of  
Urban Rail Transit: A Case Study of Tokyo 23 Wards  
*Dongqing Hanzl, Yiwen Huang, Yacheng Song, Chuan Wang*

**SHP D.2**

Chaired by Alessandro Araldi  
Room 4V

**Complexity and Future Urban Forms: A Design Science Approach Integrating AI for Future Cities**

*Mahmud Tantoush, Ulysses Sengupta, Solon Solomou*

**Comparative Urban Regeneration: Spatial Integration and Physical Transformation in London and Istanbul**

*Beyza Karadeniz, Yunus Emre Kozoğlu*

**Walkability patterns in modernist housing estates - two case studies from Lodz, Poland**

*Malgorzata Hanzl, Tomasz Krystkowski*

**Urban morphological and functional consequences of the introduction of the post-war “retroversion” method in Poland**

*Vitor Araujo de Oliveira, Łukasz Musiaka*

**Human Centred Algorithms and Machine Centered Algorithms in Urban Design**

*Hans Joachim (Hajo) Neis*

**6Wave Function Collapse in Urban Design: A Bottom-Up Approach for Pixel-Level Texture Generation and Adaptive Cityscape Development**

*Chongjian Wang*

ENV D.3

Chaired by Conrad Kickert  
Room 5V

**Machine learning Driven Insights into the Dynamic Characteristics of Neighborhood UGS Structure in Shrinking Cities**

*Shining Zhang, Xinye Fang, Conghui Zhou, Jiayin Hou*

**Enhancing Urban Morphology through AI-Driven Adaptive Design: A Case Study of Nanjing, China**

*Li Bao, Mengjia Qiu*

**Integrating AI and Statistical Physics for Urban Spatial Density Distribution Analysis**

*Kun Liu, Jianjia Wang, Yuhuang Chen*

**Michael P. Conzen and the Historico-Geographical Approach to Urban Morphology**

*Clàudia Monteiro*

**Street networks: A processual approach**

*Primas Urs*

**Rethinking the Role of Artificial Intelligence in Mobility: An Assessment of Germany's Smart City Model Projects and their Potential for Creating More Accessible Cities**  
*Thomas Schonberger*

**AI D.4**  
Chaired by Todor Stojanovski  
Room 6V

**Decoding Urban Form Drivers of Building Energy Demand: Machine Learning-Driven Insights from Nanjing's Morphological Big Data**  
*Fengmin Su*

**An Interpretable Machine Learning Framework Based on Local Climate Zone Classification for Predicting Urban Energy Consumption and Solar Potential**  
*Linzhi Zhao, Xiaodong Xu, Abudurehman Abuduwayti, Yanyi Zhu*

**Knowledge-Driven Urban Cognition Reconfiguration: A Knowledge Graph-Based Experiment on Information Integration and Decision-Making in Zurich Old Town**  
*Xiao Wang, Jinze Li, Chenyi Cai, Xuerong Zhu, Peng Tang*

**Exploring AI Applications for Conservation of Socialist China Heritage: A Case Study of the Living Area of Jilin Diesel Engine Factory**  
*Xin Wang*

**AI based evaluation of the Viennese Gründerzeit facades for their complete inventorying, understanding and preserving.**  
*Silvio Heinze, Sandra Guinand, Robert Musil*

**Research on the Application of the Establishment of a Knowledge Model Based on Historical Maps and Multi - source Information Data in the Urban Renewal Design of Historic Areas —— A Case Study of the Sima Street Area in Jiangyin**  
*Yvbei Lyu, Hao Deng*

1:00-2:00 pm      Lunch break  
Sala delle Colonne

2:00 - 4:00 pm      **Parallel Session E**

**MAP E.1**  
Chaired by Muzaffer Ali Arat  
Room 3V

**Towards an Understanding of the Morphology of Cultural Landscape: Between the Methodologies of Urban Planning and Geography**  
*Danielius Jurčiukonis*

