The study of urban form in Portugal

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Abstract. *The origins, development and main characteristics of the study of urban form in Portugal are reviewed. After considering contributions during the middle of the twentieth century, attention is focused on recent developments. Fundamental themes in urban morphology as a field of knowledge are identified and characterized. These include the history of urban form, the relationships between urban morphology and building typology, morphological techniques, and the links between description, explanation and prescription.*

Key Words: urban morphology, urban form, disciplinary history, Portugal

This review of research on urban morphology in Portugal includes studies of Portuguese cities by both Portuguese and non-Portuguese scholars. It includes research on Portuguese colonial cities but not on other cities outside Portugal.

Reviews of the study of urban form in Portugal are rare. However, Manuel Teixeira (1993, 2008a) provides two valuable syntheses from the perspective of urban history. Both, particularly the earlier one, present the history of the Portuguese city and its planning as interesting objects of study, but they reveal these fields to be relatively undeveloped compared with their counterparts in North America and many other countries in Europe. The study of urban history in Portugal has been developing in a fragmented way, with several historical periods not studied and some disciplinary approaches under-represented.

Early developments

Despite the existence of earlier topographical writing (see, for example, Costa, 1788) and historical dictionaries on the processes of city building (such as that by Viterbo, 1899), the first Portuguese studies with a clear morphological dimension were carried out as recently as the middle of the twentieth century. Owing to the country's rich history, particularly in the Age of Discovery, Portuguese cartography was a key source of information for morphological research. At the beginning of the second half of the twentieth century two important works capitalized on this. Silveira (1951) brought together the fundamental iconography of Portuguese colonial towns around the world. His study is profusely illustrated with more than 1100 figures, and is structured according to seven geographical areas –

Morocco, the Azores and Madeira, East Africa, West Africa, West Asia, East Asia, and Brazil. Silveira argues that Portugal had a pioneering role in the creation and establishment of modern colonial towns. He points out the unusual number of Portuguese cities established around the world, and the number of similarities and differences between Portuguese cities and Portuguese colonial cities. Five years later, Chicó (1956) published a paper on the influence of 'ideal' plans of Renaissance cities on the structure of Portuguese cities in India. He compares the Portuguese (apparently more organic) and Spanish (supposedly more rational) forms of city building. He also compares the Portuguese settlements in Brazil and India, and discusses a number of fundamental issues such as the formulation of a theory based on iconography and historical maps, and the supposed monotony of particular cities and buildings. At the end of the 1950s, as part of the celebration of the fifth centenary of the death of Henrique o Navegador, Mota and Cortesão (1960) published *Portugaliae Monumenta Cartographica*. This extensive collection of early manuscript charts is a major contribution to the history of Portuguese cartography. It comprises six volumes, with more than 1000 reproductions of maps, covering the period between the fifteenth and the seventeenth centuries. In a book review, Crone (1960) considered this research to be one of the cornerstones of the history of European cartography. Like Silveira's book, it includes text in English and Portuguese. In addition two other works should be mentioned: Amaral (1978) on the urbanization of Angola; and Rodrigues (1979) on the main features of Portuguese colonial planning, focusing on the Brazilian cities of Olinda and Recife.

A key work, *Lisboa Pombalina e o Iluminismo*, was published in the mid-1960s (Franca, 1966). This is a historical analysis of an individual city. It analyses the reconstruction of downtown Lisbon after the earthquake of 1755, which was carried out according to a plan prepared by Eugénio dos Santos and Carlos Mardel. This is an example of early town planning that provided a model for Portuguese and colonial cities.

Three studies with an architectural perspective on urban morphology are of note. The first is *Casas Portuguesas* by Raul Lino (1933), an architect whose work has been undervalued owing to its association with the dictatorial regime of 1926 to 1974. It is the result of a careful typomorphological analysis, noting the main characteristics of Portuguese residential buildings. The second was published by the National Union of Architects and synthesizes the results of an extensive survey of regional architecture, carried out between 1955 and 1960 (Sindicato Nacional dos Arquitectos, 1961). Confronted, on the one hand, by the oppressive censorship of the Portuguese dictatorship and, on the other, by a radical international style, the Portuguese architects felt the need to look for roots in vernacular architecture, leading to this comprehensive analysis of the national territory. The authors conclude, contrary to Lino's view, that there is neither a specifically Portuguese architecture nor a typical Portuguese house. The third study analyses a particular residential type, the so-called *solares* in the North of Portugal (Azevedo, 1969).

