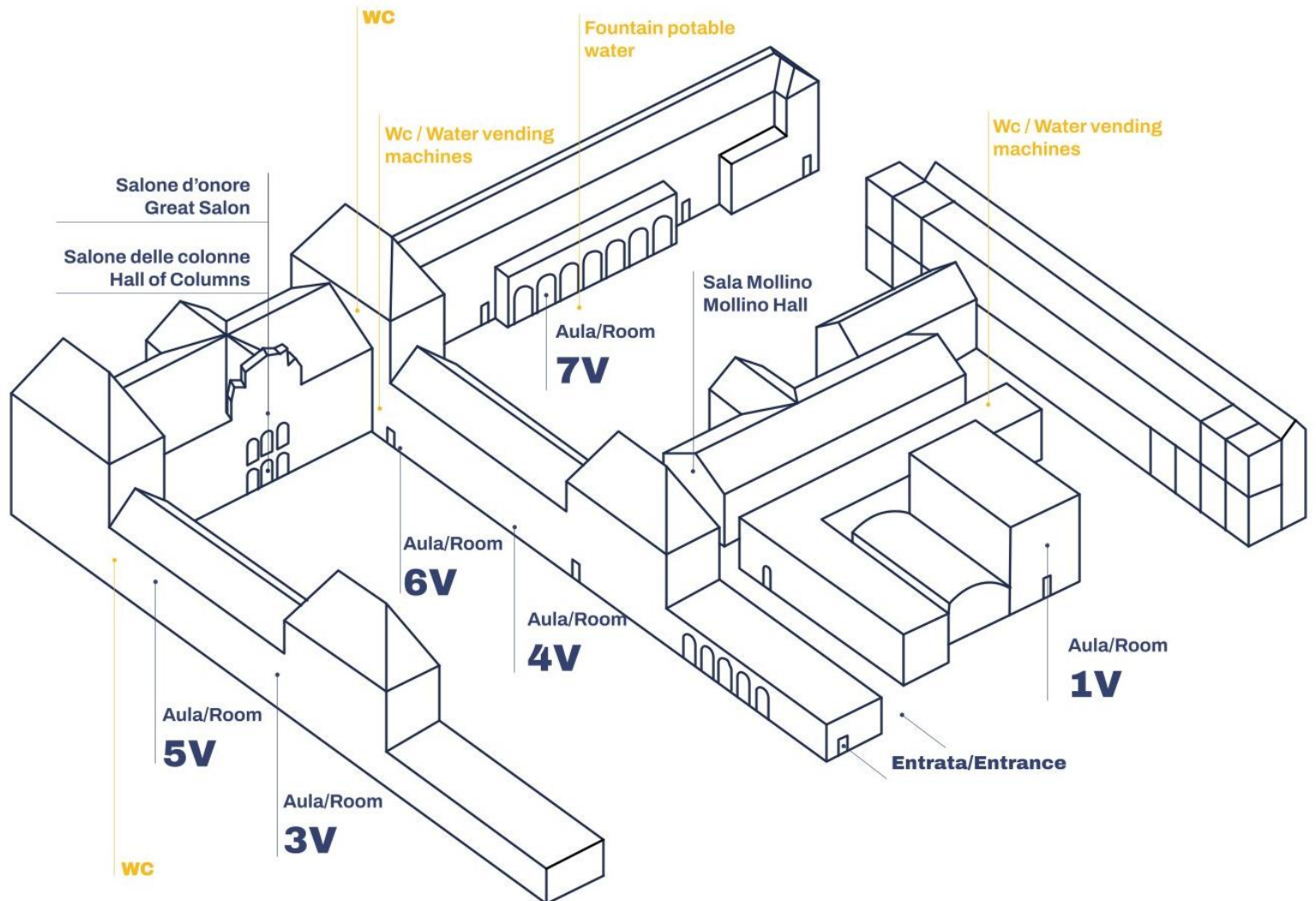


URBAN MORPHOLOGY **IN THE AGE** OF ARTIFICIAL INTELLIGENCE

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

Map | Castello del Valentino



Monday | June 16th

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 17th

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, Arthur Pessanha Falcão

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 18th

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

Venice City Campus: AI-Driven Proactive Design for Future Urban Morphologies
Marco Marino

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, Carmen Diez-Medina

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

Relevance of the Urban Density Concept
Anna Rita Amato, Marta Crognale

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 19th

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 morphotopotype 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
Jinxiu 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
Yuxin 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, Isabel Ezquerra, Raimundo Bambo

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 Díez-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 20th

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|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08:30-9:30 am | KEYNOTE SPEECH #3 Tolga Ünlü <i>The Conzenian approach in the Age of Artificial Intelligence</i> Salone d'Onore |
| 09:30-10:30 am | KEYNOTE SPEECH #4 Lars Marcus <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 – GGraphics 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 | Concluding Session Conclusions by Tolga Ünlü (Secretary General of ISUF, International Seminar on Urban Form) |



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