



THE ATHENS INSTITUTE FOR EDUCATION AND RESEARCH

Abstract Book

5th Annual International Conference on
Geography, 3-6 June 2019, Athens, Greece

Edited by
Gregory T. Papanikos

2019

Abstracts
5th Annual International
Conference on Geography
3-6 June 2019, Athens, Greece

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First published in Athens, Greece by the Athens Institute for Education and
Research.

ISBN: 978-960-598-255-3

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Preface

This book includes the abstracts of all the papers presented at the 5th *Annual International Conference on Geography (3-6 June 2019)*, organized by the Athens Institute for Education and Research (ATINER).

In total 35 papers were submitted by 38 presenters, coming from 22 different countries (Australia, Austria, China, Croatia, Cyprus, Czech Republic, Georgia, Germany, Hong Kong, Hungary, India, Italy, Mexico, Norway, Republic of North Macedonia, Serbia, Singapore, South Africa, Spain, Thailand, UK, and USA). The conference was organized into 10 sessions that included a variety of topic areas such as Urban Geography, Economic Geography, Cartography, GIS, Educational and Teaching Issues and other. A full conference program can be found before the relevant abstracts. In accordance with ATINER's Publication Policy, the papers presented during this conference will be considered for inclusion in one of ATINER's many publications.

The purpose of this abstract book is to provide members of ATINER and other academics around the world with a resource through which to discover colleagues and additional research relevant to their own work. This purpose is in congruence with the overall mission of the association. ATINER was established in 1995 as an independent academic organization with the mission to become a forum where academics and researchers from all over the world could meet to exchange ideas on their research and consider the future developments of their fields of study.

It is our hope that through ATINER's conferences and publications, Athens will become a place where academics and researchers from all over the world regularly meet to discuss the developments of their discipline and present their work. Since 1995, ATINER has organized more than 400 international conferences and has published nearly 200 books. Academically, the institute is organized into 6 divisions and 37 units. Each unit organizes at least one annual conference and undertakes various small and large research projects.

For each of these events, the involvement of multiple parties is crucial. I would like to thank all the participants, the members of the organizing and academic committees, and most importantly the administration staff of ATINER for putting this conference and its subsequent publications together. Specific individuals are listed on the following page.

Gregory T. Papanikos
President

5th Annual International Conference on Geography
3-6 June 2019, Athens, Greece

Scientific Committee

All ATINER's conferences are organized by the [Academic Council](#). This conference has been organized with the assistance of the following academics, who contributed by a) setting up the program b) chairing the conference sessions, and/or c) reviewing the submitted abstracts and papers:

1. Gregory T. Papanikos, President, ATINER & Honorary Professor, University of Stirling, UK.
2. Nicholas N. Patricios, Vice President of Strategic Planning & Analysis, ATINER and Professor & Dean Emeritus, School of Architecture, University of Miami, USA.
3. Keshav Bhattarai, Academic Member, ATINER & Professor and Geography Program Coordinator, University of Central Missouri, USA.
4. Melanie Basantis, Director, Engineering Outreach/Professor, Rowan University, USA.
5. George S. Tsagaris, Associate Professor, Cleveland State University, USA.
6. Geok Chin Ivy Tan, Associate Professor, Nanyang Technological University, Singapore.
7. Richard Jelier, Professor and Director, School of Public, Nonprofit and Health Administration, Grand Valley State University, USA.
8. Tanapon Panthasen, Assistant Professor, Kasetsart University, Thailand.
9. Piotr Razniak, Assistant Professor, Pedagogical University of Cracow, Poland.
10. Marijana Pantic, Research Fellow, Institute of Architecture and Urban and Spatial Planning of Serbia, Serbia.
11. Lampros Pyrgiotis, Research Fellow, ATINER.

FINAL CONFERENCE PROGRAM
5th Annual International Conference on Geography, 3-6 June 2019,
Athens, Greece
Conference Venue: Titania Hotel, 52 Panepistimiou Street, 10678 Athens,
Greece

Monday 3 June 2019

07:50-08:40 Registration and Refreshments

08:50-09:20 (Room B - 10th Floor): Welcome and Opening Address by Gregory T. Papanikos, President, ATINER and David Philip Wick, Director, Arts, Humanities & Education Division, ATINER & Professor of History, Gordon College, USA.

09:20-11:00 Session I (Room B - 10th Floor): Urban Revitalization

Chair: Nicholas N. Patricios, Vice President of Strategic Planning & Analysis, ATINER and Professor & Dean Emeritus, School of Architecture, University of Miami, USA.

1. Richard Jelier, Professor and Director, School of Public, Nonprofit and Health Administration, Grand Valley State University, USA. The Emergence of Moscow, Russia: A Progressive, Cosmopolitan World City within an Autocratic State.
2. Grete Swensen, Research Professor, Norwegian Institute for Cultural Heritage Research, Norway. When the well-Established Garden City meets the Contemporary Compact City Planning Ideal.
3. Maria Oikonomou, Lecturer, Vienna University of Technology (TU Wien), Austria & Christoph Luchsinger, Head of Urban Design Research Unit, Vienna University of Technology (TU Wien), Austria. Conversion Area Eleonas, Athens. Urban Transformation Projects within the Framework of the Urban Design Studio at Vienna University of Technology.
4. Dimitris Panayotopoulos-Tsiros, PhD Candidate, University College London, UK. Scale and Perceptions of Urban Voids in post-Industrial Cities. Learnings from Eleonas in Athens, Greece.

This session is jointly offered with the Engineering & Architecture Division.

11:00-12:30 Session II (Room B - 10th Floor): Urban Planning Processes and Transportation

Chair: Richard Jelier, Professor and Director, School of Public, Nonprofit and Health Administration, Grand Valley State University, USA.

1. Bun Song Lee, Associate Professor, University of Arkansas - Fort Smith, USA. Characteristics of Cities Encouraging Bus Commuting, Subway Commuting, and Active Commuting (Biking and Walking to Workplaces) in the United States.
2. Rebecca Heckmann, Deputy Project Manager, University of Applied Sciences Stuttgart, Germany & Alexandra Mittelstaedt, Researcher, University of Applied Sciences Stuttgart, Germany. Development of an Emission Calculation Tool for Sustainable Route Planning.
3. Yue Sun, Graduate Student, Southeast University, China. Urban Park Accessibility Evaluation Based on Gravity Model and Realistic Traffic Data: An Example of Baoding.
4. Xiao Zhang, Graduate Student, Southeast University, China. Ecological Resilience Assessment and Optimization Suggestions of Yangtze Middle Reaches Megalopolis.

This session is jointly offered with the Engineering & Architecture Division.

12:30-14:00 Session III (Room B - 10th Floor): Environmental Planning

Chair: Lampros Pyrgiotis, Research Fellow, ATINER.

1. Carolyn Aguilar-Dubose, Professor, Universidad Iberoamericana, Mexico. City of Promenades.
2. Mohammed Firoz Challappurath, Assistant Professor, National Institute of Technology Calicut, India & Fathima Nidha, Architect, National Institute of Technology Calicut, India. Sustainable Development through Urban Farming: A Conceptual Model for Integrating Architecture with Agriculture at the Neighbourhood Level.
3. *Marijana Pantic, Research Fellow, Institute of Architecture and Urban and Spatial Planning of Serbia, Serbia, Marina Nenkovic-Riznic, Senior Research Associate, Institute of Architecture and Urban and Spatial Planning of Serbia, Serbia & Saša Milijic, Scientific Advisor / Director, Institute of Architecture and Urban and Spatial Planning of Serbia, Serbia. City of Belgrade: Between Reality and the European Green Capital.
4. Yuxi Zhu, PhD Student, Southeast University, China, Wenjun Chen, Postgraduate Student, Southeast University, China & Le Zhu, Postgraduate Student, Nanjing University, China. The Regeneration of the Historic District Guided by Reconstructing the Walkability: A Case Study in Sifang Road, Qingdao, China.
5. Xue Geng, Master Student, Southeast University, China. A Study on the Revitalization of Traditional Villages in Southern Anhui Based on the Symbiosis Theory: A Case Study of Nanping, Anhui Province.

This session is jointly offered with the Engineering & Architecture Division.

14:00-15:00 Lunch

15:00-16:30 Session IV (Room A - 10th Floor): Experiential Learning

Chair: George S. Tsagaris, Associate Professor, Cleveland State University, USA.