**Urban Signals: Mapping Urban Spatio-Temporal Transformations Using Street View Imagery And Computer Vision – A Case Of Karaköy**  
*Yiğit Acar, Elifnaz Kancan, Burcu Şenyapılı Özcan*

**AI-Integrated Pattern Prediction Model: Exploring the Influence of Building Fabric Morphology on Land Use Patterns**  
*Aybüke Balahun Çoban, Eren Efeoğlu, Selen Karadoğan, Ozan Yetkin*

**Comparing morphological, social, and experiential dynamics and values of frontages in Toronto and Amsterdam**  
*Cristopher Daniel, Conrad Kickert*

**Describing Turin's Urban Morphology: A Data-Driven Approach**  
*Sergio Porta, Carolina Rigoni, Ombretta Romice*

**Discovering geomorphological traces in urban morphology using AI technologies: the case of the city of Turin**  
*Nataliya Kudryavtseva, Davide Poggi*

#### **SHP E.2**

**Chaired by Alessandro Cece**  
**Room 4V**

**Shaping Contemporary Townscape: Possibilities and Methods**  
*Lina Panavaitė*

**Knowledge Complexity as a Catalyst for Reshaping Urban Forms: Evidence from Technology Transfer Networks in China**  
*Kang Sun, Yingcheng Li*

**Effect of building configuration of idealized superblock on outdoor wind environment**  
*Yaoxuan Wang, Yacheng Song, Xing Jin, Dongqing Han*

**Situational Transition from Urban Fringe to Archaeological Boundary: Cultural Space Reconstruction between Xi'an Airport Area and Tang Dynasty Imperial Tomb Sites**  
*Qi Wei*

**Generative Artificial Intelligence for Architecture: the role of Knowledge**  
*Marco Maretto, Nicola Marzot, William Bozzola, Luigi Palumbo, Sandra Mikolajewska, David Viana*

**Behaviour-oriented Urban Spatial Form Optimization Driven by Operations Research Algorithms: A Case Study of a Mixed-Use Residential Community in Nanjing**  
*Wei Feng, Hao Ma, Biao Li, Peng Tang*

#### **ENV E.3**

**Chaired by Mirko Guaralda**

## Room 5V

### Harmonizing Spontaneity and Codification: An AI-Augmented Morphological Consciousness Model for Post-Industrial Land Transitions

*Sheng Bin Jiang*

### AI and morphological research of Italian School in the paradigm of the world of Tech

*Matteo Ieva*

### Urban vs. Rural climates and their impacts on the urban building design energy assessment

*Giacomo Chiesa, Ali Jahani Rahaei*

### ATLAS - A Digital Archive for the Future of Urban Morphology

*Giancarlo Cataldi, Gian Mario Aspesi, Giulia Cataldi, Massimo Gasperini, Patrizia Tamburini*

### Mapping the Future: AI-Driven Insights into Colonial Fabrics, Urban Transformation, and Demographic Dynamics

*Imane Samghour, Lamiae Ainine*

### Sitte Traces – the international reception and influence of Camillo Sitte

*Stefan Kubin, Angelika Psenner*

## MAP E.4

Chaired by Roberto Podda

Room 6V

### Building a Global Urban Block Morphology Database: A Multidimensional Indicator and Machine Learning-Based Classification Approach

*Can Zhang, Isabelle Y. S. Chan*

### Urban Form as a Driver for Quantitative Measurements of HOD Performance: a Methodological Innovation via Multi-sourced Urban Data

*Ziyi Chen, Jingmeng Lei, Haochun Tan, Yizhu Wang, Yu Ye, Hua Zhang*

### Porosity in Transition: Identifying Ambiguous Edges through AI-Driven Plot Clustering

*Ezgi Nur Gungor, Azmi Can Ozgen*

### Geographical Urban Morphology in Understanding Children's Walking School Travel Behaviour

*Xiaoyu Yuan*

### From Classical to Contemporary Methods in Suburban Morphology Research: Analyzing the Transition from Conzen's Approach to AI-Enhanced Solutions