In this period the research work of three geographers is noteworthy. Ribeiro (1962) analyses a number of aspects of Portuguese colonization, including the characteristics of settlements in Portugal and their influence on the various colonial territories. Oliveira (1973) produced the first thesis in urban geography, focusing exclusively on a particular Portuguese city. He synthesizes many of the relevant data on Oporto and provides a view of its urban development process and spatial variety. Gaspar (1969) explores the geometrical patterns used in the design of towns in the Middle Ages. A number of towns established in the thirteenth century in the Alentejo region, in bordering territories or in recently colonized areas, are analysed and found to have characteristics that reflect their planned origin. In addition, Gaspar (1968) analyses the main spatial features of Muslim cities.

The history of urban form

Throughout the last decade the work developed in the Instituto Superior de Ciências do Trabalho e da Empresa under the co-ordination of Teixeira constitutes a major contribution to the study of the evolution of the 'Portuguese city'. It includes work by Rosália Guerreiro, Teresa Madeira, Teresa Marat-Mendes and Margarida Valla.

First, there has been the construction of a Digital Archive of Urban Cartography (see Teixeira, 2000). This comprises a digital database, including references and images relating to urban cartography and iconography. The main objectives of the archive are the identification and organization of historical urban cartography; the selection and reproduction of the most relevant digital cartography; the structuring of a digital database articulating cartographic records and digital images; and the dissemination of these data through the Internet.

Secondly, this research group has been publishing a journal, *Urbanismo de Origem Portuguesa*, the only Portuguese periodical focused on urban morphology. Its main goal is the investigation and characterization of urban forms in cities of Portuguese origin or influenced by the Portuguese.

Thirdly, three books by these authors merit attention. The work of Teixeira and Valla (1999), reflecting the influence of British and Italian studies, is based on the detailed analysis of the most remarkable examples of the main stages of the early formation of the Portuguese city between the thirteenth and eighteenth centuries. The research consisted of the collection and careful analysis of historical cartographic sources to support the authors' graphic representation of the urban settlements' evolutionary stages. Teixeira (2001) brings together a set of papers presented in the congress on *A praça na cidade Portuguesa* (The square in the Portuguese city). This congress was concerned with identifying the origins, genealogies and morphological characteristics of the public spaces of cities, articulating them in relation to Portuguese urban history and planning. Focusing on the form of cities with Portuguese origins, Teixeira (2008b) divides the subject matter into three parts. The first consists of the morphological characterization of the Portuguese *traçados* (street system) – namely Portuguese urban planning, relations between the territory and the *traçados,* plan hierarchy and the main urban elements, the structure of urban blocks and plots, urban squares and the planning process. The second presents the history of *Salvador da Baía,* in Brazil, demonstrating how its form synthesizes Portuguese town planning of the sixteenth century. Finally, the third part analyses the plan for the reconstruction of downtown Lisbon.

Like the congress on 'A praça na cidade Portuguesa', the 'Colóquio Internacional Universo Urbanístico Português, 1415-1822' (papers collected by Rossa *et al*., 2001) was a major contribution to the study of the history of the Portuguese city. This conference was part of a wider initiative intended to develop and disseminate knowledge on the history of Portuguese urban planning.

A number of books published by the Faculty of Architecture of the University of Oporto during the last decade have also constituted a solid input to the study of urban form in Portugal. The works of Ferreira (1995), Fernandes (1996) and Correia (2008) on the evolution of the Portuguese city should also be highlighted.

Ferreira (1995) considers ten Portuguese cities, and seeks to identify the most important aspects of urban quality. He analyses the evolution of urban forms and their interaction with the physical characteristics of surrounding areas and concludes that there has been a steady decline in the quality of Portuguese urban spaces. In the second part of the research, Ferreira focuses his attention on two medium-sized cities, Évora and Viana do Castelo. He gives special attention to graphical material. He re-draws a set of town maps to assure their graphic comparability, and to highlight the essential characteristics of urban form.

Fernandes (1996) studies the urban morphology and building typology of

Macaronésia (the set of four archipelagos of Portuguese colonization in the North Atlantic – Azores, Madeira, Canary Islands, and Cape Verde) over a period of 4 centuries. The study presents a comparative analysis of the urban forms and structures of Macaronésia. He then examines recurrent patterns developed on the Portuguese mainland so that he can specify a model of cities of Portuguese origin.

