

2022 Virtual Summer School on Resilient Cities

July 25-29, 2022

BACKGROUND

The summer school will be jointly organized by ISPRS Student Consortium (ISPRS SC) and Beijing University of Civil Engineering and Architecture (BUCEA), mainly focus to the methods and technologies on Resilient City. It will be a virtual event held during July 25-29, 2022.

Experts from international universities and ISPRS will be invited to give lectures to the students and young technicians so to provide them with innovative practical and methodological knowledge and skills on robustness, rapidity, redundancy, resourcefulness of city and sustainable development plan. In addition to the regular courses, a variety of cultural practice activities will be arranged. The summer school will promote the multi-cultural, multi-disciplinary and multi-level communication among students from different countries and regions.

2021 Virtual Summer School on Smart City has been successfully organized by ISPRS TC III, ISPRS SC and BUCEA, there were 299 students joining us who came from 56 universities, 27 countries. BUCEA also has successfully organized five International Summer schools since 2016, with more than 1000 attendees from more than 70 universities. One of 5 is the ISPR SC and TC III joint Summer School held in May 2018.

REGISTRATION

This event is free to attend. To participate this event, please complete the registration form and send it back to buceaiss@hotmail.com by **15 July 2022**. The further details including the invitation CODE and the certification will be shared by the organizer through the email. The organizers will review the applications and send the notification of acceptance to those who meet the requirements.

VENUE

This online event will use ZOOM system for communication. Participants need to prepare the ZOOM system before the event.

AGENDA

Note: the time in the agenda is **Beijing Time (UTC+8)** , 8 hours ahead of GMT.

No.	Institution	Subject	Lecturer
July 25 (Monday)			
Moderator: Prof. Jie Jiang, Secretary General of ISPRS			
14:30-15:00	Opening Ceremony & Welcome Addresses		Prof. Aiqun Li
			Prof. Jie Jiang
			Laxmi Thapa, ISPRS SC
15:00-16:00	ISPRS	Lecture I: TBD	Guest from ISPRS
20:00-21:00	Politecnico Di Milano, Italy	Lecture II: An Outlook from Europe on Sustainable and Resilient Cities. What We Learnt and Future's Strategies	Prof. Luca Maria Francesco Fabris
21:00-22:00	Natural Resources Canada, Canada	3D Visual Perception and its Applications in Urban Developments	Dr. Mozhddeh Shahbazi
22:00-23:00	NewSchool of Architecture & Design, USA	Lecture IV: Resilient Cities	Prof. Daniela Deutsch
July 26 (Tuesday)			
Moderator: Prof. Tao Chen, Vice Dean, International Development Research Institute, BUCEA			
16:00-17:00	University of Reading, UK	Lecture V: Visioning sustainability on urban-scale mega-projects	Prof. Stuart Green
20:00-21:00	University of Central Florida, USA	Lecture VI: Development and Application of Noncontact Sensing Solutions for Built Environment	Prof. Peng Sun
21:00-22:00	Auburn University, USA	Lecture VII: Stabilized or Surface-Modified Nanomaterials for in situ or onsite Remediation of Contaminated Soil and Groundwater: From Bench to Field	Prof. Dongye Zhao
July 27 (Wednesday)			
Moderator: Xing Huang, Deputy Director, International Development Research Institute, BUCEA			
15:00-16:00	Bahria University, Pakistan	Lecture VIII: Nanofluids-Inception and Development	Prof. Muhammad Ramzan
16:00-17:00	BUCEA, China	Lecture IX: Resilient Cities: Dynamic Systems of Green Open Spaces	Prof. Mengyixin Li
20:00-21:00	ISPRS	Lecture X: Introduction of ISPRS Student Consortium	Laxmi Thapa

21:00-22:00	BUCEA, China	Lecture XI: Advanced Robotics and Industrialized Building Systems	Prof. Xiaowei Shan
22:00-23:00	Tongji University, China	Lecture XII: Spatio-temporal Analysis for Human Urban Activities	Prof. Wei Huang
July 28 (Thursday)			
Moderator: Rui Ding, Professor, School of Urban Economics and Management, BUCEA			
15:00-16:00	University of Adelaide, Australia	Lecture XIII: Resilience: A personal perspective	Prof. George Zillante
16:00-17:00	University of Reading, UK	Lecture XIV: Sustainability Across Different Scales: The Foundation of Resilient Cities	Prof. Emmanuel Essah
20:00-21:00	Auburn University, USA	Lecture XV: Reality Capture for Built Environment and Heritage BIM	Prof. Junshan Liu
21:00-22:00	BUCEA, China	Lecture XVI: Sensing urban dynamics with big data	Prof. Shishuo Xu
July 29 (Friday)			
Moderator: Prof. Tao Chen, Vice Dean, International Development Research Institute, BUCEA			
15:00-17:00	Group Discussion & Closing Ceremony		

