

XXVIII International Seminar on Urban Form  
ISUF2021: URBAN FORM AND THE SUSTAINABLE AND PROSPEROUS CITIES  
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**How to rediscover the public square in the contemporary city:  
the experience of Lisbon**

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**Abstract**

*During the 20th century and in particular, throughout the post-second world war, Lisbon's public square's design and function have changed as a consequence of the urban expansion and the cars' massification. After the Lisbon Strategic Charter 2010-2024 development, in 2014 the City Council of Lisbon presented the program of interventions in the public space "Uma praça em cada bairro" [A square in each neighborhood]. In this context, it has been proposed the qualification of more than one hundred and fifty public spaces in Lisbon. Through this paper, we aim to understand how this program contributed to rediscover the public square as an urban form and its traditional socioeconomic functions. The impact of the program and its concluded interventions were analyzed through a visual qualitative methodology. The qualitative evaluation of the previous and post-intervention spaces was enabled through the comparison of the Google Street View archives from 2009-2016 and the pictures taken during this research in 2020. By using this methodology this paper assesses the introduction of new urban elements, such as pavements, vegetation, urban furniture, lighting, and signs. This analysis shows the qualitative impact of the program "Uma praça em cada bairro" [A square in every neighborhood] on the qualification and revaluation of the public square as an urban forum in Lisbon. After the interventions the car traffic and parking was reduced about 21% of the total case studies area. Green spaces also increased, as did the areas dedicated to people.*

**Keyword:** public, space, square, Lisbon.

**1. The city at eye level**

In 2014 the Lisbon City Council presented the program "Uma praça em Cada Bairro" ["A square in each neighborhood"], which became an opportunity to rethink and qualify the public space of the Lisbon city. This program is noteworthy for interventions reaching all parishes of Lisbon. These convey new ideas of public space with transformative potential for the neighborhoods or micro-centralities it intended to promote (1). In the sequence of the Lisbon Strategic Charter, approved in 2009, and the Lisbon Local Development Plan, approved in 2012, the program presented in 2014 identified 150 spaces for intervention with 18 projects already implemented. Those projects and their transformational actions trigger these paper structural questions: (i) What are the transformations carried out by the program "A square in each neighborhood"? (ii) How does this program qualify and enhance public spaces?

This paper analyses this program strategy to rediscover the public square in contemporary Lisbon in 3 sections. The first and introductory section reflects on classical approaches of observation of the urban form

and public spaces and presents the methodological aspects of this research based on qualitative analysis, photography, and the Google Street View potential for urban analysis. The second section displays the qualitative transformation results and analyses the case studies after the program's intervention. That analysis focus on two dimensions: pavements and urban furniture. The third section discusses the results and reflects on the implications of the transformative process for the quality of the city.

This paper follows a theoretical framework laid down by different authors: Carmona(2), Cullen(3), Gehl(4), Lynch(5), Merlin and Choay(6), Pereira(7), and Whyte(8). Their perspectives and methodologies contributed to understanding cities and public spaces, namely the square and the street. These methodologies reflect the city and the public space through different lenses: history, function, form, and image. With these authors' work, it is possible to analyze the image of the city as an essential aspect of the citizens' quality of life.

**Table 1. Observation techniques by selected classical authors.**

Author	Observational technique				
	Observation	Drawing	Photography	Video	Inquiry
Cullen	X	X	X		
Gehl	X		X		X
Lynch	X	X			X
Pereira	X				X
Whyte	X		X	X	X

These authors use different methodologies, techniques, and approaches but share the same interest: to observe the city and its public space. Merlin and Choay (5) clarify the notion of public space that we still know today. This concept emerged in 18th-century Europe as being outdoor spaces, places of anonymity, and informal meetings, opposed to the private, intimate spaces, the home. They also clarify, among other concepts, the Urban Design specifying that it must provide the means for public space purposes and accomplishment. So, we consider that the quality of public space depends on the urban design investment at the most varied scales.