Correia (2008) studies Portuguese cities in North Africa since the conquest of Ceuta in the sixteenth century. Initially he reviews the current state of work on this topic and provides a chronological analysis. Then he focuses on the Portuguese presence in North Africa, highlighting six particular cities: Ceuta, Alcácer Ceguer, Arzila, Tanger, Safim and Azmor. Finally, he provides a comparative synthesis and explores some areas of future research based on the urban rehabilitation of Mazagão.

Salgueiro (1992) studies the process of urban development in Portugal, analyses the morphological characteristics of Portuguese cities in the context of their historical evolution, and examines the role of the planning system and different actors. She examines the functional organization of cities, explaining the territorial appropriations of the different activities and social groups. Lamas (1992), analyses Avenidas Novas, Bairro de Alvalade and Areeiro: though not primarily concerned with Portuguese cities, this constitutes a key reference for Portuguese urban morphologists. Lamas argues for a central role for urban morphology and urban design in the city building process.

A number of papers have focused on the evolution of small samples of Portuguese cities. By studying six northern Portuguese cities, Fernandes (2005, 2008) underlines the importance of cartography and urban planning documentation as indispensable sources of information concerning city growth and change. Fernandes sets out the following principles: i) the town plan constitutes a summary of a town's history, allowing the various developmental stages to be recognized; ii) examination of town plans facilitates spatial comparisons; and iii) the redrawing of the town plan allows observation and interpretation of the existing situation, the representation of planning forecasts and planning results so far achieved, and identification of the most important decision makers. Oliveira (2008) provides a detailed analysis of this work.

In a similar way, Oliveira and Pinho have been developing a morphogenetic analysis of Lisbon and Oporto. They have identified and characterized the different periods of urban development in Lisbon and Oporto (Oliveira and Pinho, 2006). They have critically reviewed the most influential planning policies in these cities since the second half of the nineteenth century (Oliveira and Pinho, 2008). Finally, they have evaluated the use of cartographic redrawing, in the analysis of a particular city over a long period of time (Pinho and Oliveira, 2009a).

A number of articles have sought to explain the evolution of a particular city. França (1980) and Rodrigues (1973) analyse the urban history of Lisbon since medieval times, distinguishing the most significant periods. Rodrigues (1973) focuses on specific parts of the city, providing a morphological matrix for their analysis. Included in the Historical Atlas of Cities of the Iberian Peninsula, are Calado *et al.* (1994) on Lisbon and Domingues *et al.* (1994) on Oporto. Williams (1983), Oliveira and Pinho (2010) and Costa-Lobo (1991) provide city profiles of Lisbon and Oporto.

There are also papers characterizing a single city at a particular time in history. The second half of the eighteenth century and the first half of nineteenth century have been studied in detail in a sizeable number of works. Mullin (1992), Rossa (1998), Heitor *et al.* (2000) and Santos (2002) analyse the history of Lisbon during the reconstruction process following the earthquake of 1755. In a similar way, Ferrão (1985), Mandroux-França (1986), Alves (1988) and Nonell (2002) study Oporto's expansion outside its medieval walls under the leadership of Almada, the first and most notorious President of the Junta das Obras Públicas (Public Works Junta). Finally, Correia (1997) analyses a small town in Algarve, Vila Real de Santo António, as one of

the achievements of Pombal's urban vision. He examines for the period 1773-76 the creation and construction of the town, analysing its structural forms and reflecting on its significance as a planned town.

Urban morphology and building typology

The research works under this heading were mainly developed by architects, with some contributions from the field of urban history. All the works referred to here were published in the last 2 decades. They analyse the relationship of buildings to territory at four different scales: the region; the city; the neighbourhood, and the street or square.

Four of the six books in the first category reflect a major influence from Sindicato Nacional dos Arquitectos (1961). Tostões *et al*. (2000) and Mestre (2002) complete the work of this organization, extending the survey to the Azores and Madeira. Under the umbrella of the Centro de Estudos de Etnologia, Oliveira and Galhano (1992) analyse the whole country from a typo-morphological point of view. Focusing on the rural houses of the Lisbon region in the eighteenth century, Caldas (1999) explores three different lines of research represented by Sindicato Nacional dos Arquitectos (1961), Lino (1933) and Azevedo (1969). The two remaining books in this category were influenced by the history of the country in the Age of Discovery. Silveira (1998) studies the courtyard house in Goa (India), and Fernandes (1996) analyses the housing types of Macaronésia.