1. Geok Chin Ivy Tan, Associate Professor, Nanyang Technological University, Singapore. Student-Teachers' Conception and Perception of the Use of the Inquiry-Based Approach in Geography Fieldwork in Singapore.
2. YM Tang, Teaching Fellow, The Hong Kong Polytechnic University, Hong Kong, To Sum Ho, Assistant Professor, The Hong Kong Polytechnic University, Hong Kong & Chun Ho Wu, Assistant Professor, The Hong Kong Polytechnic University, Hong Kong. Engineering Education with Mixed Reality (MR).
3. Jose Miguel Alvarez Romero, PhD Student, Instituto Universitario de Microgravedad "Ignacio Da Riva" (IDR/UPM), Spain, Elena Roibas-Millan, Professor, Instituto Universitario de Microgravedad "Ignacio Da Riva" (IDR/UPM), Spain, Santiago Pindado, Professor, Instituto Universitario de Microgravedad "Ignacio Da Riva" (IDR/UPM), Spain, Javier Pérez-Álvarez, Professor, Instituto Universitario de Microgravedad "Ignacio Da Riva" (IDR/UPM), Spain & Ángel Sanz-Andrés, Professor, Instituto Universitario de Microgravedad "Ignacio Da Riva" (IDR/UPM), Spain. UPMSAT-2 Communications System Design, Integration and Testing, within MUSE (Master in Space Systems) Academic Plan.

This session is jointly offered with the Education Unit.

16:30-17:45 Session V (Room B - 10th Floor): Economic Issues

Chair: Piotr Razniak, Assistant Professor, Pedagogical University of Cracow, Poland.

1. Norbert Csizmadia, Lecturer, Corvinus University of Budapest, Hungary. Geofusion: Cities, Regions, Nations in the Geoeconomy Age; the Power of Geography.
2. Guohua Hu, MPhil Student, Hong Kong Baptist University, Hong Kong. The Making of "Political Enclave Economy" in China.

3. Yaqi Wang, Graduate Student, Southeast University, China. A Comparative Study on the Residential-employment Characteristics of New Urban Area in Nanjing and Suzhou-Wuxi-Changzhou Metropolitan Area.

This session is jointly offered with the Engineering & Architecture Division.

17:45-19:15 Session VI (Room A - 10th Floor): Special Topics in Geography

Chair: Geok Chin Ivy Tan, Associate Professor, Nanyang Technological University, Singapore.

1. Barbara Polo-Martin, Professor, University of Barcelona, Spain. Mental Projections of a City in War. The Perception of Burgos through its Military Cartography.
2. George S. Tsagaris, Associate Professor, Cleveland State University, USA. Geographic Information System (GIS) Analysis of Developmentally Disabled Adult Offenders.
3. Srdan Nagic, Associate, PannonIQm Institute for Education and Research, Croatia & Igor Sipic, Head of the Scientific Team, PannonIQm Institute for Education and Research, Croatia. The Discovery of Astrognosical Primordial Geometrical Matrix of the Pleiades Cluster with Effects on the Real Geographic Space.
4. Bakur Jinoria, Specialist of Disaster Processes and Engineering-Geology Group, Ivane Javakhishvili Tbilisi State University, Georgia. DEM 360^o for X-Y-Z (Turbulence Theory).

21:00-23:00 Greek Night and Dinner

Tuesday 4 June 2019

08:00-11:00 Session VII: An Educational Urban Walk in Modern and Ancient Athens

Group Discussion on Ancient and Modern Athens.
Visit to the Most Important Historical and Cultural Monuments of the City (be prepared to walk and talk as in the ancient peripatetic school of Aristotle)

11:15-13:00 Session VIII (Room B - 10th Floor): Urban Planning Methodologies and Processes, Transportation & Policy

Chair: Marijana Pantic, Research Fellow, Institute of Architecture and Urban and Spatial Planning of Serbia, Serbia.

1. Riste Temjanovski, Professor, Goce Delčev University of Štip, Republic of North Macedonia & Monika Arsova, PhD Student, Goce Delčev University of Štip, Republic of North Macedonia. Transport Policy and Create a Western Balkans Market: How to Mirror the EU's Experience.
2. Martina Sedlakova, Assistant Professor, Czech Technical University in Prague, Czech Republic. Public Space and Artefacts: Several Alterations of Historical Squares in the Czech Republic.
3. Tanapon Panthasen, Assistant Professor, Kasetsart University, Thailand & Supaporn Kaewko Leopairojna, Assistant Professor, Kasetsart University, Thailand. Using the Smart Growth Principles for Real Estate Development around Rapid Transit Stations to Achieve Sustainability.
4. Claudio Meninno, Contract Professor and Postdoctoral Researcher, University of Trieste, Italy. Architecture and Infrastructure: Strategies, Methods and Techniques of Integrated Design for Cross-Border Territorial Development in Europe.
5. Ilaria Geddes, Postdoctoral Researcher, University of Cyprus, Cyprus. Understanding the Mechanisms and Impact of Growth on the Urban Form and Functioning of Cities.

This session is jointly offered with the Engineering & Architecture Division.

13:00-14:30 Session IX (Room A - 10th Floor): Special Topics /Teaching Strategies

Chair: Melanie Basantis, Director, Engineering Outreach/Professor, Rowan University, USA.

1. Srdjan Vujicic, Professor, University of Dubrovnik, Croatia, Nermin Hasanspahic, PhD Student, University of Dubrovnik, Croatia, Ana Gundic, Professor, University of Zadar, Croatia & Niko Hrdalo, PhD Student, University of Dubrovnik, Croatia. Assessment for Adequately Qualified Instructors in Maritime Education and Training Institutions.
2. Krystle Ontong, Lecturer, Stellenbosch University, South Africa. Exploring Place and Space as 'Fluid Centres' for Preparing Geography Student Teachers in Becoming Curriculum-Makers.
3. Arthur Firipis, PhD Student, Deakin University, Australia, Siva Chandrasekaran, Lecturer, Swinburne University of Technology, Australia & Matthew Joordens, Lecturer, Deakin University, Australia. Nurturing Creativity through Differentiation while using 1:1 Mobile Devices for Learning?

This session is jointly offered with the Education Unit.

14:30-15:30 Lunch

15:30-17:00 Session X (Room B - 10th Floor): Urban Concepts

Chair: Tanapon Panthasen, Assistant Professor, Kasetsart University, Thailand.

1. Sorana Radulescu, Assistant Professor, Technical University Graz, Austria. Urban Gulliver and the Negotiation of Public Space.
2. Melina Philippou, Researcher, Future Heritage Lab, Massachusetts Institute of Technology, USA. Design as a Form of Self-determination: Autonomous Interventions at the Azraq Refugee Camp.
3. Adriano Venudo, Researcher, University of Trieste, Italy. Geostories. Landscape along the Border Italia-Slovenia-Austria.
4. Cansu Denizhan, PhD Student, Eastern Mediterranean University, Cyprus & Maya Nanitchkova Ozturk, Associate Professor, Eastern Mediterranean University, Cyprus. Urban Generic Sites: Multi-sensory Spaces as Modes of Immediate Experience and 'Dwelling'.

This session is jointly offered with the Engineering & Architecture Division.

20:00- 21:30 Dinner

**Wednesday 5 June 2019
Mycenae and Island of Poros Visit
Educational Island Tour**

**Thursday 6 June 2019
Delphi Visit**

**Friday 7 June 2019
Ancient Corinth and Cape Sounion**

Carolyn Aguilar-Dubose
Professor, Universidad Iberoamericana, Mexico

City of Promenades

Studying old maps showing the transformation of Mexico City can unveil possible footprints and disappearance of historic facilities and utilities in the process of urban modernisation. The objective of this exercise is to uncover the location of old structures of Pre-Hispanic and Colonial Mexico City as a basis for creating a new footprint of urban memory and identity.

“A city of promenades” proposes the appropriation and use of public space, the recuperation of lost cultural and geographic landscapes; it takes the routes and paths, the aqueducts, the roads, the moats, the ramparts, the gates of the historic city and its connections to other villages which now conform this great metropolitan area and it revives them with a modern touch, to create a sense of meaningful place, giving the inhabitants the opportunity to experience the changes of a growing city.

These paths will serve as detonators of projects and actions which will improve patterns of use and sense of identity, offering landmarks, establishing linear parks as connectors of different scales of existing parks and, through modern design, creating a rediscovered footprint of monuments, landscapes and infrastructures long gone.

This proposal is an integral project for the Mexico City Metropolitan Area. It begins at the neighborhood level and forms part of an urban park system; connecting the surrounding natural landscapes and woodlands, the urban parks, sports clubs, neighborhood parks, squares, bridges, central reservations, sidewalks, tree and flower beds, chapels, rights of way, unused railways, roads, avenues, greenhouses, agricultural trails, cemeteries, brooks and waterways, ravines, canals, terraces, balconies, cloisters and convent patios, archeological sites and unbuilt urban block cores.

The city of paths and strolls, of boulevards, of old roads to ‘haciendas’ and convents, of dikes, gateways, old custom house gates, water fountains and springs, canals, causeways, watermills and aqueducts is an academic exercise with students and teachers to find a meaningful representation of the layers of history that builds a city and creates identity.