From Cullen's work (3), we would like to emphasize how it defines and represents the elements that produce the urban landscape. A city is an object of its inhabitants' perception. Its analysis is a sequential observation of the urban environment and how the different urban elements are combined to organize the urban setting. With Lynch's research (6), we learn to dismember the city by its constituent elements: ways, limits,

neighborhoods, outstanding elements, nodes. Its mental maps and surveys help us to think about the city through looking and structuring visual elements. In relation to that, the case studies analyzed in this paper correspond to urban spaces for social meeting that do not only occur in situations of great road complexity but can also be quality public spaces.

For this study, eight public spaces intervened under the program “A square in each neighborhood” are analyzed, namely: i) Largo da Boa Hora à Ajuda; ii) Largo do Calvário; iii) Largo da Graça; iv) Largo do Leão; v) Largo da Memória; vi) Largo de Santos; vii) Praça Duque de Saldanha; viii) Rossio de Palma.

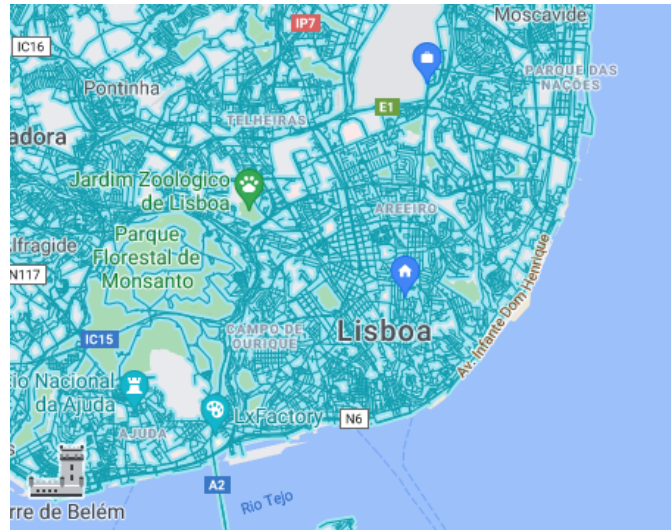
Pereira (7) establishes a methodology for observing and reading the city as a fundamental stage of the urban project. Her method is suitable for a critical analysis of the territory to obtain a diagnosis (problems and possibilities) that serves as the intervention basis. Thus, according to this research, proposals must reflect the understanding of the project area. That is, a broad knowledge of the territory facilitates the design of integrated proposals. In this perspective, we must clarify that analyzing the public spaces intervened by the program “A square in each neighborhood” was essentially carried out by direct observation and using other resources to read the transformation of the case studies.

This research pretends to explore the impact of the program “A square in each neighborhood” in Lisbon public spaces after its creation in 2014 (1). Photographies were a source of information in that process. As stated by Basil (9), “Photography and video should be a critical part of observational research and should be used in a wide range of studies, applied to objective and subjective perspectives and both quantitative and qualitative questions.”.

The livability (and quality) of public spaces can be analyzed by these observational methods, as William H. Whyte did in his research “The social life of small urban spaces” (8). Photographs can also provide “significant content, given the research question” (10), namely when we pretend to analyze the townscape transformation, the public space, and its elements.

Google Street View is available from Google Maps application (<http://maps.google.com>) since 2007 and collects images that “provide panoramic, street-level views of city streets, in which the user can navigate forward or backward along the street, pan 360 degrees, rotate the camera vertically 290 degrees, and zoom in and out.” (12).

Even though it was not created for research purposes, it constitutes a relevant source to “explore world landmarks, see natural wonders, and step inside places such as museums, arenas, restaurants, or small businesses” (11) as well as public spaces. The historic imagery on Street View's archives enables us to observe “how your neighborhood has changed over time.” (11).



**Figure 1.** Street View (blue lines) information availability in Lisbon (partially). (GOOGLE, 2021)

Given the extension of Google Street View imagery, it is possible to answer questions on public space landscape (12) but not without limitations. The paper "Using Google Street View to Audit Neighborhood Environments" (12) highlights three limitations: 1) Public spaces pictured are mostly limited to "automobile-accessible streets"; 2) It is not known the time when the pictures were taken; 3) Pictures are from a driver's perspective and some elements can be hidden by parked cars on a sidewalk, for example.