The second category is concerned with the relationship between the building and the city. Pereira and Buarque (1995), Barata (1996), and Trindade (2002) study the evolution of housing types in a particular city. The first authors analyse the urban expansion of Lisbon. Different types of construction corresponding to different time periods and different social classes are studied in a systematic way. Underlying the whole work is the intention to move from description and explanation to prescription. Barata (1996) attests the

existence of three historical residential types in Oporto contributing in a prominent way to the characterization of Oporto's urban form. These he terms mercantilist, enlightened and liberal. He recognizes the existence of a particular residential type in the historical kernel, which is different from the one found in the city expansion outside the walls in the eighteenth century. Both these residential types differ from a third type – the liberal – developed since the second half of the nineteenth century, and present in the early decades of the twentieth century. In a line of research close to that of Walter Rossa, Trindade (2002) develops a similar analysis for the city of Coimbra.

Two books present similar analyses of particular periods in Oporto and Lisbon. Berrance (1993) analyses the city of Oporto in the period between 1774 and 1844, focusing on the *almadino* phenomenon and its influence on the city. He develops a typological analysis, focusing on the evolution of the city. Viegas (1999) brings together a set of 70 drawings produced between 1758 and 1846 by the architects and engineers of the Casa do Risco das Reais Obras Públicas, an agency established by Pombal to plan the city after the earthquake of 1755.

Finally in this category, Teixeira (1996) investigates the Oporto *ilhas*, a nineteenth-century working-class house type, seeking to explain its location and physical form, as well as the influence of the local socio-economic context on its spatial and formal character-istics. The *ilhas* is a result of a partial occu-pation of urban plots with approximately 6 m frontages, and maximum depths of 100 m. Teixeira takes the view that, at the time, the *ilhas* was a residential type well adapted to the residents' economic conditions, as well as to the financial capacity and spatial constraints of most building contractors. He acknowledges the rationality of this solution, which involved the intensive occupation of the plot as well as the minimization of construction costs. He points out that the *ilhas* model can also be a rational solution to apply in the case of larger plots, by constructing side-by-side rows of small houses occupying the whole plot.

The third category is concerned with buildings and their relationship to neighbourhood. Three studies focus on three different areas in Lisbon: Bairro Alto, Chelas and Bairro de Alvalade. Carita (1994) highlights the capacity of the Bairro Alto neighbourhood to maintain its identity throughout time without suffering major breaks despite the several changes it experienced. He seeks to understand the neighbourhood in its different dimensions: historical, social, urban and architectural.

Heitor (2001) explores the spatial characteristics that contribute to the vulnerability of the built environment of Chelas, one of Lisbon's largest neighbourhoods. It is a problematic neighbourhood, particularly vulnerable to neglect. Heitor begins by identifying the main characteristics of the spatial configuration of such an ambitious and complex housing project. She describes the urban space as it is at present, rather than as it was intended to be in the initial version of the project. A significant difference was found.

With reference to the Versailles School of urban morphology (particularly Castex *et al.*, 1977), Costa (2002) reveals the use of general urban models in the design of Lisbon's neighbourhoods. These models are able to incorporate different reinterpretations of the designers' initial intentions. Costa (2002) argues that the Alvalade neighbourhood constitutes a paradigm of Portuguese town planning, reflecting its rather eclectic urban design.

In a different approach, using shape grammars (see, for example, Stiny, 1980), Duarte (2001, 2005) analyses the patio houses in Malagueira, a major 1200-unit development in Évora, still under construction today. This grammar is based on 35 houses designed between 1977 and 1996.

Finally, the last category is concerned with buildings and their relationship to streets or squares. Afonso (2000) examines the evolution of Rua das Flores, the most important street of Oporto in the sixteenth century, and Pires (2001) analyses the opening of another street, Rua Álvares Cabral. Rossa (2001) carries out a similar study of Rua de

Sofia in Coimbra. Vasconcelos (2008) investigates an important square in Oporto, Marquês do Pombal, from its origins to the second half of the twentieth century. The second part of this study focuses on the evolution of the buildings, identifying the main changes, including the introduction of commercial uses on the ground floor.

Syntactical analysis

Kruger played an important role in the early development of space syntax theory and methods and their introduction in Portugal, although with no particular focus on Portuguese urban forms. Focusing on built form connectivity at an urban scale, he explored a number of issues (Kruger, 1977, 1979a, 1979b, 1980, 1981a, 1981b), including the description and representation of built-form systems, the variations of connectivity and adjacency between different zones, and the relationships between built-form connectivity and adjacency as functions of the urban spatial structure.