Jose Miguel Alvarez Romero

PhD Student, Instituto Universitario de Microgravedad "Ignacio Da Riva"
(IDR/UPM), Spain

Elena Roibas-Millan

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Javier Pérez-Álvarez

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(IDR/UPM), Spain

&

Ángel Sanz-Andrés

Professor, Instituto Universitario de Microgravedad "Ignacio Da Riva"
(IDR/UPM), Spain

**UPMSAT-2 Communications System Design, Integration and
Testing, within MUSE (Master in Space Systems) Academic
Plan**

In recent years, the development of small-size satellites by companies, research institutions and universities have become common practice. This tendency is based on the need for providing an easy and low-cost access to space for those institutions and companies that cannot afford the use of the usual big industrial platforms. In this context, IDR/UPM Institute (*Instituto Universitario de Microgravedad 'Ignacio Da Riva'*) of *Universidad Politécnica de Madrid*, has been developing the UPMSAT-2 microsatellite within the past years. This is one of the most relevant projects in the existing space engineering framework at IDR/UPM, which integrates university professors, research staff of IDR/UPM, and students of the Master in Space Systems (MUSE). Going back to the UPMSAT-2 mission, it should be underlined that this type of small-size satellite requires reliable communication systems able to ensure the quality of the communication link between the satellite and ground control, but they must be also optimized in terms of costs. Therefore, the use of Commercial-Off-The-Shelf (COTS) components, which are normally developed for terrestrial applications, has become a usual practice in such kind of small-size satellite missions. Therefore, these communication subsystems require deep trial campaigns to ensure their proper operation. From this point of view, a proper balance between the limited resources available in this kind of university-satellite missions and the appropriateness of the testing techniques is needed. IDR/UPM professors and MUSE students have performed the full design, manufacture and testing of the UPMSAT-2 communications systems (flight and ground). This paper summarizes the

development of the whole UPMSAT-2 communication system, describing the tasks that were required for its implementation, and focusing on how they were harmonized and integrated within the academic plan of the Master in Space Systems (MUSE).

Mohammed Firoz Challappurath

Assistant Professor, National Institute of Technology Calicut, India

&

Fathima Nidha

Architect, National Institute of Technology Calicut, India

**Sustainable Development through Urban Farming:
A Conceptual Model for Integrating Architecture with
Agriculture at the Neighbourhood Level**

Agriculture is the backbone of Indian Economy. A majority of this agriculture produce is consumed by urban areas. Due to rapid urbanization, unplanned development, climatic changes, lack of resources, drop in agricultural practices and several other reasons the condition of farming in the country is at stake by losing a large amount of valuable agricultural land with no effective produce. Though, some of these reasons are inevitable and beyond our control, there exists several innovative solutions to address the loss of agriculture land and vegetation. One such solution is the proposals for an urban vertical farm in cities at a neighborhood level. Accordingly, this paper examines the farming history of India and the world from 9000 BCE onwards and analyses the change in farming trends and the need of an urban vertical farming is established through analysis of food Security issues, growing urban centers and migration; drop in agricultural practices and employment as well as climatic changes and its effect on farming. The economics of urban vertical farming is analyzed with respect to conventional farming methods. The different urban farming methods like vertical farms, window farms, green house farms, roof top farms by using technologies such as hydroponics, aquaponics, aeroponics etc. are explored. Several good practices elsewhere are also studied. As an output of the study, a module of urban farming tower as an Architectural design solution is proposed which can act as a self-sustained model for a small urban neighborhood of fifteen thousand population. It is presumed that this design model developed can be replicated elsewhere in any developing country thus contributing to sustainable development of settlements at large.

Norbert Csizmadia

Lecturer, Corvinus University of Budapest, Hungary

Geofusion: Cities, Regions, Nations in the Geoeconomy Age; the Power of Geography

The study behind this presentation is based on a thorough investigation regarding the recent global, social and geographical processes. The presentation 'Geofusion' guides the audience with the help of maps in the global world of the 21st century through the quest for the winning nations, communities, leaders and powers of this age.

The findings of the study include a significant recognition that the scientists who are taken as explorers geostrategists of this century in this case, are expected to present guidelines of our *connected* world full of global social and economic challenges. In 2017 the author issued his book in Hungarian and English alike titled *Geofusion: Mapping of the 21st Century*. This paper presents the basic message of his book involving the following statements: We have to redraw our conventional maps replacing them with maps of questions making up objectives. Creativity and geo-knowledge is the pledge of a winning position in global economic competition. In the future's economic competition, if taken as a race, creativity is the fuel, connection networks and knowledge represent the safety belt. Local resources help us to go international. We can enter international geo-fusion networks only via our local community's values. Positive effects of co-operation, cultural diplomacy, knowledge and talent have to be trusted.

New Global Cities – Powerhouses in the 21st Century

According to various research and forecasts, the main economic concentration will be in 40 megacities and global centers. Based on various competitiveness analyzes and indices, global city centers and city networks are outlined, but if we look at other aspects of urban development like complexity, connectivity, creativity, technological development, viability, green cities, pedestrian and child friendly cities, creative and cultural centers, cultural spaces and knowledge centers, we get a city competitiveness index with quite new complex indicators. The research shows this result. In addition to the megacities and the global centers, with the investigation of functionality we got 64 so called 'fusionopolis' (i.e. fusion-polis) which stand for the most decisive economic power centers of the 21st century. In this city competition Asian centers considerably rise, as the world's functional city competitiveness index is being formed.

Using the lately discovered geographic and economic interrelations, the presentation tries to give a prognosis of the global processes. The

methodology contains the survey and analysis of many recent publications worldwide, regarding geostrategic, cultural, geographical, social and economic surveys structured into global networks.

In conclusion the author presents the result of the study which is a collage of the global map of the 21st century as mentioned above. In summary the presentation displays the results of a several year long study giving the audience an image how economic navigation tools can help the investors and travelers to get along in the changing new world.

Cansu Denizhan

PhD Student, Eastern Mediterranean University, Cyprus

&

Maya Nanitchkova Ozturk

Associate Professor, Eastern Mediterranean University, Cyprus

Urban Generic Sites: Multi-Sensory Spaces as Modes of Immediate Experience and 'Dwelling'

Dwelling as a natural condition of the human existence/ being occurs during the inseparable correlation between space and body. (Heidegger, 1971) The knowledge of the environment arises out via multi-sensory experiences of the self/ body as a path of the recognition. Tuan mentioned about the major impact of multi-sensory experiences by its transformative effect/ability on space which could become a place by this gained knowledge. (Tuan, 1977) Dominance of sight and the negligence of multi-sensory experiences which withdrawn the human being from existential realism is one of the major problem of this study. (Pallasma, 2012) Architecture: 'the physical presence of dwellers' as a primitive hint on the capacity of 'poesies' unfolds from existential reality. The aim of this study is to analyses identification of space by looking the process of the correlation between space and body on generic dwelling spaces. Those generic spaces: natural site (as a primitive immediate space), historical site (authentic /memorial, tactile spaces), temporary spaces (transformative action based space /space of change) and domestic spaces (as a man-made, nucleus and condense space of dwellers) were chosen by their high stimulation effects through the senses which represent valuable generic dwelling condition. In this study, houses considered as a compact identical unit as a part of whole identity of the urban space where it belongs. Also how environment forms the identity and infuse to the domestic spaces via experiences is one of the primary consideration of this research.

Arthur Firipis

PhD Student, Deakin University, Australia

Siva Chandrasekaran

Lecturer, Swinburne University of Technology, Australia

&

Matthew Joordens

Lecturer, Deakin University, Australia

Nurturing Creativity through Differentiation while using 1:1 Mobile Devices for Learning?

Differentiation is an important concept for educators, because it attempts to explain the relationship occurring between theory and application. The responsibility to manage this relationship is that of the curriculum designer. Stating the obvious alludes to the need to have a clear understanding about differentiation. With the acceptance of 1:1 mobile devices within the learning space, differentiating to facilitate its use effectively is an important discussion. This paper explores the theoretical and practical considerations when differentiating the curriculum to incorporate 1:1 mobile devices. Also, results from a recent research study are discussed to contextualise and understand learner perceptions when using BYOD (Bring your own device) within the learning space.

Ilaria Geddes

Postdoctoral Researcher, University of Cyprus, Cyprus

Understanding the Mechanisms and Impact of Growth on the Urban Form and Functioning of Cities

In the great majority of cases cities have been steadily growing and becoming increasingly complex through urbanization. Waves of growth may have occurred at different times and the characteristics of growth may vary depending on the geographical location of the city and its socio-economic and demographic context. However, it remains that common features, invariants, processes and regularities are persistently found in cities and in their growth mechanisms. These must be understood and exploited in our attempt to sustain better living environments. A key problem in our ability to analyze and understand the complexity of the urban form is the long-standing isolation of analytical approaches which were developed in different countries and research environments. Even more difficult is to develop and agree on a system of analysis which is able to capture the universal mechanisms through which cities change and assess how such changes impact on the functioning of cities, providing the evidence base to manage, mitigate and exploit the impact of growth and urban transformation.