PROFILE OF PRESENTATIONS

WELCOME ADDRESSES



Prof. Aiqun Li, Vice President, BUCEA
liaiqun@bucea.edu.cn

25 July

14:30-
15:00



Prof. Jie Jiang, Secretary General, ISPRS
jiangjie@bucea.edu.cn



Er. Laxmi Thapa, President, ISPRS Student Consortium (need confirmation from ISPRS)
thapalaxmi278@gmail.com

LECTURE 1

25 July

15:00-
16:00



TBD (need confirmation from ISPRS)
TBD
TBD

Topic TBD

Introduction TBD

Biography

Biography TBD

LECTURE 2

25 July

20:00-
21:00



Dr. Luca Maria Francesco Fabris
Professor, Politecnico Di Milano, Italy
lucamariafrancesco@polimi.it

An Outlook from Europe on Sustainable and Resilient Cities. What We Learnt and Future's Strategies

It has been more than 40 years since the concept of urban ecology has been applied to landscape and urban design in Europe. The lecture introduces some of the most relevant examples,

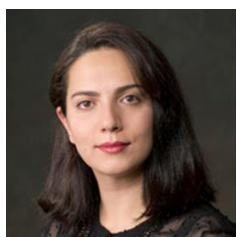
discussing the passage from theory to practice and the evolution of the concept of ‘green’ and ‘ecology’ to ‘sustainable’ and then to ‘resilient’, trying to interpret the following strategy to be applied to reach new paradigms of ‘healthy’ and ‘resistant’ strategies for the cities of tomorrow.

Biography

Luca Maria Francesco Fabris, journalist and architect, obtained a PhD in Architectural and Environmental Technology and a Master in Urban Planning and Environment. He is a Beijing University of Civil Engineering and Architecture Distinguished Expert and Associate Professor in Architectural Technology and Environmental Design at the Politecnico di Milano (Polimi - Italy) Architecture and Urban Studies Department. Fabris has taught since 1997 at the Polimi’s AUIC School’s MS in Architecture and MS in Landscape Architecture – Landscape Heritage, serving as a referent for several Erasmus+ agreements in Europe and various exchange and Double Degree programs in China, Canada, and Japan. He is writing for the international architectural reviews The Plan and ABITARE and is Editorial Director of the Italian technical architectural magazine YouBuild, Scientific Director of the Environscapes book series published by Maggioli Editore (since 2008). Visiting professor at European, American and Asian Universities, Fabris focuses on research related to contemporary built environment, resilient and sustainable cities, and landscape metabolism. Editor and scientific referee of various university publications, Fabris has written several books and essays about the above subjects and serves as a specialized journal reviewer. More on www.environscape.eu

LECTURE 3

25 July



Dr. Mozhdeh Shahbazi

Physical Scientist Expert, Natural Resources Canada, Canada

mozhdeh.shahbazi@nrcan-mcan.gc.ca

21:00-

22:00

3D Visual Perception and its Applications in Urban Developments

In this lecture, first we will learn what 3D visual perception means, how it can be achieved, and what technologies, sensors and platforms are involved in it. Next, we will look into some sample applications of this technology in different aspects of urban developments, including land-cover mapping, structural health assessment, traffic surveillance, monitoring urban parks, city tourism, and sustainable energy.

Biography

Mozhdeh Shahbazi (PhD, PEng) holds a BSc degree in survey engineering with a minor in civil engineering, MSc in photogrammetry engineering, and PhD in remote sensing. Her expertise is in the areas of computer vision, deep learning, photogrammetry, sensor–integration and self–calibration, and robot vision. In 2022, she joined the government of Canada in the ministry of Natural Resources as a computer vision and photogrammetry scientist. She is currently developing automated techniques for geo-referencing and processing historical images to extract various statistics related to the natural resources of the country.