In this research, we used Google Street View as a source of images before the interventions by the program in Lisbon. All the places selected had historic imagery on Street View, but some of them did not have recent update. So it was decided to take pictures of the public spaces, in November 2020, using similar Street View perspectives.

Those perspectives are at an eye-level which is, according to Jan Gehl in his work "Cities for people" (4), "the most important scale for city planning.". The author recommends that cities should be planned to address human-scale needs or, as the author calls, "universal human activities": walking, standing, sitting, listening, and talking (4).

It is from an eye-level scale that we can perceive the good city quality: "The battle for quality is on the small scale." (4). Picking this perspective, the Street View imagery, even if captured from the top of a car, is a fast and comprehensive way to observe and evaluate urban public spaces.

From 2014 until June 2021, eighteen public spaces/interventions are concluded within the program. Of those, eight public spaces match the form and definition of public square: "public place composed by the empty space and its surrounding buildings" (5). Public spaces being free, accessible, and open include other types of spaces (2). Among them, public squares, in opposition to streets, divide and mark the urban grid, in an allusion to Kevyn Lynch's work on "The Image of the City" (6). With these methodological notes, the



evaluation of the transformation of those public spaces, after the program “A square in each neighborhood”, will be made with the observation and qualitative analysis of photographs before and after the intervention.

## 2. Transformation of Lisbon public squares

The results of the transformation after the intervention of the “A square in each neighborhood” program for the eight case studies are presented in Table 1. The use of the same perspective between the Street View images from 2014 and the 2020 photographs (before and after) stresses the change that these public squares went through.

A satellite imagery analysis that measured the distribution of functional areas in the case studies also stresses the transformation of these public squares (13). Before the interventions, 56% of the total case studies’ area was dedicated to car traffic and parking. The program’s strategy did not eliminate that function from the public space but reduced it to about 21% of the total case studies area (13). That reduction of cars’ area contributed to increasing the people’s area and the green spaces (13).






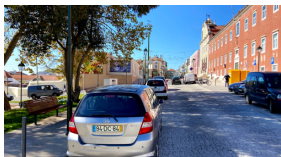
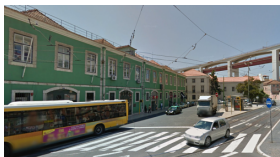





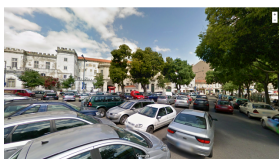













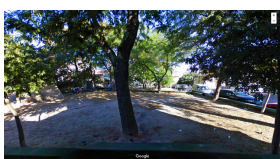

The public space’s transformation highlights the program’s progress, reducing the area dedicated to tires/cars, in allusion to Cullen’s “Townscape” (3) idea. This change contributes to the “Cities for people” approach or, as Jan Gehl defends a basic human right: good city quality (4). Closing car circulation and parking areas contribute to open new perspectives and uses for the public space. In the case of these public squares, it is a stake their social, economic, and environmental functions more than answering the private transport demands.



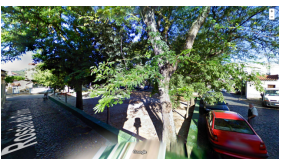
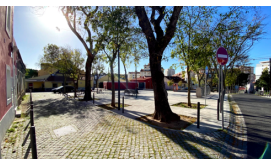
**Table 2. Functional areas’ variation between 2014 and 2020 (13).**

Case study	Functional areas (% variation (2014-2020))		
	People	Cars	Green
Largo da Boa-Hora à Ajuda	5	-10	5
Largo do Calvário	27	-27	0
Largo da Graça	16	-16	0
Largo do Leão	36	-36	0
Largo da Memória	25	-24	6
Largo de Santos	15	-15	0
Praça Duque de Saldanha	12	-39	17

Rossio de Palma	13	-13	0
Average	17	-20	5

Given our approach that pretends to analyze the "empty area" corresponding to the public square, we focus our discussion on two classes of urban elements: pavements and urban furniture. Within the second class, we included benches, tables, chairs, trash cans, lighting, signs, kiosks. Both of these two elements are associated with public space design and are interdependent. Furthermore, these elements can acknowledge a public's demand or need, but their installation can also introduce new habits (11).