This paper presents a transdisciplinary approach to urban analysis, which enables the deployment of multiple methods under a common framework. The approach is taken from the field of philosophy and the concept of cities as assemblages; within this a combination of social research methods and urban analysis tools are integrated to provide a comprehensive methodology for diachronic analysis of city development, thus enabling the understanding and assessment of growth patterns. The approach was tested in the case study of Limassol, Cyprus: a diachronic analysis of the city was carried out using historical and archival research, interviews with stakeholders, space syntax analysis, block size and land use analysis, mapping of contemporary census data as well as illustrative case studies. The aim of the research was to identify the mechanisms of growth which led to Limassol's specific urban form and identity. This paper presents the key research findings and discusses the extent to which the processes identified can be generalisable, how the proposed approach performed in this specific case, how it can be applicable to other contexts, the research challenges, contributions and prospects.

Xue Geng

Master Student, Southeast University, China

**A Study on the Revitalization of Traditional Villages in
Southern Anhui Based on the Symbiosis Theory:
A Case Study of Nanping, Anhui Province**

China is a traditional agricultural country with traditional villages distributed in vast areas. These villages are rich in historical information and cultural landscapes and they are also the living heritage of traditional Culture. The homesickness and historical memory of the Chinese are hidden in these traditional villages.

With the change of China's late Qing Dynasty and the twists and turns in urban construction after the founding of the People's Republic of China, the traditional villages have been in an unstable state. In recent decades, with the development trend of social diversification, the society has changed too much and too fast. The space of traditional villages is affected and the space is chaotic. The development and revitalization of traditional villages are severe.

This research based on the symbiosis theory analyzes the logical relationship between the traditional village symbiosis unit, symbiotic environment and symbiosis mode, and constructs the symbiotic model of traditional villages in southern Anhui. This study takes Nanping Village in Anhui Province as an example. The study explores the rural revitalization model of Nanping Village from various perspectives such as industry, economy, population and culture. This paper provides specific rural renewal recommendations and measures in terms of architecture, planning and management.

Rebecca Heckmann

Deputy Project Manager, University of Applied Sciences Stuttgart,
Germany

&

Alexandra Mittelstaedt

Researcher, University of Applied Sciences Stuttgart, Germany

Development of an Emission Calculation Tool for Sustainable Route Planning

The volume of traffic in cities and the associated emissions are currently the focus of social debates. Criticism of automotive-oriented urban redevelopment, conflicts over driving bans in inner cities and the question of how to make cities more liveable and more attractive for pedestrians and cyclists - in the interests of health and the environment - are central aspects. The strengthening of the sustainability concept, as well as the necessary reduction of emissions, urge the state and local authorities to act. In 2019, Stuttgart was the first German city to impose a ban on diesel driving. Such bans should lead to a lower number of vehicles, but at the same time alternatives need to be created. The change to sustainable mobility requires a multi-layered and integrated concept. According to a survey by HFT Stuttgart, the environmental aspect only plays a subordinate role when deciding on a means of transport, while factors such as reliability, travel time, costs and flexibility are decisive for the user. Pursuant to Pez (1998), a decision in favour of a means of transport is only made if there is no pronounced mobility behaviour. Assuming that younger people do not yet have a fixed mobility pattern, there is great potential at universities, to influence behaviour in an ecological way.

In order to achieve a rethink, the sustainability aspect is placed in the centre as a decision criterion for the choice of means of transport, but the relevant selection criteria of the user are not lost sight of. This concept is implemented via an add-on for existing route planning applications. The add-on visualizes the environmental aspect by integrating emission calculations for different ways to manage a route and a classification. To promote the use of the add-on, a bonus system and game functions are implemented.

Guohua Hu

MPhil Student, Hong Kong Baptist University, Hong Kong

The Making of “Political Enclave Economy” in China

The paper investigates a special political enclave economy in China, in other words, the state-promoted interjurisdictional economy. Unlike other types (ethnic, FDI etc.), such enclave economy is developed by some segregated administrative units for the purposes of resources, cooperation etc. It is thus distinct for its political heterogeneities, which is mostly influenced by the state’s regulation. More specifically, the administrative boundaries set limits for Chinese local states, who have to switch roles between competitors and collaborators from time to time, leading to unstable spatialities. This paper draws on Lefebvre’s theorisation of state and space to comprehend this phenomenon, mainly by his threefold schema of "homogeneity-fragmentation-hierarchization", arguing that these dimensions belong to a continuum with endogenous “heterogeneities”. During the process of state’s production of space, the “homogeneity” phase aims at getting rid of the “heterogeneity”, while the other two help generating new “heterogeneities” under state’s will, once the new runs counter to the governance, another round of schema will come into being. In practice, original political segregation presents the major heterogeneity, and by state-driven cooperation, a series of "homogeneity-fragmentation-hierarchization" works to establish a new special support for the making of political enclave economy. Empirical cases indicate that local states try to break through jurisdictional limits, which are outcomes of the former process of "homogeneity-fragmentation-hierarchization", and re-homogenize the institutional heterogeneity, to gain more resources of land, labor and developing opportunities.

Richard Jelier

Professor and Director, School of Public, Nonprofit and Health
Administration, Grand Valley State University, USA

**The Emergence of Moscow, Russia: A Progressive,
Cosmopolitan World City within an Autocratic State**

Benjamin Barber author of *If Mayor's Ruled the World: Dysfunctional Nations/Rising Cities* (2013) claims as nation states are failing on a global scale, cities are offering a progressive working framework to improve economic performance, environmental sustainability and quality of life. My research as a former Fulbright Scholar at Moscow State University, in Moscow, Russia, will evaluate surprising progress made by the City of Moscow in improving the infrastructure, the built environment and development policies to compete favorably with other global cities. Research methodology includes primary source documents, empirical data and semi-structured interviews.

Indeed, former Mayor Yury Luzhkov (1992-2000) helped usher in a great revival in Moscow, securing a degree of autonomy and finding a place as an emerging global city in an interdependent world. Moscow is the largest city in Europe with an official population of 11.5 million. Urban primacy is evident in Moscow as the city constitutes nearly one quarter of Russia's GDP. The average official income of Muscovites is four times the average Russian.

Russia's metropolitan development approaches are quite distinct from the patterns in North America or Western Europe. Yet, more recently the Soviet policies that worked to keep cities compact have weakened, even while market liberalization of the Russian Federation and new conceptions about the role of localism and the state is unleashing new creative potentials that will be analyzed.

This research specifically investigates Moscow's recent efforts to improve infrastructure - parks, historic environment, transport, urban services and the development of an international business center. Ultimately this research evaluates whether these advancements positions Moscow as a model of well-functioning urbanism worthy of notice on the world stage.

Bakur Jinoria

Specialist of Disaster Processes and Engineering-Geology Group, Ivane Javakhishvili Tbilisi State University, Georgia

DEM 360° for X-Y-Z (Turbulence Theory)

The purpose of the presentation is to connect more Scientist from all fields of natural science related to the planet Earth. To understand the external and internal ongoing processes, it is necessary to study the whole of the earth in 3D (X, Y, Z) fragmented and then connected. Because everything is closely linked, the positive results of the research is proportionate to how well we study the fragments and rectify each other for the whole earth. The research needs to be done as detailed DEM and DSM on the entire surface of the Earth, Which gives us an opportunity to understand the exact form of the earth's relief, exposition. The lithological knowledge of the surface of the earth and the knowledge of DEM gives us a picture of how the how the driving forces are operate. We know that from the center of the earth, the different point of the surface of the earth is at a different distance, but how important it is we don't know this. the GOCE gravity-tracking satellite has built the first-ever full map of Earth's gravitational field, this fact can be used as one of the main reasons to understand connection link of the earth, Because gravity acts on everything. the radius from the center of the earth to the surface, the level of heat and pressure is difference, which is reflected in the differentiation of rocks, we must take into account the fact that the surface of the earth is uneven, so we need to take into account the sea level and Earth's gravitational field. By analyzing this process, we will be able to understand the processes such as the turbulence exchange of rocks, tectonic connections, earthquake preliminary and so on.

Bun Song Lee

Associate Professor, University of Arkansas - Fort Smith, USA

**Characteristics of Cities Encouraging Bus Commuting,
Subway Commuting, and Active Commuting (Biking and
Walking to Workplaces) in the United States**

In my coauthored paper published in *International Journal of Sustainable Transportation* (2016) "Bus commuting, subway commuting, and walking to workplaces in US cities: Socioeconomic factors of transit commuters," we investigated bus ridership data in small- and medium-sized US cities, which has been primarily ignored in the earlier literature. We also analyzed data on bus commuters, subway commuters, and walkers to workplaces in the eight largest cities with extensive subway systems and 22 other large cities. The analysis employed the 2010 US Census (IPUMS data). Generally, the characteristics of subway commuters are quite different from those of bus commuters. The characteristics of walkers in all the US cities are very similar to those who commute by bus.

In the proposed paper we will expand our previous study in two directions: First, we will pool different years' US Population census data including 1990, 2000 and 2010. By doing this we will investigate how commuting behaviors in US small and medium-sized cities have changed over the time.