*Robert Szmytkie, Piotr Kryczka, Agnieszka Lisowska-Kierepka*

**Collective Housing Typologies in Contemporary Urban Space: Understanding Housing Adaptation in Mexico City's Historic Centre**  
*Daniela Resendiz Garcia*

4:00-4:30 pm      Coffee break  
Sala delle Colonne

4:30 - 6:30 pm      **Parallel Session F**

**MAP F.1**  
Chaired by Martina Crapolicchio  
Room 3V

**The Impact of Urban Form and Land Use on Urban Heat Island Intensity: Evidence from Turkish Cities**  
*Azem Kuru, Mete Korhan Özkök*

**Deciphering Urban 'Cold Spots': A Morphological and Functional Analysis of Underutilized Spaces in Guangzhou, China**  
*Michelle Xiaohong Ling, Jingjing Jia*

**The (Re)Discovery of Streetscape Qualities – historic paradigms, contemporary shortcomings, and future potentials**  
*Susanne Tobisch*

**Machine Learning-Based Recognition and Fractal Analysis of Building Height Composition Patterns in Urban Blocks: A Case Study of Nanjing Old Town**  
*Xinzhe Liu, Dian Shao, Junyan Yang, Chenyang Zhang*

**Decoding Nonlinear Urban Density-Functional Mixity Relationships via Explainable AI: A Case Study of Chengdu, China**  
*Yupeng Liu*

**Morphological Factors Affecting Reconstruction Projects in Historical Centers of Small Italian Towns**  
*Tomoyuki Mashiko*

**SHP F.2**  
Chaired by Tolga Ünlü  
Room 4V

**Designing for Circularity: Exploring Sustainable Solutions for Mid-Rise Multi-Residential Housing**  
*Sevgim Pekdemir*

**Accounting for externalities of urban development project. A prototype to measure and visualize the local and city-wide impacts of urban development.**  
*Meta Berghauser Pont, Chen Feng, Ioanna Stavroulaki, Lars Marcus*



*International Exhibitions and Open Public Spaces: Echoes of the Times or Forerunners?*  
*Javier Monclus*

*Research on Plot-Scale Open Space Morphological Design Strategies Based on Block-Scale Wind Environment Performance Optimization in Historic Areas: A Case Study of the Northern Area of Jinhua Ancient City, Zhejiang Province*  
*Yang Yu, Hua Liu, Weiren Zhuang*

*The urban transformation of Cairo as a project of projects*  
*Manlio Michieletto*

*The actual changes in the location and distribution patterns of urban agricultural land*  
*Komatsu Mei*

**ENV F.3**  
Chaired by Ilaria Geddes  
Room 5V

*Human dimension of urban form: creativity and social innovation in community self-organization*  
*André Araújo Almeida, Angelica Tanus Benatti Alvim, Jörg Schröder*

*Research on the Relationship Between Urban Form and Residential Building Carbon Emissions at the Neighborhood Scale and Regeneration Strategies: A Case Study of Nanjing, China*  
*Jiwen Han, Li Bao*

*Exploring Urban Morphology with AI: ChatGPT as a Tool for Analyzing the Urban Forms*  
*Damlanur Ilipinar, Cansu Türker*

*Urban Morphology, Microclimate, and Energy: The Potential of In-Between Spaces in the Context of Climate Change*  
*Maurizio Sebastiano Serra*

*AI-augmented Space Syntax: A Theoretical Approach to Adaptive Urban Form through Function-oriented Spatial Accessibility*  
*Mihyun Kim, Taimaz Larimian*

*Genotypical study of urban form using analytical AI tools*  
*Sepher Zhand, Kayvan Karimi*

**MAP F.4**  
Chaired by Ana Ricchiardi  
Room 6V

Mapping main streets. Combining configurational street classification and streetscape morphometrics.