Before (2014)	After (2020)	Before (2014)	After (2020)
Largo da Boa-Hora à Ajuda		Largo do Calvário	
			
			
Largo da Graça		Largo do Leão	
			
			
Largo da Memória		Largo de Santos	
			
			
Praça Duque de Saldanha		Rossio de Palma	
			

			
<b>Before (2014)</b>	<b>After (2020)</b>	<b>Before (2014)</b>	<b>After (2020)</b>

**Table 3. Case studies: 2014 vs. 2021.**

In comparison with the two moments that the photographs represent, the pavement's transformation is the most indisputable. The approach - to enlarge the peoples' area - adopted different types of pavements. From the traditional "calçada Portuguesa" like in Largo da Graça, Largo de Santos, and, particularly, Praça Duque de Saldanha for its rich patterns, to more contemporary approaches like in Largo do Leão or Rossio de Palma. Even with differences, there was a pavements enrichment and differentiation with these interventions.

The pavements substitution support the program's strategy by answering the question: What this area is meant for? Also if we consider the types of pavements used, more comfortable for walking, but also more diverse and noble, they denote the requalification of these public squares.

Over this floor, different elements were placed. Because this program (re)creates public squares, considering its social, cultural, and economic dimensions, benches, tables, lighting. But, remembering the title of this paper, old elements like fountains, bandstands, and kiosks helped to restore these public squares. We can highlight three particular examples: 1) The old fountain in Largo do Calvário that was taken to another location to facilitate the circulation in the area, was, with this intervention, relocated in the Largo; 2) A new bandstand was placed in Largo da Graça; 3) The kiosks that almost disappeared from the Lisbon public spaces in the 1990s, were included in different public squares.

### **3. The public square in the contemporary Lisbon**

The program "A square in each neighborhood" was presented by the Lisbon City Council in 2014 and, 6 years later, 18 interventions are concluded, 5 is ongoing, and others were transferred to another public program "A Rua é Sua" ["The street is yours"]. The name of this program inspires many questions for the urban morphology study. Questions like "What is a public square?" Or "What is a neighborhood?". Picking the example of this paper's case studies we can argue that a public square in Lisbon had multiple forms, images, and designations. Somehow this program's interventions uniforms the public space's images and enhances its social and cultural value. The neighborhood question wasn't addressed in this paper but is interesting for future research.



About the methodology, besides the fact that Google Street View presents some problems like the case that pictures are from a car perspective serves to understand where the car could go before and can't go anymore and express the transformation of the public squares. Also, the photographs served the purpose of analyzing the physical transformation of the public squares.

The rediscovery of the public square by the municipality contradicts the previous car-centric planning period. This program promotes the social, economic, cultural, and environmental functions of the public square against the "Invaded city" scenario where public squares are dominated by car traffic and parking demands. So, to rediscover the public square in contemporary Lisbon is to address its original multifunctionality. The transformation of these public squares have three dimensions in common: reinforcement of these spaces as social gathering places, the improvement of active mobility, and the increase of areas dedicated to consumption.

This program, and the interventions, follow the idea of city (and public space) humanization. Even though it happens with decades of delay if we compare it to some other international experiences, like Barcelona in the '80s, the program follows much of the "Cities for people" concept and principles, more visible in the work of Jan Gehl. The public squares were transformed to address that concept, turning former car parking and car traffic areas into public squares. The program pretends to create centralities and for that, it transforms the Lisbon public space in order to address the "city of neighborhoods" strategy. The transformation of these places is the rediscovery of its previous-to-car-invasion phase or, in other words, the city reconquer of in a reference to the work of Jan Gehl. The transformation and adaptation of these old public squares through times and urban strategies is an example of its strength and durability through time.