Second, our new analysis will concentrate on identifying characteristics of U.S. cities which encourage usages of bus commuting, subway commuting, and active commuting (biking and walking to workplaces). These characteristics of U.S. metropolitan areas will include both socioeconomic characteristics and transportation related infrastructures in each city.

Claudio Meninno

Contract Professor and Postdoctoral Researcher, University of Trieste,
Italy

Architecture and Infrastructure: Strategies, Methods and Techniques of Integrated Design for Cross-Border Territorial Development in Europe

The research aims to analyze the relationships between architecture and infrastructure by identifying the methods and techniques for the enhancement of the cross-border area between Italy and Slovenia, and in particular the territory of Gorizia and Nova Gorica. In addition to the general principles for territorial action, it is required to identify concrete cases capable of triggering the dynamics of economic development among the neighboring states within the European Community.

The objectives can be summarized as follows:

Identification of a methodology for the analysis and design of infrastructural networks aimed at the creation and development of large cross-border infrastructures for the economic development of a given geographical area.

Definition of a model of infrastructural and economic relations between member states of the European Community such as to be used as a reference in transnational development processes (this aspect was welcomed with particular interest by the President of the European Parliament, who gave initiative the Patronage of the European Parliament).

Identification of the areas involved in the construction of the research infrastructure, analysis of the needs and territorial repercussions, identification of the urban and architectural works necessary for the proper functioning of the operation and possible developments obtainable on the urban area concerned.

Expected Results

Identification of the actions necessary for the economic-functional success of a cross-border infrastructure node placed in a favorable strategic position (integrated logistics-economic platform).

Analysis of good practices for the identification of areas suitable for the acceptance of similar integrated areas and for their correct development.

Definition of punctual interventions related to the realization of the project.

Definition of a Replicable Model on European Scale

The picture that emerges is the definition of an integrated economic-logistic platform capable of being characterized as a retroport for the port system of the Northern Adriatic Sea and which could also benefit from the recognition of the status of a Special Transfrontier Economic Zone. This is made even more concrete by the direct relationship with the European Adriatic-Baltic and Mediterranean connecting axes, by the benefits deriving from the presence of the Northern Adriatic Sea ports system and in particular from the Free Port of Trieste.

In this extremely positive framework, the project could represent a point of union between various infrastructural layers and at the same time constitute the "positive systemic shock" identified by the research as an element capable of initiating rapid innovation processes for the territory analyzed.

Similar experiences on comparable areas have generated economic benefits such as to trigger urban and territorial regeneration operations with significant effects on the urban structure of the neighboring cities. Furthermore, this condition makes it possible to hypothesise the creation of architectural opportunities to encourage the reuse of abandoned or underused industrial areas, barracks (particularly numerous in the analyzed area), state-owned buildings and brownfields inside urban areas.

Srdan Nogic

Associate, PannonIQm Institute for Education and Research, Croatia
&

Igor Sipic

Head of the Scientific Team, PannonIQm Institute for Education and
Research, Croatia

The Discovery of Astrognosical Primordial Geometrical Matrix of the Pleiades Cluster with Effects on the Real Geographic Space

This paper presents the basics of the original method of topographic space analysis and its reconstruction, in a world context. The method is derived from the discovery of astrognosical primordial geometrical matrix of the Pleiades cluster with effects on the real geographic space, regarding urban and religious organization and impostation of the cities, sanctuaries and temples. For the first time so far, this method introduces the concept of *Trojan eponymy*. When the method is applied outside the Mediterranean, through Arab, African and Asian world, it gives compatible spatial and temporal coordinates, which points to the Pleiadean primordial pattern as a postulate of the overall spatial and geometric arrangement of the world.

The method was applied in several separate projects: Milesian colonization of the Black Sea, epic poem *Argonautica* by Apollonius of Rhodes, Hannibal's march on Rome – First Punic War, the legend of Loreto, the position and architecture of Pre-Romanesque Rotonda in Ošlje etc.

The matrix is autonomous in finding the lost prehistoric cities, which was verified in some obvious examples, such as archaeological site Kasta Tomb, Amphipolis. It opens and discusses the crucial question: who would nowadays be able to construct such a properly arranged matrix in which cardinal geographic objects and prehistoric cities throughout Mediterranean and Europe function perfectly, if they have not originated through the matrix itself?

The matrix projection is based on elementary geometry and mathematically confirms astronomical and terrestrial coherence through all the layers of history starting from the oldest known civilizations. Its nature is fractal and in itself precisely reflects the metaphysical principle "On Earth as it is in Heaven".

Interdisciplinary, natural science, philosophical and theosophical approach is proposed, in order to provide a critical review of this work, which, in terms of scientific research, introduces the necessary novelty and freshness, while in technological sense, enlivens the neglected dimension of the human as a depoliticized being.

Maria Oikonomou

Lecturer, Vienna University of Technology (TU Wien), Austria

&

Chsritoph Luchsinger

Head of Urban Design Research Unit, Vienna University of Technology
(TU Wien), Austria

Conversion Area Eleonas, Athens.

Urban Transformation Projects within the Framework of the Urban Design Studio at Vienna University of Technology

Eleonas district - originally an olive grove - is the infrastructural 'digestion apparatus' of Athens, located in the immediate proximity of the historical center and a gigantic conversion area in the time horizon of the next five to twenty years.

The task of the Urban Design Studio was to develop and present scenarios for this transformation based on synthetic thinking and action. The whole project is related to a cooperation agreement between the cities of Vienna and Athens.

Students were expected to develop both provocative and insightful approaches on Eleonas today's challenges, pressures, potential and complex circumstances in order to lead the way to change and decision.

The final outcome of the first two semesters (Winter Semester 2017-18 and Summer Semester 2018) was the development of ideas and proposals based on the various characteristics of Eleonas, taking also into consideration the existing plans and strategies of the different municipalities.

The goal of the final semester (Winter Semester 2018/19) was to bring together the previous work into a compact and applicable 'synthesis plan' / 'composition' / 'set of strategies' for Eleonas. Our students elaborated in one compact team in order to propose a new dynamic and desirable vision with a forward-thinking concept, flexible urban strategies and specific guidelines/remarks.

This paper introduces the working process and the final results in order to bring Eleonas' issues in the discourse between politics, the city (public and authorities) and the university.

Krystle Ontong

Lecturer, Stellenbosch University, South Africa

Exploring Place and Space as 'Fluid Centres' for Preparing Geography Student Teachers in Becoming Curriculum- Makers

Since the establishment of the national curriculum in South Africa the 'disjuncture' between university and school geography has become commonplace. The nature of change in geographical knowledge in the academy is therefore important in helping student teachers to understand and 'cope' with a rather 'fragmented' geography curriculum awaiting them in schools. One of the many challenges experienced by teacher educators is gaining a precise conceptual grasp of what geographical knowledge is and how it can best be mediated across the spatialized tension between the academy and school geography. Adding to the complexity of the knowledge agenda are the current pressing environmental and social issues. This poses several questions for teacher educators to reflect upon such as: *What is school geography really for? Secondly, what type of knowledge and skills are needed in the 21st century that would equip student teachers with an adequate intellectual toolkit to respond to these challenges in practice?*

In this paper I argue that some of the answers to the aforementioned questions can be found at the conceptual and pedagogical intersections of the notions of place and space, that is, at the 'fluid centre'. I shall address these questions by discussing how organising pedagogy around the 'fluid' centre could: provide a different lens for rethinking the purpose of geography education; illuminate an intellectual toolkit for student teachers to become curriculum-makers amidst a 'fragmented' school geography curriculum; and utilise student teachers' *sense of place* and *sense of planet* as key components in strengthening the relationship between university and school-based geographies.

Dimitris Panayotopoulos-Tsiros
PhD Candidate, University College London, UK

Scale and Perceptions of Urban Voids in Post-Industrial Cities. Learnings from Eleonas in Athens, Greece

The urban environment is often constituted of “patchworks of urbanisms” that result in the creation of urban voids; large inactive and neglected areas where key urban, social and environmental aspects are overshadowed by the speculative value of the territory.

By focusing on a single case study – the industrial urban void “Eleonas” in Athens – this research traces the transformation of the area in time and space and tracks the evolution of the notion of the void at the large, intermediate and local scales. Through mappings and interviews with policy makers, residents, employees and academics this paper explores under what conditions an area is seen as a “void” and how does this affect decision-making.

It has been found that tensions regarding whether areas are considered empty/filled, abandoned/in use, useful/worthless, etc. are inherent to the notion of the urban void and change depending on the scale of investigation. As these dichotomies appear regardless of the configurations of power or planning externalities, this paper argues that they are subjective perceptions that can become a tool of transformative change skewing decision-making towards specific actions and developments.

Using a trans-scalar and relational framework, this research provides with an understanding of the case that is broad enough to relate it to the wider metropolitan dynamics and narrow enough to include the day-by-day reality and ultimately question the assumption of Eleonas as an urban void.