Despite limited use of Portuguese syntactical analysis during the 1980s and the first half of the 1990s, there has been a steady increase in this type of research during the last 15 years stimulated particularly by the establishment of the International Space Syntax Symposia. The most consistent line of research has been developed at the Instituto Superior Técnico in Lisbon, mainly promoted by Teresa Heitor, who worked earlier with Kruger.

At a theoretical level, Cerdeira, Cordovil and Heitor propose a characterization of axial maps (Cerdeira *et al.*, 1996). With a closer focus on a Portuguese city, Lisbon, Heitor *et al.* (2000) analyse the changes that occurred in the capital after the earthquake of 1755 and study the morphological break that took place when the medieval spatial pattern was modified by the reconstruction of the city centre by Pombal. Also with a focus on a particular city, Pinho and Oliveira (2009b, 2009c) study the evolution of the urban form of Oporto throughout the nineteenth and

twentieth centuries: they analyse a set of fifteen maps that correspond to three morphological periods, using six syntactic measures.

While the previous papers focus on an urban scale, other studies are centred on the building scale. Heitor *et al*. (2007) and Heitor and Tomé (2009) apply syntactical techniques in the analysis of educational facilities. André *et al*. (2003) and Côrte-Real *et al*. (2005) use these techniques in the study of health facilities, analysing signal systems and guidance systems in hospitals to improve the overall quality of orientation and circulation in complex structures.

In recent years a number of studies have explored bridges between space syntax and other approaches. Heitor *et al*. (2003) have considered how two different computational approaches, space syntax and shape grammars, can be combined into a common framework for formulating, evaluating and generating designs. Heitor *et al*. (2007) have proposed a model based on the linking of space syntax and spatial information visualization, exploring the potential of using Wi-Fi networks as an input for a space-use analysis model capable of describing and visualizing spatial usage and users' spatial behaviour in knowledge-sharing scenarios and correlating this information with the spatial structure. Pinho and Oliveira (2009b, 2009c) combine space syntax with a morphological approach close to that of the Conzenian School, identifying a link between morphological periods and integration, both global and local. Pinho *et al*. (2009) combine the use of two distinct structural methodologies in the analysis of Oporto metropolitan area – space syntax, centred on space and urban form, and the Structural Accessibility Layer, focused on the land use and transport system.

Urban morphology and urban planning

The first research work on urban morphology and planning in Portugal was carried out in the Laboratório Nacional de Engenharia Civil (National Laboratory of Civil Engineering) by researchers such as Luz Valente Pereira and Nuno Portas. With a clear prescriptive intention, Pereira (1982) introduces the concept of 'urban space' as an object of planning activity, linking the building and city scales. In addition, she argues that the design of this 'urban space' should be informed by careful morphological analysis. In his research work between 1962 and 1974, Nuno Portas has moved from typological research, on collective housing, to the analysis of the city (see, for example, Portas, 1969a, 1969b). In subsequent years, he published a number of papers, the most important being gathered in a recent book (Portas, 2005) that covers such subjects as the Portuguese settlements in Brazil; the relationships between planning and absolutist regimes; and the evolution of the urban form of a particular Portuguese town, Vila Viçosa.

Influenced by her background in the Direcção Geral de Ordenamento do Território (National Agency on Spatial Planning), Lobo (1994) analyses the production of urban plans in Portugal, focusing on two decades following the 1934 law decree on Planos de Urbanização. The author divides this group of plans into three types: pragmatic city, garden city and radiant city.

Most recently the Centro de Investigação do Território, Transportes e Ambiente (CITTA) (Research Centre for Territory, Transport and Environment) has been developing a consistent line of research on this issue. Oliveira (2006) assesses the incorporation of morphological criteria in the Plano Director Municipal (Municipal Plan) for Oporto, with reference to a set of planning documents prepared by members of the Urban Morphology Research Group for British and French towns. Oliveira and Pinho (2008) present a critical review of the most influential planning policies on the evolution of the urban forms of the two largest Portuguese cities between the second half of the nineteenth century and the present day. With a group of eight European research centres, CITTA is currently developing a project that seeks to link concepts concerning urban form to urban metabolism, advancing operational knowledge

for planning practice (see Schremmer *et al.*, 2010).