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## Foreword

Dear Authors, esteemed Readers,

It is with deep satisfaction that we write this Foreword to the Annual Proceedings of the XXVIII International Seminar on Urban Form held virtually in Glasgow, United Kingdom, between June 29th and July 3rd 2021.

When, at the closing of ISUF2019, the Urban Design Studies Unit at the University of Strathclyde in Glasgow (UK) was announced as the host of the XXVIII International Seminar on Urban Form, the world was indeed very different from what, in just few months, we all came to know, and in ways which, at the time, we could not possibly imagine.

Due to the protracted impact of the Covid-19 pandemic and related restrictions to travel and in-person gathering, we found ourselves to forfeit our plan to host the conference in our beautiful and welcoming Glasgow and, very much like our colleagues in Salt Lake City, to deliver the event as fully online instead. We were truly sorry not to be able share a dram of Single Malt Scotch Whisky, have you taste Scottish haggis neeps and tatties, or take you for a spin at an evening Ceilidh in our Dear Green Place. In addition to this, just few days before the opening of ISUF2021, we were shocked and saddened by the unexpected loss of Emeritus Professor Jeremy Whitehand, founding father of ISUF, leading scholar, inspiring educator, and dear friend to many.

But despite the odds being stuck against us, and while our community is still mourning this great loss, we believe we achieved the feat of delivering a thought-provoking and engaging event, continuing the long and prestigious tradition of the International Seminar on Urban Form, while also doing our best to remember and honour Professor Whitehand as he deserved.

A difficult goal, this one, that we could achieve only thanks to the valuable experience of our colleagues in Salt Lake City, the involvement of a formidable team of colleagues and students who volunteered their time to help through all the phases of this complex event and the guidance of the ISUF Council and, to Jeremy himself who, with his meticulous and impeccable planning, granted all of us a once in a lifetime opportunity to have him at ISUF2021 after all and in many different forms, through the voices of his fellow scholars and, quite extraordinarily, through his own recorded voice.

We were able to reach a wide audience of over 370 delegates presenting and attending from some 52 countries around the world, allowing us to bring urban morphology and its values to new colleagues and friends, as well as to audiences that would not have been able to join us in Glasgow, or that would normally not consider attending a conference. We held a total of 95 sessions - including keynotes, round tables, opening and closing sessions - each moderated by a chair and supported by a host, for over 230 hours of live content. All the sessions were also recorded and made available to conference delegates for a period of 60 days after the conference, allowing people attending from different time-zones to listen to each and every one of them at their own pace. Surely, we missed informal gatherings, tours, meals, and parties but we did our best to give all delegates the best of the Scottish hospitality, through virtual walking tours prepared and delivered by current and former students of the Department of Architecture at the University of Strathclyde and lectures delivered by representatives of the Glasgow City Heritage Trust.

And now, after little over six months from the end of ISUF2021, we are finally able to release to the public the Annual Conference Proceedings of the XXVIII International Seminar on Urban Form: "Urban Form and The Sustainable and Prosperous City" a work curated by Dr Alessandra Feliciotti and Dr Martin Fleischmann. The contributions collated in this edited book illustrate the great variety of research streams investigated within ISUF and represent the heterogeneous geographical distribution of contributions, both telling aspects of this florid and growing interdisciplinary field, characterised by deep solid roots as well as vigorous far-reaching branches.

We believe these Proceedings will provide urban form researchers and practitioners of the world with an excellent reference book on the latest advances in the broad area of urban morphology, stimulate new connections and research partnerships, and be an impetus for further research.

We thank all authors and participants for their contributions.