Tanapon Panthasen

Assistant Professor, Kasetsart University, Thailand

&

Supaporn Kaewko Leopairojna

Assistant Professor, Kasetsart University, Thailand

Using the Smart Growth Principles for Real Estate Development around Rapid Transit Stations to Achieve Sustainability

Real estate development around rapid transit stations in Bangkok, Thailand, has been highly desirable for decades. A major drawback is that development depends on the individual idea of each real estate developer, without consideration for the quality improvement of the whole area around transit stations. Moreover, all developments are controlled by out-of-date regulations. Therefore, the land use around rapid transit stations does not promote economic, social, and environmental sustainability pillars. Recently, the Thai government introduced a policy which hopes to use the Transit Oriented Development (TOD.) concept as a crucial tool to make national rail development projects successful. Nonetheless, such projects have a high risk of being unsustainable as there is no TOD guidelines issued, and no requirement for the bidders to specify the economic activities and the size of the population around the stations following internationally accepted guidelines. This paper, thus, is to affirm that “using the Smart Growth principles for real estate development around rapid transit stations helps to achieve sustainability.”

The case study presented in this paper is an example of the real estate development around the rapid transit stations in the municipality of Rayong. This municipality is where the government plans to build one of its high speed train stations in an urgent plan to develop the Eastern Economic Corridor. The characteristics of Rayong Municipality are suitable for development utilising the Smart Growth principles. Data was collected through public hearings, spatial surveys, hands-on workshops, and questionnaires. Data analysis methods included content analysis along with percentage and mean statistics. The main content of this paper will show the process of using analysis results to create a master plan for real estate development projects around transit stations. Such a process starts by identifying the boundaries of the area to be developed, followed by reorganizing internal plot boundaries, then specifying how each plot of land is divided up to achieve cohesive mixed use. The density and height of buildings is then decided upon, followed by the calculation of building foot prints and whole building areas, and lastly the size of the population around the station is forecasted.

The creation of this master plan proved to the stakeholder that “using the Smart Growth principles for real estate development around rapid

transit station areas to achieve sustainability” is acceptable for future implementation. Also, the master plan helped to forecast a population growing to 313,337 in 20 years. This is highly beneficial for investment plans for real estate and rail system development projects.

Marijana Pantic

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Marina Nenkovic-Riznic

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&

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**City of Belgrade:
Between Reality and the European Green Capital**

Internationally granted and recognized awards, that a city could win, represent humongous capital for the city itself but also for the entire state. Starting from the support for improvement and empowerment of certain aspects, all the way to boosting number of tourists, a nomination process brings entire series of direct and indirect benefits. One of such awards is the European Green Capital that requires, similar to other competitions of that kind, serious preparation process and significant fulfilment of preconditions. Judging by the documents prepared by or in cooperation with the Belgrade city Secretariat for Environmental Protection, environmental filed is one of the most covered when it comes to the city development. However, qualities of a green capital depend on substantially more complex set of factors than just an active engagement of an institution or a sector. In addition, Belgrade differentiates from the cities that have been awarded the European Green City title so far for being a non-EU city and for still undergoing an intense urban transformation followed by economic challenges - characteristic for transitional countries.

In September 2018, the Mayor of Belgrade signed an agreement letter with the Mayor of Ljubljana (the European Green Capital for 2016), thus establishing official cooperation in experience and knowledge exchange on the matter of nomination and winning the Green Capital title. Therefore, the main focus of this article will be review of current state of Belgrade's environmental qualities and other preconditions necessary for the European Green City competition nomination. Indicating the difference between where it currently is and where it should be, the results are expected to help in the Belgrade's nomination process, but also to be an example for any other European city with the similar ambition.

Melina Philippou

Researcher, Future Heritage Lab, Massachusetts Institute of Technology,
USA

Design as a Form of Self-Determination: Autonomous Interventions at the Azraq Refugee Camp

The paper investigates design methodologies for autonomous interventions in refugee camps as a means to reconstitute the ontological deprivation of displaced communities in spaces of containment based on the case study of the Al Azraq refugee camp, Jordan.

In the absence of effective citizenship and institutions able to enforce international laws, refugees exist in the legal order within extraterritorial spaces such as Refugee Camps. In a philosophical level, Hannah Arendt and Giorgio Agamben argue on the ontological deprivation of Stateless people in refugee camps. Arendt suggests that camps separate stateless people from the common world geographically, socially, economically and politically, depriving humans of their primary capacity to influence their lives meaningfully. Giorgio Agamben supports a similar position referring to life in the camp as *Bios*, a life deprived of any meaning beyond biological needs.

The paper will discuss design as an act of self-determination in environments of ontological deprivation. Representative examples of the creative work of displaced Syrian refugees at the Al Azraq refugee camp bring forth non-institutional methodological tools that re-constitute the social and cultural values of communities in threat.

Operating in the boundaries of organized design, emerging from the bottom up and with the use of limited resources Bricolage, Hacking and Tactical Design transform and question the existing humanitarian design system to introduce a new approach for design in spaces facilitating refugees departing from life as *bios* and reflecting collective identity.

Examples span from cultural artifacts assembled with found objects (Bricolage) to Do It Yourself devices playfully overcoming camp regulations (Hacking) and camp regulation adaptations as a result of demonstration projects by displaced Syrians (Tactical Design).

The paper leverages the resources of the MIT-FHL two-year engagement with displaced Syrians at the Al Azraq Refugee Camp, Jordan with the support of the humanitarian aid organization CARE, supervised by UNHCR, and the German-Jordanian University (GJU) in Amman as part of the 1002 Inventions research project.

Barbara Polo-Martin

Professor, University of Barcelona, Spain. Mental Projections of a City in War

The Perception of Burgos through its Military Cartography

A range of different wars that took place in Spain produced a complex development of knowledge's branches relatives to war, being the cartography one of the most important. Through the production of maps from different points of view of local and foreign troops, we can understand the evolution of technique skills as well as mentalities and concepts about the representation of a city developed in different countries but used in Spain. This last point should be understand from the perspective that a map made over a territory is an impartial mental projection, which reflects the most important or relevant for its creator, the mapmaker. Through the case of Burgos, one of the most important cities in the military defense of Spain in the 19th century, we find a variety of mental projections during the conflicts, something exceptional. The different versions of the same city allow us to know how they thought that the city was, according to particular interests.

Sorana Radulescu

Assistant Professor, Technical University Graz, Austria

Urban Gulliver and the Negotiation of Public Space

Urban Gulliver is a fictional urban character, introduced by the author out the need to react to the contemporary challenges of the urbanization process, with special focus on the European cityscape. It represents the outline of an implementation strategy of large-scaled, hybrid structures in urban settings. The strategy sets the focus on the agglutinant, the binding element necessary for creating the synapses between L-sized structures and their surrounding urban fabric: the public realm.

The provision of public spaces is a city's main responsibility. Ironically, public spaces have become the vehicle of the privatization process of the city. The shift from public sector towards private ownership models, the increasing density and changing patterns of public life in the European metropolises call for reactions. Urban public ground is reduced, restricted and diminished through the privatization process. Despite maintaining an apparent accessibility, this process superposes a layer of restrictions that transform the space and induce an almost invisible shift, not easy to perceive in everyday life. At first glance, urban privatized areas are seductive: clean, safe, well-designed, apparently welcoming and civilized. In exchange, the users have to accept the compromise of re-writing their behavior. As the concept of public realm has diversified and become elastic in the last decades, three phenomena were considered influential: interiorization, privatization and commercialization – all three byproducts of the vehement commodification process that affects large-scale ensembles. These mutations occurred especially at the encounter of city and building – Urban Gulliver's neuralgic spot.

The paper discusses the formalization of such public-private agreements (privately owned public spaces, business improvement districts etc.) and the consequences of the privatization patterns that affect large-scaled structures. The study looks for administrative and planning tools – from the realm of urban design and architecture – to counteract the evaluated negative outcomes of the privatization of public spaces and turn the pessimistic discourse into a benefit for the collective experience of public space. Methodologically, the paper relies on the analysis of case studies and the comparison of architectural and administrative means of action. In this regard, the study uses the analysis of the L'Illa Diagonal (Moneo & de Solà-Morales, Barcelona, 1993) as the Litmus test, to extract and extrapolate a set of intervention instruments.

Martina Sedlakova

Assistant Professor, Czech Technical University in Prague, Czech Republic

Public Space and Artefacts: Several Alterations of Historical Squares in the Czech Republic

Touristic mode, widely understood as accumulation of perceptions, is embedded in contemporary society. It has influenced not only functioning and reception of cities but also cities' agenda of making alteration of public space. The touristic mode is related to another overwhelming feature of our society namely aestheticisation. Indeed, aestheticisation often affects alteration of public space.

The paper looks at different examples of several alterations of historic squares in the Czech Republic where artefacts play a crucial role, paying attention to the relationship between artefacts, space and special delineation and their perception. The paper focuses on the relation between object and historic built environment and how it is influenced by touristic and aesthetic reception of the city and also by legacy of modernity. The latter is deeply rooted in the Czech modern architecture which had specific nationalistic and political context within the Czech history.