In Portugal, as in many countries, the morphological dimension of urban planning tended to be less evident towards the end of the twentieth century. During the middle of the twentieth century, however, a number of plans, co-ordinated by planners such as Faria da Costa, Etienne de Gröer, Moreira da Silva, Januário Godinho and Raul Lino, were clearly influenced by morphological thought. The plan of Faria da Costa for the Bairro de Alvalade prepared in the 1940s has recently attracted the attention of Costa (2002) and Marat-Mendes (2006, 2007). In his detailed analysis, Costa identifies morphological elements related to the traditional city and the garden-city movement, as well as to the urban growth projects of Amsterdam and Sieldlung in Berlin, and to the concept of the neighbourhood unit, fashionable at the time. Marat-Mendes (2006) analyses this plan alongside the plans for the neighbourhoods of Areeiro and Restelo and against the background of the municipal plan co-ordinated by de Gröer (further developed by Marat-Mendes and Sampayo, 2010), revealing the morphological contributions of these plans to the built environment of the Portuguese capital. In addition, Marat-Mendes (2007) analyses the morphological contribution of the urban plans of Etienne de Gröer and Faria da Costa to a sustainable urban environment.

More recently, the 2006 Municipal Plan of Oporto (Câmara Municipal do Porto, 2005) clearly addresses the maintenance of the character of the city, proposing a form-led zoning. This typological approach to zoning began with a comprehensive, rigorous identification of the types of urban tissue covering the whole municipal area. The zone boundaries and regulations correspond for the most part to the tissues identified in the analysis. The plan considers the existing forms of each type of tissue as potential solutions for accommodating human needs in each part of the city. Accordingly, the bases for the forms prescribed for each particular application for a building permit are the buildings within the same street or plot series.

Conclusions

There is not a Portuguese school of urban morphology. Since the middle of the twentieth century, certain relationships between key contributors and their followers have become evident, and some research centres have formed, but Portuguese urban morphology mainly consists of unco-ordinated efforts undertaken by individual researchers.

It is possible to identify the development of different morphological approaches – spatial analytical, configurational, process typological, and historic-geographical, to use the terms employed by Kropf (2009). Each of these tends to be associated with a main research centre or with certain individual researchers. One of the most characteristic aspects of Portuguese urban morphology – mainly explored by urban historians and urban geographers – is the existence of a rich cartographical collection produced after the Age of Discovery.

The internationalization of Portuguese urban morphology is constrained by the fact that most Portuguese researchers do not publish in the English language. In fact only 30 per cent of the publications in this review are in English. Of the others, only a small percentage include material in more than one language – surprisingly, some of these are the earliest publications.

Finally, there is an obvious need to establish a Portuguese network linking the different approaches, developing projects, providing opportunities for contact between members, and encouraging the dissemination of findings, both nationally and internationally.

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ISUF 2011: Urban morphology and the post-carbon city

The Eighteenth International Seminar on Urban Form (ISUF 2011), hosted by Concordia University, will take place in Montréal, Canada from Friday 26 August to Monday 29 August 2011. The theme of the conference is 'Urban morphology and the post-carbon city'. The objective is to critically explore how interdisciplinary research on urban form can contribute to the debates, formation of policies, and progressive professional practice for addressing the environmental challenges of our times. The organizers and the Council of ISUF invite participation in the conference by interested academics and professionals. Topics to be covered include:

Urban morphological theory
Urban form in North America
Urban morphology and climatic change
Mega-projects and urban morphology
Urban morphology and transportation
Urban morphology and brownfield redevelopment
Urban morphology and health
Urban morphology and the automobile suburbs
Urban morphology and urban heritage
Urban morphology of pre-industrial cities
Geospatial technology in urban morphology
Legislation and urban form
Urban morphology, planning and design

Typological research and design

The official conference languages are English and French. There will be a New Researchers' Forum, in which researchers new to the field will take part.

Founded in 1642 on the banks of the St Lawrence River, Montréal is the second largest city in Canada and the second largest primarily French-speaking city in the world (after Paris), with a metropolitan population of 3.7 million. A cosmopolitan, international city known for the vitality of its urban neighbourhoods and the vibrancy of its cultural scene, Montréal is a UNESCO City of Design.

Enquiries and suggestions concerning the conference should be forwarded to Professor Pierre Gauthier (e-mail: isuf2011@alcor.concordia.ca) or Professor Jason Gilliland (e-mail jgillila@uwo.ca). The Conference Organizing Committee comprises Pierre Gauthier, Concordia University; Jason Gilliland, University of Western Ontario; Lisa Bornstein and Nik Luka, McGill University; Carole Després and Geneviève Vachon, Université Laval; Kai Gu, University of Auckland; Michael Conzen, University of Chicago; and J. W. R. Whitehand, University of Birmingham.

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