Dr Alessandra Feliciotti

Conference Organiser of ISUF2021

Urban Design Studies Unit (UDSU)

Department of Architecture

University of Strathclyde

Dr Martin Fleischmann

Geographic Data Science Lab

Department of Geography and Planning

University of Liverpool

## Preface by ISUF2021 chair

The 28th ISUF Conference was organised by the Urban design Studies Unit at the Department of Architecture of the University of Strathclyde in Glasgow, from the 29 of June to the 3rd of July 2021. The weather was excellent in Glasgow in those days, with a daytime high of around 20 degrees Celsius and no rain throughout. Too bad we could not enjoy it, for all the good reasons that travelling had been a question mark all year round and despite all our commitment we just could not take any other decision than going fully online. Which we did, and it was a dizzy jump into the unknown for us all. Things got sorted out, eventually, and in style, thanks to Alessandra and Martin and all our incredible folks here at UDSU, the Department of Architecture and the University at large, ISUF's support and the enthusiastic contributions of splendid guests who committed themselves to enrich the environment of the conference – though virtually – with invaluable and unreplaceable insights of the real place.

We decided to focus on “Urban Form and the Sustainable Prosperous City”. The more we study cities, the more we realise that their form is never neutral. On the contrary, space is active: how it interacts with social, economic, environmental and economic systems, is central to their success. On urban form also depends cities' capacity to be and remain successful and engaging in time. Form is central across all scales of urban systems and we are at a stage in which our capacity to study social, economic and environmental systems can be related to the analysis of urban form like never before. Furthermore, new technologies, as well as new interpretative frameworks that put time and resilience at the heart of cities' life, have grown in clarity and capacity over the past years, helping immensely our understandings of these complexities.

Theories, methods and practices in the study of urban form were explored in the conference, with two special focuses proposed: “The resilient city: ecological perspectives in Urban Morphology” and “Urban Morphology for SDG 11”. Sustainability and resilience are terms often used interchangeably, while they can be regarded as complementary in capturing both normative and descriptive aspects of change. As associated to urban form, these terms are still open avenues of research as well as promising areas of growth in the ability of urban morphology to further inform urban policy and practice.

Urban morphology is an inherently multi-disciplinary field of research, and each of its many convergent strands of knowledge brings its own set of tools and practices. To the foundational backbone of the discipline, still solidly developing around the Conzenian and Muratorian historico-geographical and morpho-typological living traditions, as well as to the more recent space-syntax quantitative-configurational approach, new impulses have been shaping up in the last few years that have conspicuously marked their presence in this 28th edition of the ISUF conference: these are quantitative approaches building on geographic data science, which rely on advanced techniques of data processing to push the boundaries of large-scale analysis to unprecedented levels, and – even more importantly – without compromising the richness of information. Which is fundamental: urban morphology's core-scale, that of the building/plot, street and neighbourhood, requires information at that scale. That is why other quantitative methods that look at the form of the city as a whole, or beyond to the metropolitan or regional forms of urbanisation, have always struggled to fit in, and contribute to, the development of urban morphology. The unprecedented flood of papers in this area of studies characterized the event. They also seemed to seamlessly and even delicately find their own place and meaning in the rich flow of the urban morphology discourse, building on – and making value of – its quantitative side. In fact, “metrology” studies of urban form have always been part of the discipline since its very foundations in the 1960s. This was also the focus of Jeremy's own contribution to the round table at the conference, entitled “Urban Morphometrics in Urban Morphology: Disciplinary Roots and New Perspectives”, where he explored these roots drawing them back to the inter-war period and Herbert Louis' precursory studies at the Geographical Institute in Berlin. A young geography student at that time in Berlin, MRG Conzen was there in attendance before leaving to Britain in 1933. This red thread of urban morphology metrology studies is now quite clearly evolving into novel “morphometric”

methods of reading and understanding urban form, under the impetus of new technologies, processes and large-scale, fine-grained geo-data.

Jeremy would have liked to bring this point of view in person to the round table, with his usual crystalline open mindedness and genuine generosity. We'll miss him dearly.