*Alessandro Araldi, Flavia Lopes, Ioanna Stavroulaki, Giovanni Fusco, Meta Berghauser Pont*

Nicosia Fringe Belt Formation and Transformation: An AI-Driven Approach to Urban Morphology

*Nevter Zafer Comert*

The configuration of urban form: Morphogenetic and Configurational Analysis for Identifying 15-Minutes City Opportunities for Densification

*Federica Deri, Chiara anselmi, Federico Mara*

Rule-Based Synthetic Urban Morphology Dataset for Historical and Predictive Modeling of Xiaoxihu, Nanjing

*Xiao Xiao*

Describing Swedish and Danish character areas: Typo-morphology for morphologically informed urban design

*Sofie Kirt Strandbygaard, Gunvor Riber Uggerhøj, Todor Stojanovski*

Characterizing the urban landscape of Antequera, Malaga Province through the lens of M.R.G. Conzen

*Muzaffer Ali Arat, Vitor Oliveira*

6:30-7:30 pm

**ISUF Regional Network Meeting**

## Thursday | June 19<sup>th</sup>

8:00 am Registrations

8:30 - 10:30 am **Parallel Session G**

### MAP G.1

Chaired by Didem Turk Grigoletto  
Room 3V

**AI-Powered Perceptual Mapping: Assessing Urban Form through Street-View Imagery**

*Nicolas Palominos*

**Mapping Urban Transitions: An AI-Driven Approach to Fine-Scale Urban Morphology**

*Juan Uriel Legaria Peña, Roberto Ponce Lopez*

**Research on the correlation between small-scale public space morphology and multidimensional crowd vitality - based on video data and deep learning**

*Yuting Chen, Di Guo*

**Artificial intelligence and environmental mapping tools- political and environmental control**

*Alice Monacelli*

**Clustered or Dispersed? A Morphometric Perspective on Tall Buildings Distribution in European Cities**

*Piotr Kryczka*

**Understanding cross-regional patterns of urban form using hierarchical morphotope classification**

*Martin Fleischmann, Krasen Samardzhiev*

### SHP G.2

Chaired by Teresa Marat-Mendes  
Room 4V

**The use of AI in the process of creating (pre-)urban form: a didactic experience**  
*Peter Ribon Monteiro*

**Planning Codes for Conglomerative Urban Tissues: The Role of Generative Design Tools in Combining Types**

*Mazyar Abaee, Nahal Khorrami, Nasibeh Tabrizi, Mohammadmahdi Javadi*

**Method of Constructing Multi-scale Continuous Wind Corridor Networks in Innovation Blocks—A Case Study of the Form Design of the Innovation Block in a Northern City of China**

*Hua Liu, Yang Yu, Weiren Zhuang*

*The role of network centrality shifts for local morphological transformations. A case study of 10 linear settlements in the metropolitan area of Vienna.*

*Ioanna Stavroulaki, Daniel Löschenbrand, Tanja Hellsten Romeborn, Susanne Theresa, Theresa Tobisch, Angelika Psenner*

*The green city, 15-minute city and food systems: the architectural morphology of urban agriculture and food flows in cities*

*Irena Atkovska, Todor Stojanovski, Anders Wästfelt, Teresa Marat-Mendes, Pierre Gauthier, Michael Martin, Jenni Vilhelmiina Partanen*

*Research on Cross scale Morphological Analysis and Design Strategies of the West Five-mile Riverside Area of the " Ten-mile Qinhuai River " in the Old City of Nanjing*

*Hua Liu, Dongqing Han*

#### MAP G.3

Chaired by Li Bao

Room 5V

*Towards the classification of superblock typologies. Characterization of Abu Dhabi's urban form using Principal Component Analysis.*

*Martin Scoppa, Amnah Gargoum*

*The Effect of Intercity Arterials on Urban Form: A Comparative Study of Adriatic and Ionian Coastal Cities*

*Ermal Shpuza*

*Morphology and Perception: Research on Staircase Spatial Perception in Mountainous City Parks Based on Real-Scene EEG Monitoring*