As part of her voluntary activities, she has been a secretary of the International Society of Photogrammetry and Remote Sensing, vice president of the Canadian Remote Sensing Society, associate editor of Canadian Journal of Remote Sensing, and co-editor in chief of Journal of Unmanned Aerial Vehicles and associate editor of Drone Systems and Applications. She has been an active participant and organizer of STEM outreach programs such as NSERC Chairs for Women in Science and Engineering, Women in Data Science, and Cyber Mentor.

LECTURE 4

25 July



Dr. Daniela Deutsch

Professor, NewSchool of Architecture & Design, USA

ddeutsch@newschoolarch.edu

22:00-

23:00

Resilient Cities

For the foreseeable future worldwide, urban population will continue to grow. By some estimates, 90% of this growth will occur in urban areas of less developed countries. While people continue to migrate into urban areas, we have to ask ourselves: How do cities and those that make them respond? What are the implications? How does this affect agricultural land? How and when will renewable resources meet the challenge? Is it possible to make a city center CO2 neutral? How do landscapes respond? Our future depends on how we direct the growth of our cities and respond to the problems that will arise.

This lecture will frame some of the most pressing local and global threats that challenge the resiliency of the contemporary city, coupled with select forward thinking solutions, worldwide, and from students at the NewSchool of Architecture and Design.

Biography

Daniela Deutsch has been practicing and teaching Architecture for the past 20 years. She is currently the Head of Architecture Programs and Professor at the NewSchool of Architecture and Design in San Diego where she teaches Integrated Design Studio and Environmental Systems with a focus on an integrated approach to energy-efficient design. She currently serves on the Board for the San Diego Green Building Council. She holds a master's degree in architectural engineering from the Technical University of Darmstadt in Germany.

LECTURE 5

26 July



Dr. Stuart Green

Professor, University of Reading, UK

s.d.green@reading.ac.uk

16:00-

17:00

Visioning sustainability on urban-scale mega-projects

The presentation will explore the challenges of visioning sustainability on urban-scale mega-projects. The underlying perspective is shaped by the recognition that the material realities of sustainability are continuously shaped and re-shaped by the narratives that are mobilised. Sustainability leadership can therefore be construed in terms of the continuous projection of a coherent narrative of sustainability across different governance structures. Such narratives should be sufficiently flexible to engage competing definitions of sustainability while at the same time providing an overall sense of direction. Given that urban-scale mega-projects often extend over several years (even decades) it is inevitable that priorities will change over time. Hence sustainability leadership narratives need to evolve accordingly whilst retaining the commitment of different stakeholder groups. The associated research focus therefore shifts from supposedly static 'critical success factors' towards the way the meaning of sustainability is continuously negotiated within and across different urban-scale governance structures.

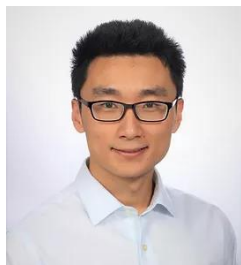
Biography

Stuart is a Professor in Construction Management in the School of the Built Environment at the University of Reading. He worked as head of school for 7 years. He has over 30 years' experience with research involvements relating to construction industry improvement, project

management, building performance, innovation and recently sustainability. His research work is acknowledged internationally and published in top journals in construction and city field. He has won international reputation and works as the editorial board member for several top international journal. Prof. Green is now the chair of University of Reading Environment and Sustainability Committee. Prof. Green continue to be actively involved in consultancy with industry and research both in the UK and internationally.

LECTURE 6

26 July



Dr. Peng Sun

Assistant Professor, University of Central Florida, USA

[Peng.Sun@ucf.edu](mailto: Peng.Sun@ucf.edu)

20:00-

21:00

Development and Application of Noncontact Sensing Solutions for Built Environment

Sensors and sensing technology has been a driven force for smart cities. Dr. Sun will talk about three different study cases of smart sensing solutions in built environment

In Session 1, he will talk about full-field strain mapping using developed smart skin sensor.

In Session 2, Dr. Sun will talk about the UAV application in smart city application.

In Session 3, Dr. Sun will talk about the computer vision-based measurement of utilization of public open spaces.