Prof Sergio Porta

Chair of ISUF2021

Urban Design Studies Unit (UDSU)

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## Preface by ISUF Presidents

Over the last three decades, since ISUF's first meeting in Lausanne in 1994, our knowledge about the physical form of cities has substantially increased. Today, we know more about the different elements of urban form, how these are combined generating different patterns, and how these are shaped by different agents and processes over time. We also have a better understanding of urban form's influence on the social, economic, and environmental dimensions of our cities. Multiple concepts and methods as developed by founding scholars such as M. R. G. Conzen, Jeremy Whitehand, Saverio Muratori and Gianfranco Caniggia have proven to be quite effective in describing and explaining urban form, resulting in their widespread adaptation by urban morphologists today. Examples of these foundational tools for urban studies include town-plan analysis, fringe belts, morphological regions, typological processes, basic and special buildings, poles and nodes, to name just a few. Findings surrounding applications of morphological existing methods coupled with new tools for urban analysis continue to evolve further enriching our interpretations of urban environments. We realize how street systems can influence movement, social interaction, and the location of economic activities. We use new geometries and new mathematical models where agents have a key role and where the different elements of the urban landscape can be transformed into cells, enabling the simulation of alternative scenarios of development.

While the early years of an organization are challenging by nature, for ISUF the last five years brought unprecedented challenges. The organization of our annual conferences was first faced with significant political barriers in a world with so many authoritarian regimes. It is with great sadness and concern that we see Ukraine being invaded by Russian forces at the time of writing this Preface. On the other hand, since early 2020 the Covid-19 pandemic has completely changed our lives. And yet, between 2018 and 2020, Irina Kukina, Nadia Charalambous and Brenda Case Scheer have successfully overcome these tremendous challenges, offering us three enlightening conferences in Krasnoyarsk, Nicosia, and Salt Lake City (online conference). As the pandemic has continued to inhibit in person gatherings and international travel, the organizers of the Glasgow conference have exhibited resilience by offering ISUF's second fully online conference.

One day after the 2021 meeting of the ISUF Council, and two days before the official opening of the Glasgow conference, we were shocked to learn of Jeremy Whitehand's sudden passing. Until the last weeks before the conference, Jeremy was working with us on a Task Force on Teaching Urban Morphology, on two special sessions (on the relation between research and practice, and on quantification in urban morphology) and on a keynote speech for this conference entitled 'The nature of urban morphology' (Whitehand, 2021). Jeremy was central in the creation of ISUF in the mid-1990s, and he has always been at the centre of our organization over the last three decades. He organized two conferences – the first open event in Birmingham, in 1997, and the Newcastle / Glasgow conference, in 2004, together with Michael Barke. For over almost 25 years he has edited with singular rigor the journal 'Urban Morphology'. Jeremy's legacy (see Oliveira, 2019) will always be part of our organization and of our morphological research.

Two generations of notable and committed researchers based at the University of Strathclyde collaborated over the past two years to organize ISUF 2021. They include Sergio Porta, Alessandra Feliciotti, Ombretta Romice and Martin Fleischmann. This book of proceedings, as the conference itself, is framed by the on-going debate about the role of urban form in creating sustainable and prosperous cities. Sergio and his colleagues propose a fourfold structure for debate including four main themes that are fundamental for ISUF and for urban morphology as a field of knowledge. Theory and method are the first and second of this set. Urban morphologists should be able to establish an open, but coherent, body of theories and methods for understanding the structure and functioning of cities. In addressing these two challenges, we must find a common ground, allowing each one of us to learn from each other, while maintaining the specificity of his own work. The third theme is practice. We must continue to search for effective ways of moving from morphological research to practice in planning,

urban design, and architecture. In this task it is not enough for urban morphologists to simply assert their relevance and claim that they could play a part, if only they were asked (Barke, 2021). It is not enough to create single events of interaction; we must create effective processes, involving many moments for researchers to understand and engage into real practice, and for practitioners to be exposed to and get involved in research on streets, plots and buildings, and how these change over time. Finally, the Glasgow team proposes a focus on sustainability. Urban morphologists must be able to show the relevance of urban form to several key aspects of our daily life in cities, and in the design of strategies for adaptation and mitigation.