*Xinyu Yang, Cong Gong, Changjuan Hu*

*Pre-disaster Recovery Machizukuri Based on Escape Mapping in Potential Tsunami Affected Areas. ~ Harms and Benefits of Simulation Technology ~*

*Kosuke Masuo*

*Types, Motivations, and Behavioral Processes of Agents in the Morphological Evolution of Urban Historic Industrial Lots: the Case of Julong Bay*

*Area, Guangzhou*

*Chai Xuerui, Tian Yinsheng*

*Digital technology associated with analogical means for the study of urban form in small cities*

*Jorge Correia, Renata Mattos Simões, Rafael Pestana Fabres, Eneide Maria Souza Mendonça, Leandro Teixeira Grandi*

**MAP G.4**  
Chaired by Rossella Gugliotta  
Room 6V

*Modeling the Historical Stratification of Towns: Leveraging Urban Morphology, Deep Learning, and Artificial Intelligence*

*Eva Lovra, Elif Sarihan*

*Research on Block Morphology Type Analysis Method Based on Graph Network Structure: Taking Typical Innovation Spaces in Nanjing, China as an Example*  
*Yi Chen Chen, Huaxing Sheng Sheng*

*Engaging Architecture: Bridging Spatial Computing and Emotion-AI in Sites of Cultural Heritage*

*Javier Gonzalez Sanchez, Jennifer Shields*

*Impact of regulations on the shaping of urban landscape*

*Tülin Selvi Ünlü, Tolga Ünlü*

*Developing an Urban Form-led Walkability Index: Integrating Morphological, Functional, and Environmental Metrics*

*Alessandro Venerandi, Hal Mellen, Ombretta Romice, Sergio Porta, Barbara Piga, Marco Biffi, Gabriele Stancato, Nicola Rainisio, Mariana Pizzo Diniz, Silvia Spolaor, Tolga Ünlü, Miguel Serra*

*Mapping urban trees: systematization and democratization of data in Campos dos Goytacazes/RJ, Brazil.*

*Danielly Aliprandi Cozer, Fagner Das Neves de Oliveira, Daniela Bogado Bastos de Oliveira, Layla Soares, Rebecca Godoi, Marcelly Adão de Oliveira Pereira*

10:30-11:00 am      Coffee break  
Sala delle Colonne

11:00 - 1:00 pm      **Parallel Session H**

**MAP H.1**  
Chaired by Li Bao  
Room 3V

*Students mobility and its implications for university design*

*Malgorzata Hanzl, Agnieszka Pikala, Maria Stasiak*

*The space schema and representation of ancient Chinese city: iconological analysis of chronicle maps of Huizhou, Anhui*  
*Hong WU*

*Restorative Benefit Evaluation of University Campus Outdoor Public Space Based on Multi-source Data and Deep Learning*

*Yi Chen, Deqing Lin, Tingjin Wu, Jinxiu Wu*

***Morphological Similarity Analysis of Villages Based on Deep Learning and Historical Research***

*Xinyu Wu, Yan Zhou, Guya Sun, Siyi Wang, Hong Jiang*

***GeoAI for Mapping Climate-Responsive Traditional Courtyard Morphology Across China: A Deep Learning and Remote Sensing Approach***

*Jinxu Duan, Poyu Yang*

**MAP H.2**

**Chaired by Santiago Gomes**

**Room 4V**

**Mapping the functional evolution of Ulaanbaatar's historical Gandan neighbourhood through analysis of street-level views with AI tools**

*Munkh-Erdene Togtokhbayar, Amgalan Sukhbaatar*

**Late-capitalist urban morphological types in the global South: the case Marginal Pinheiros in São Paulo, Brazil**

*Alexandre Hepner*

**Developing a virtual - spatial - expert focus group for exploring urban form types and their role in spatial planning**