The role which artefacts play in modification of public space is often related to the touristic mode, to the legacy of modernity and to the phenomenon of aestheticisation. The mentioned approaches and tendencies which also shape alteration of public space will be critically discussed in regard to the preservation of historic environment.

The paper departs from the theoretical approaches of B. Groys, W. Benjamin and Z. Bauman, relating them to the concrete examples of alteration of public space of several historic squares in the Czech Republic.

Yue Sun

Graduate Student, Southeast University, China

Urban Park Accessibility Evaluation Based on Gravity Model and Realistic Traffic Data: An Example of Baoding

Urban residents in the new era tend to live in a city that is more connected to nature and more diverse life. Urban park provides people with the possibility of leisure, sports and communication so that promoting its service level and accessibility is an important way to improve the quality of the city and the residents life.

In the accessibility study, the gravity model is a more reasonable research method. It takes into account the residents' demand for facilities, the service supply capacity of the facilities, and the transportation distance between residents and facilities. However, this method is rarely used to explore the accessibility of urban park. The study of humanity is even more lacking in point-to-point precision research. Besides, traditional analysis usually establishes a road network based on road grades, but the real situation is more complicated. We cannot simulate a real traffic system.

As a result, in this paper, the point-to-point gravity model and realistic traffic data are taken as the core technical method, which can improve the accuracy and objectivity of the analysis. The specific technical methods include:

1) Use the WeChat thermal data to establish the spatial distribution of the population into grid.

2) Use online Application Programming Interface (API) of the Amap to obtain the location of the urban park and the realistic point-to-point time from every population grid to the park under different modes of transportation.

3) Use the green area to estimate the service capacity of each park.

4) Taking Baoding, Hebei Province as an example, we conduct a case study. Finally, the paper comprehensively evaluates the service level and accessibility of the urban park, and make recommendations on its distribution.

The results show that the overall urban park accessibility of Baoding has a polarized distribution. We should achieve a balance between the population and the urban park service level. In the future construction of urban park system, areas with high service population, low service capacity and low accessibility should be paid close attention.

Grete Swensen

Research Professor, Norwegian Institute for Cultural Heritage Research,
Norway

When the well-Established Garden City meets the Contemporary Compact City Planning Ideal

The compact city and densification is today considered a suitable means to promote sustainable urban development. Regional cooperation across municipal borders is used as a means to provide housing as more people are moving into central areas.

What happens to small and well-established historic cities when they are being included in the broader urban belt of larger cities? How can they maintain their place-specific identity and preserve, or even strengthen their urban heritage when strong economic densification forces are present? Such broader societal questions that contemporary planners are facing will in this paper be narrowed down to the following research question: What perspectives can provide inputs that can strengthen local planners' arguments for preserving the Garden City?

The analysis is based on a case study carried out in Lillestrøm, situated in the outskirts of the capital Oslo, Norway. It was established around the saw mill industry in the middle of the 19th century. The overall traces from the town plan of the Garden City from 1946 is still prominent in large parts of the city – but threatened from various angles. The method used for the analysis will be briefly presented (DIVE: Describe, Interpret, Valuate, Enable), but the case will primarily be discussed in view of the input such studies can be for local planners in need of strong arguments early in the political process.

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Student-Teachers' Conception and Perception of the Use of the Inquiry-Based Approach in Geography Fieldwork in Singapore

The secondary and junior college geography syllabuses in Singapore recommend the inquiry-based approach for the teaching and learning of Geography. One salient feature of the syllabuses is the introduction of geographical investigation in fieldwork as a component in the examinations for both lower and upper secondary. Therefore, it is now necessary and essential for geography teachers to conduct geography fieldwork for students to enable them to actively make meaningful connections of what they learn in their classrooms with the realities in the field.

This present qualitatively study seeks to explore 36 student teachers' conception and perception of applying the inquiry-based approach in fieldwork within a 39-hour "Field-based Teaching in Geography" course at the National Institute of Education, Singapore. The key objective of the field-based teaching course is to enable student teachers to construct and deepen their understanding collaboratively of how to plan and conduct field-based lessons in Geography. It is an experiential course where student teachers will experience field inquiries themselves. Student teachers are required to complete three sets of reflections as part of their portfolio for assessment. The guiding questions for each reflection are:

1. What have I learnt about the nature and role of sparking curiosity in field inquiry? How might I spark curiosity in my students about a field inquiry topic?
2. What have I learnt about the data collection and data representation in field inquiry? What implications does this understanding have on designing field inquiry for my students?
3. What are my key understandings and takeaways about field inquiry from this course? How do these guide me when designing field inquiry for my students?

These reflection pieces from the 36 student teachers were analysed to surface themes and issues for further discussion. This paper will provide some insights from the student teachers' reflections so as to understand how they themselves construct their understanding of fieldwork and their conception of the inquiry-based approach in fieldwork.

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Engineering Education with Mixed Reality (MR)

Nowadays, virtual reality (VR) is widely used in different applications such as healthcare, fashion, sports, education, commercial and entertainment, etc. Education and training is one of the leading area which is expected to grow to US\$2.2 billion in revenue by 2023. For the education and training in various disciplines, VR gives an opportunity to connect with learners and teachers in a novel and meaningful way. VR enables experiential learning by simulating virtual environments. It not only increases students' levels of engagement. Hands-on VR learning approaches can also contribute to increase cognitive and memory abilities. It is suggested that games, simulations, and virtual worlds in VR were effective in improving learning outcome gains of the students in higher education.

Mixed Reality (MR) is the most reason reality teahnology which encompassing both virtual reality (VR) and augmented reality (AR). MR further enhances the effects of VR technology in teaching and education. It not only allows digital model combined with real world, but also enable users to interact with the digital content dynamically in real time. MR allows interaction and feedback from the students which is particularly important for enhancing experience in teaching and learning. The benefits of incorporating MR technology into educational experiences include better engagement and the opportunity for students to experience and better remember what they have learned.

Despite various approaches have been developed to help students in understanding engineering subjects with the aids of VR, not much work has been conducted to investigate the effects of MR in teaching engineering subjects in tertiary education. Therefore in this project, an MR application is proposed and developed for the teaching and learning of Enigneering subject in tertiary education. The application is developed on the HoloLens system. A practicable application has been designed that allows students to visualize the geometry of 3D objects, as well as the exploded diagrams of selected components. The students can command the system through the command manual, or signal the system through gazing, gesturing and voice to implement instructions. We have organized two MR workshops for the teachers and students in the university to collect their feedbacks and comments. The teachers and students are

allowed to experience and develop their MR application in the workshops. It was found that the MR application can help students in understanding the learning outcome of the engineering subject in university, the workshops can also enhance the skills of teachers in teaching university subjects with the support of MR. The outcomes and recommendations for future work of the proposed MR application are discussed and explained.

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Transport Policy and Create a Western Balkans Market: How to Mirror the EU's Experience

The creation of a United Europe is in the final stage. For the complete mosaic image called European Union, the part of the Western Balkans still remains to be assembled. Last but not so simple step. Historically vulnerable, sensitive, mixed with many nationalities, similar but still different. Economically underdeveloped and vulnerable, socially unstable and politically aroused, the Western Balkans are still far from a stable European core. GDP per capita in the Western Balkans, adjusted for purchasing power parity, is half that of eastern European EU countries, one-third that of southern EU members and a mere quarter of the richest EU members in western Europe.

The question that imposes itself is: how to overcome those differences among Balkans countries, to complete the historical vision and final mosaic puzzle of European Union?

We should look for the solution historically for several decades back when creating the United Europe model. Prosperous and contemporizing Europe began its vision with the creation of a common market. And the market gives its benefits only with its physical ties i.e. transport and communication links. Transport links between the countries of the Western Balkans, with all accompanying economic, political and administrative adjustments, can contribute to realizing the single market as the final phase of a United Europe. All future hopes and views are focused on finalizing Pan-European transport corridors in the Western Balkan countries, through which the trade peaks will be strengthened, overcoming the decades-long problems and conflicts in this part of Europe, and to achieve the long-awaited model for a Common European Union. But we must be realistic enough to see that transport infrastructure is not some miraculous tool with which to solve a society's development problems. It is only one part of the story. Transport must work in union with national development programmes, physical planning, investment, economic and monetary policy, custom and legal regulations. But we must acknowledge that, in many respects, the quality and success of life of Balkan's citizens depends on the vitality and responsibility of implementation many structural changes. One of the crucial factors is still transport infrastructure.

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Geographic Information System (GIS) Analysis of Developmentally Disabled Adult Offenders

Purpose: Adult offenders diagnosed with developmental disabilities have been referred for services to a Northeast Ohio county agency. The purpose of this paper is to examine their repartition in the three areas of the county as determined by zip codes, their involvement with the criminal justice system, types of offenses they committed, their indictment, and the court outcomes.

Design/methodology/approach: This study used a geographic information system (GIS) mapping based on secondary data collected from the 2008 to 2012 American Community Survey and a random sample of 160 participants selected from an agency database including 850 clients.