This book of proceedings is built from the participation of over 350 researchers from more than 50 countries, presenting their work in almost 100 sessions – including keynote, round tables, and opening and closing sessions – representing almost 250 hours of live contents. The publication of this book takes place in between the realization of the Glasgow (June/July 2021) and Lodz/Cracow (September 2022) conferences. We owe a debt of gratitude to Sergio, Alessandra, Ombretta and Martin for their remarkable work. The second conference, led by Anna Agata Kantarek and Malgorzata Hanzl, is expected to bring us back the possibility of meeting face-to-face to restore place-based collaboration, presenting our investigation, establishing and reinforcing research networks, and visiting and exploring the physical fabrics of cities – the privileged object of morphological inquiry.

Prof Vitor Oliveira

President of ISUF

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Division of Spatial and Environmental Planning

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Prof Emerita Wendy McClure

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Barke, M. (2021) 'Foreword', in Oliveira, V. (ed.) *Morphological research in planning, urban design and architecture* (Springer, Cham) v-viii.

Oliveira, V. (ed.) (2019) *J.W.R. Whitehand and the historico-geographical approach to urban morphology*, Springer, Cham.

Whitehand, J. W. R. (2021) 'The nature of urban morphology' (prerecorded video), *28<sup>th</sup> International Seminar on Urban Form*, Glasgow, 29 June – 3 July.

## Organization of the Proceedings

The Annual Conference Proceedings of the XXVIII International Seminar on Urban Form: “Urban Form and The Sustainable and Prosperous City” collates 178 papers, and 3 posters and 1 viewpoint. In keeping with the structure implemented during submission, review and presentation of individual contributions, the present book is divided into four main sections: Theory, Methods, Practice and Focus. Within each section, papers were further grouped in a number of themes, as defined below.

Section I, **Theory**, contains contributions deepening our understanding of existing morphological and typo-morphological theories, models and concepts as well as exploring new avenues of knowledge and perspectives from affine disciplines, linking them up to established or original morphological theories. Themes in the theory section include:

- **The epistemology of Urban Morphology:** retracing the evolution of a discipline and charting new research paths.
- **Towards a descriptive science of urban form:** old and new models explaining generative and transformative processes driving complex trajectories of urban evolution.
- **New trans-disciplinary perspectives in urban morphology:** new hybridisations for a holistic understanding of complex city systems.

Section II, **Methods**, looks at existing and innovative tools and procedures for the reading and understanding of urban form and its dynamics, encompassing both qualitative and quantitative approaches. Within the Methods sections, contributions are divided into the following themes:

- **Innovations in qualitative research in Urban Morphology:** methodological perspectives linking to classic Conzenian and Muratorian traditions, with an emphasis on qualitative research methods.
- **Innovations in Urban Morphometrics:** perspectives bringing new quantitative methods into Urban Morphology building on the rise of the digital age, including digital cartography, big data and remote sensing.
- **Engaging with the social, cultural and institutional discourse:** novel and original research methods capturing the interaction of urban form and human life engaging with complementary disciplinary fields.

Section III, **Practice**, looks at urban form as an active player in shaping tomorrow’s cities and at the world of professional practice, policy and education. Contributions within this section address the following themes:

- **Urban Morphology for design, planning and policy:** the practical role of urban form towards the sustainable and resilient, safe and inclusive cities for all.
- **Urban Morphology, Architecture and Heritage:** preservation, reuse, valorisation of built heritage as asset for future prosperity.
- **Teaching Urban Morphology:** methods, experiences and lessons learned to shape the next generation of architects, planners, urban designers and policy makers.

Section IV, **Focus**, reflects on urban morphology in light of emergent global drivers and in relation to the wider debate on Sustainable Development and Climate Change. Contributions within this section revolve around two main topics:

- **The resilient city: ecological perspectives in Urban Morphology:** perspectives and approaches linking urban form to the overall resilience of urban systems.
- **Urban Morphology for SDG 11:** contributions relating urban form to sustainable development goal targets.



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