*Yannis Paraskevopoulos, Efthimios Bakogiannis*

**Transforming Urban Planning with Digital Twins: A Case Study of Smart Design in El Palmar, Manta**

*Gabriel Gregorio Salvatierra Tumbaco, Tatiana Cedeño, Kevin Desiderio, Genesis Cevallos*

**From Matrix to Modernity: AI in the Epistemology of Urban Form**

*Paolo Carlotti*

**Typo-morphology as a Futuristic Methodological Framework to evaluate Urban Sustainability**

*Anirban Adhya*

**MAP H.3**

**Chaired by Martin Fleischmann**

**Room 5V**

**Thermal Environment Effects of Urban Morphology: An Integrated "Simulation-Interpretation-Design" Framework Based on Explainable AI Tools**

*Jiawei Leng, Zhao Zhou*

**Research on the Multivariable Analysis Pattern and Development Trend of Urban Green Space Morphological Evolution**

*Haini Chen, Haonan Ding, Zhe Li, Liya Wang*

Forms of urban densification: From spatial patterns to actor involvement in England, France and Germany

*Denise Ehrhardt, Vera Götze, Mathias Jehling*

Street frontage properties: combining surface-based and perceptual-based methods

*Julia Micklewright, Alessandro Araldi, Alice Vialard*

A method for identifying harmonious streetscapes of a pedestrian's perspective

*Hiroyuki Usui*

AI Powered Urban Morphology through Deep Learning and Earth Observation for Scalable Urban Form Analysis

*Didem Turk Grigoletto*

#### MAP H.4

Chaired by Nadia Charalambous  
Room 6V

*Curvilinear morphological itineraries. An alternative taxonomy of Rome's urban form*

*Cristian Sammarco*

*Mapping the Evolving Urban Scene: A Case Study of Shanghai's Anfu Road through Scene Theory and Digital Analysis*

*Kun Liu, Yitong Lin, Jianjia Wang, Qin Wei, Tianfu Zhou*

*From Morphological Analysis to AI: Future Prospects in Central European Historic Buildings' Typology*

*Filip Suchoń, Kinga Racón-Leja, Ernestyna Szpakowska-Loranc, Krzysztof Barnaś, Krzysztof Klus*

*Enhancing Research Capacity in Urban Form. The Strategic Evolution of the SURF Lab (UCY)*

*Martina Crapolicchio, Marco Trisciuglio*

*A review on the influence of morphological parameters on the interaction between humans and ecosystems in urban green spaces*

*Ilse Ellenbroek, Meta Berghauser Pont, Ioanna Stavroulaki*

*Creating Meaning from Building Pre-Blocks to Urban Project*

*Caspar Kleiner, Mariana Pizzo Diniz, Mathias Jehling*

1:00-2:00 am

Lunch break  
Sala delle Colonne

2:00 - 4:00 pm

Parallel Session I

### MAP I.1

Chaired by Alessandro Venerandi  
Room 3V

**Towards an Integrated Framework combining Remote Sensing and Urban Morphometrics to improve Urban Fabric Analysis**

*Hugo Colicchia, Benjamin Wayens, Eleonore Wolff*

**UPMsmart – qualitative street space analysis on large-scale**

*Daniel Loeschenbrand, Susanne Tobisch, Angelika Psenner*

**The Multifaceted Relationship Between Food Systems, Urban Morphology, and Architectural Layout: A Case Study of 11 Municipalities in Italy**

*Yuexin Wang, Yu Zhang, Ye Tang*

**Assessing Form Patterns for the Suburban 15-Minute City: The Case of Drap (France)**

*Giovanni Fusco, Gregoire Picard*

**On New York's Ground: Dense, Diverse and Sustainable**

*Vitor Oliveira*

**Mapping Peri-urban Landscapes: open-source web for knowledge dissemination**

*Sergio Garcia-Perez*

### MAP I.2

Chaired by Ana Ricchiardi  
Room 4V

**Current Status and Future Prospects of Urban Cemeteries Based on Urban Morphology and Spatial Vitality Measurement: A Case Study in the Main Urban Area of Nanjing**