Findings: The authors found that the concentrations of offenders in the core city, inner, and outer suburbs of the county were, respectively 71.7, 19.6, and 8.7 percent. The largest racial groups included African Americans (112; 70 percent) and Whites (33; 20.6 percent). Male offenders (155; 96.9 percent) outnumbered female offenders. Of the offenses committed, 42.9 percent were crimes against persons including kidnapping, abduction, assault, followed by crimes against property (22.2 percent), and crimes against society (26.4 percent). As they appeared before Mental Health Court or Non-Mental Health Court judges, the court outcome evolved from community control for six months to prison sentence of 120 months.

Research limitations/implications: These findings will enable agency professionals to look for protective as well as risk factors that are prevalent in each area of this NEO county and make plans for more effective, preventative, and clinical service provision.

Originality/value: The use of GIS for data analysis represents an innovation in the research field involving adult offenders with developmental disability as it allows professionals to look for protective as well as risk factors that are prevalent in their clients' immediate environment.

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Geostories. Landscape along the Border Italia-Slovenia-Austria

The research, in collaboration with the teaching activities of the Laboratory of Integrated Design of Architecture and Built (CdLMcuA - DIA engineering and architecture department - University of Trieste), investigates the transformations that occurred and still going on, along the **Italian, Austria and Slovenia border**, to follow of the geopolitical changes of the last 20 of this geographical area of Europe. The research rediscovers the traces of "landscapes in danger of extinction", and proposes a new interpretation of architecture and landscapes, starting from the **geographical matrix of the border**.

This research is a reflection **between geography and architecture**, an ancient theme that has always accompanied the history of man and the construction of the landscape, just think of the Chinese wall or the Roman aqueducts, the Hadrian's Wall or the great agricultural reclamation. Geography rewrites and informs new architectural languages, and architecture, if observed with the geographer's point of view, cyclically redraws, through the scales and the history of geography, new relationships, new assets and new texts: the palimpsest.

The imagined path (geography) includes 13 steps (landscapes) along the 180km of the border between Italy, Austria and Slovenia that configure a new vision (the story), from Tarvisio to Trieste.

The research work is divided into 4 phases: analytical, synthetic, interpretative and design. Various linguistic registers and different media have been used to rediscover the fragile relationship between word and content, between territory and environment, between landscape and place, between figure and image. 11 research groups (visions) worked to investigate the 13 landscapes, which produced a new figure of the "deleted border", and proposed a "new border geography".

The "eleven visions" imagine, each one, a "new geography of the border", which altogether reshapes in an "acrobatic" way an unpublished morphology of *limes*, which is the palimpsest of a multiethnic community in which the stratigraphy of history, geography and architecture, rewrite once again, a new story between geography, landscape and architecture.

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Assessment for Adequately Qualified Instructors in Maritime Education and Training Institutions

Introducing new technologies, knowledge, understanding and proficiency for seafarers is a challenging task for maritime instructors since it affects maritime safety. Effective teaching strategies depends on qualified instructors with STCW Convention requirements and adequate arrangement of teaching. According to STCW Convention every party shall ensure that all instructors of the Maritime Education and Training (MET) institutions are appropriately qualified for the particular type and levels of training. This article presents a review of factors that are not included in STCW Convention requirements and are very important for development of instructor's competences and the strategies for teaching and learning.

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A Comparative Study on the Residential-employment Characteristics of New Urban Area in Nanjing and Suzhou-Wuxi-Changzhou Metropolitan Area

Since the middle of the 20th century, the emergence and development of the metropolitan area has become an important trend of urbanization worldwide. At present, the metropolitan area has become the basic form of regional economic development and spatial structure organization in the new era of China. However, the new urban areas included in each metropolitan area have been mismatched with the job-residence relationship to varying degrees. In this context, based on the metropolitan perspective, the author takes two metropolitan areas in southern Jiangsu province—Nanjing metropolitan area and Suzhou-Wuxi-Changzhou Metropolitan area as examples. Based on summarizing the rules of occupational and residential characteristics of their new urban areas, this paper analyses the different characteristics of residential-employment space between the two metropolitan areas, explores the dynamic mechanism, and tries to put forward strategies and suggestions.

Firstly, by comparing the residential-employment space total measurement results of the two metropolitan areas, we find that the current residential-employment situation in the new towns of Suzhou-Wuxi-Changzhou Metropolitan Area and Nanjing metropolitan area are relatively balanced, but the residential-employment deviation index value of the new towns in Suzhou-Wuxi-Changzhou metropolitan area is better than that of the new towns in Nanjing metropolitan area, and the value of Nanjing metropolitan area is far from the ideal value year by year. Therefore, we determine that the total number of jobs and housing in the Suzhou-Wuxi-Changzhou metropolitan area metropolitan area is more matched.

Secondly, using questionnaire data, the author calculates the average residential separation index, employment separation index and occupational-residential separation index of the two metropolitan areas. At the same time, according to the commuting satisfaction of residents and employees and the weight of commuting factors obtained by SPSS analysis, the author calculates the degree of separation of residence and employment in two new metropolitan areas. Then, comparing the differences of occupational and residential characteristics of the two metropolitan areas based on commuting factors, the author finds that the calculation results of Suzhou-Wuxi-Changzhou metropolitan area are better than those of Nanjing metropolitan area.

Thirdly, the author makes a correlation analysis between occupational-residential population and spatial characteristics and

occupational-residential separation score, and draws the main influencing factors of occupational-residential separation in the two metropolitan areas.

Subsequently, using POI data of Nanjing, Suzhou and Changzhou cities, the nuclear density distribution maps of residential and employment space in the two metropolitan areas are generated respectively. By comparing the two maps, it is concluded that the employment and residential centers in Nanjing metropolitan area tend to be single-center structure, while Suzhou-Wuxi-Changzhou metropolitan area shows a multi-center trend, and the correlation of occupational and residential space in the new urban areas of Su-Xi-Changzhou metropolitan area is higher. It is inferred that the occupational-residential balance of new towns in metropolitan area is also related to the structure of metropolitan area and traffic conditions.

Finally, this paper explores the dynamic mechanism of the difference of job-housing matching characteristics between Nanjing metropolitan area and Su-Xi-Changzhou metropolitan area, and puts forward corresponding solutions.

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Ecological Resilience Assessment and Optimization Suggestions of Yangtze Middle Reaches Megalopolis

Research on the assessment and regulatory control of region ecological resilience is of great significance for both urbanization quality improvement and sustainable development. This study selects Yangtze Middle Reaches Megalopolis which includes 4 urban agglomeration sub-regions such as Wuhan megalopolis, Xiang-Jing-Yi city belt, Changsha-Zhuzhou-Xiangtan megalopolis and city cluster surrounding Poyang Lake totaling 31 cities in China as objects. Using systematic analyses combined with a comprehensive index assessment method, this study constructs indices to examine the region's ecological resilient capacity for change and renewal. Regional ecological organization, function and maintenance are three major indices cause climate, vegetation coverage and urban eco-facilities are placed emphasis on the assessment. And each of them involves 2-4 specific parameters. In addition, the entropy value method is used to evaluate overall urban ecological resilience in the respective region. After collecting datum, the GIS and regression model are used to analyze. The result of the assessment reveals the spatial differentiation among cities and the distribution pattern of the ecological resilient capability in the Yangtze Middle Reaches Megalopolis. There appear to be a low level of ecological resilience capability in the megalopolis and fragmentation is remarkable. And the capability spatial distribution of the 4 urban agglomeration sub-regions of ecological resilience is classified as balanced pattern, severe fragmentation pattern and center-edge gradient pattern. Furthermore, city's population size is also verified to cause the low ecological resilience. Three Suggestions for optimization are put forward in the discussion part. They are overall promotion strategy, sub-regional control strategy and population control strategy.

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The Regeneration of the Historic District Guided by Reconstructing the Walkability: A Case Study in Sifang Road, Qingdao, China

Walkability is an important factor in building social networks and releasing the city's charm. At the same time, the street is the password of the city memories, with relatively enduring physical and spiritual attributes in terms of space and function. Qingdao was transformed from a small fishing village to the most important trade port along the northern coast of China for the planning and construction of Germany at the end of the 19th century. The growth of the streets in the old town vividly reflects the topographic features of the city, as long as the functional layout and evolution of planning ideas. The Sifang Road Historic District is the earliest planned area in the old city, designed by German architect Alfred SiemBen as the living area for the labors who work for production and services. In the twentieth century, a unique chessboard texture and inner courtyard building was formed, and it is also the characteristic block which has the most densely population, thriving business and civic culture. However, when the new millennium comes, with the compulsory interference of government, some of the courtyards were demolished in 2002 due to the construction of the viaduct. In 2017, all the residents were removed because of the renovation of the Sifang block. As a consequence, the block has completely lost its integrity and authenticity. Based on this dilemma, the regeneration plan begins from retrieving the memory of the streets, through systematically creating the walking environment and activating local featured function by acupuncture, repairing street vitality and reshaping sustainable social networks.