*Hongbu Wang, Hao Deng*

**Introducing SOAR: A Scalable, Open, Automated, and Reproducible urban data model for the EU**

*Gareth Simons*

**Nolli-Type Map of the Central Zone of New Belgrade: Testing AI-Based Chatbot in Map Creation**

*Nikola Mitrovic, Djordje Mitrovic*

**Characterization of historical urban forms with digital processing of RPAS LIDAR point cloud**

*Milton Montejano-Castillo, Mildred Moreno-Villanueva*

**Urban morphology on the cube**

*József Attila Jankó, György Szabó*



Evaluating morphological methods for climate-based classification of urban heat

*Caroline Walder, Daniela Maiullari*

### MAP I.3

Chaired by Muzaffer Ali Arat  
Room 5V

Identification of Plot Patterns and Strategies for their Morphological Control in the Historic Urban Area of Chongqing

*Peng Liu*

Data Skylines – Tools, Data and Analytic Applications to Study Urban for Vertical Cities

*Gerhard Bruyns, Jiaxiu Cai, Darren Nel*

Quantitative Analysis of Street Spatial Features of Traditional Chaoshan Villages Based on Spatial Texture and Street View Images: A Case Study of Qianmei Village, Guangdong

*Xiaoyu Lin, Yuqian Mao, Gang Yu*

Mapping Governmental Land for Strategic Urban Development: A Data-Driven Approach

*Nadia Charalambous, Iason Giraud, Marina Pasia, Michalis Psaras*

Toward a Parametric Urbanism

*Luca D'Acci, Stephen Marshall*

Towards Fine-grained Mapping of Urban Historic Fabric through Semantic Learning on Street View Images

*Yujiao Wang, Peng Tang*

### MAP I.4

Chaired by Paolo Carlotti  
Room 6V

Historical Plots as Relics of Medieval Town Planning in Mecklenburg

*Philip Hansen*

A Typological Analysis on the Functional mix of Superblocks Based on MXI Measurement: The Case of Hexi New City, Nanjing

*Zheng Wang, Yiwen Huang*

Urban fringe belts: an Amazonian perspective

*Thales Barroso-Miranda, Felipe Costa de Almeida, Ana Claudia Duarte Cardoso, José Julio Ferreira Lima*

Cartographic analysis of peri-urbanization processes in Zaragoza and its metropolitan region

*Cecilia Sanz-Garcia, Javier Monclús-Fraga, Carmen Diez-Medina*

From Iconography to Typology: A Historical Study of the Morphology of Traditional Street buildings and space in Suzhou

*Wantian Yang*

Exploring Morphological Restoration Strategies for China's Historical and Cultural Cities

*Kun Li, Shanshan Wu*

4:00-4:30 pm      Coffee break  
Sala delle Colonne

4:30-5:30 pm      ***Urban Morphology & common engagement***

5:30-8:0 pm      Free Morphologic Walking Tour in Torino

## Friday | June 20<sup>th</sup>

08:30-9:30 am	<b>KEYNOTE SPEECH #3 Tolga Ünlü</b> <i>The Conzenian approach in the Age of Artificial Intelligence</i> Salone d'Onore
09:30-10:30 am	<b>KEYNOTE SPEECH #4 Lars Marcus</b> <i>Contributions to a Theory of Land</i> Salone d'Onore
10:30-11:00 am	Coffee break Sala delle Colonne
11:00-12:00 am	Land & AI @ Politecnico di Torino Dive Deep coordinated by Fabrizio Lamberti (GRAINS – GReaphics And INtelligent Systems group) and Piero Boccardo (Urban Lab Torino)
12:00-12:30 am	The Jeremy Whitehand Legacy Susan Whitehand interviewed by Nicola Marzot (ISUF Italy)
12:30-1:00 pm	<b>Concluding Session</b> Conclusions by Tolga Ünlü (Secretary General of ISUF, International Seminar on Urban Form)



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