Biography

Dr. Sun is an Assistant Professor in Smart Cities in the CECE department at the University of Central Florida. He is a passionate researcher for smart sensors and sensing systems, in which he incorporates his scientific and engineering understanding of structures and people. He is particularly interested in combining knowledge in civil engineering and other disciplines (e.g. nanotechnology, computer vision, electrical engineering, and material science) to convert traditional structures into more intelligent systems with a “perception” of structures and surrounding environment.

LECTURE 7

26 July



Dr. Dongye Zhao

Professor, Auburn University, USA

[dzhao@eng.auburn.edu](mailto: dzhao@eng.auburn.edu)

21:00-

22:00

Stabilized or Surface-Modified Nanomaterials for in situ or onsite Remediation of Contaminated Soil and Groundwater: From Bench to Field

Remediation of soil and groundwater contaminated with chlorinated solvents and toxic metals/metalloids has been a major environmental challenge for decades. Yet, cost-effective and sustainable in situ or onsite remediation technologies remain lacking. Through two decades of research and field demonstrations, the Auburn University research team has developed a strategy to synthesize various stable and soil-deliverable nanoparticles using low-cost and “green” polysaccharides, such as starch and carboxymethyl cellulose (CMC), as a stabilizer. The stabilizers can facilitate controlling the size, delivery and transport of the nanoparticles. This presentation overviews the evolution and applications of various stabilized nanoparticles for in situ or onsite immobilization of metals/metalloids in soil and groundwater, including zero-valent

iron (ZVI) and sulfidated ZVI nanoparticles for reductive immobilization of redox active contaminants such as TCE, U(VI), Tc(VII), and Cr(VI), FeS for adsorptive immobilization of Hg(II), Pb(II) and Cd(II), and Fe-Mn binary oxides for As(V) and As(III).

Biography

Dr. Zhao is a professor and the Engineering Alumni Endowed Chair of Environmental Engineering at Auburn University. Starting August 16, 2022, he will serve as professor and the chair of the Department of Civil, Construction and Environmental Engineering at San Diego State University.

Dr. Zhao has served as PI or Co-PI for ~50 research projects totaling ~\$9 million. He and co-workers have published more than 220 SCI-indexed journal papers, one textbook, 15 book chapters, and 250+ other publications. In addition, he has delivered 135+ invited or keynote presentations/lectures worldwide, and has been granted 7 U.S. patents. His work has been cited ~16,000 times with an h-Index of 64 according to the Google Scholar. He is included in both the Clarivate World's Top 1% Scientists and the Stanford World's Top 1% Scientists.

LECTURE 8

27 July



Dr. Muhammad Ramzan

Professor, Bahria University, Pakistan

mramzan@bahria.edu.pk

15:00-
16:00

Nanofluids-Inception and Development

Nanofluid is a blend of suspended metallic nanoparticles and some customary fluid say water. The thermal performance of the base fluid is dramatically augmented with the inclusion of metallic nanoparticles. The application of nanofluids has revolutionized modern engineering procedures especially in manufacturing of small gadgets. The nanofluid has gained great significance in the field of nanotechnology as literature shows the attempts made by scientists and researchers to discover the numerous characteristics of nanofluids.

Biography

Muhammad Ramzan is a senior Mathematician at Bahria University, Islamabad, Pakistan. He has published around 125 ISI Indexed papers in renowned International Journals. At present four PhD and three MS students are working in his lab. Fourteen MS students have successfully completed their research work with him. He has received “Best Paper” and “Best Presenter” Awards in Antalya, Turkey, (2018) and Kuala Lumpur, Malaysia, (2017) respectively. He was also visiting Professor at Jiangsu University, China and Sejong University, Korea. He is also recipient of different projects in the PI and Co-PI position.

LECTURE 9

27 July



Dr. Mengyixin Li

Associate Professor, BUCEA, China

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16:00-
17:00

Resilient Cities: Dynamic Systems of Green Open Spaces

Contemporary cities demand different approaches to design, planning, management, and maintenance, which explicitly provide the capacity for resilience in the face of long-term

adaption to change and for ecological, cultural and economic viability. In this context, contemporary urban landscapes are regarded as complex and dynamic systems in which green open spaces are constantly perceived, organized and comprehended in the field of urban planning and landscape architecture. Under the demand of green, low-carbon and sustainable development, the lecture will take North America, Europe and China as examples to systematically elucidate the changes to resilient urban systems brought by green open spaces and post-industrial landscapes during the transformation from industrial to post-industrial societies from the perspective of "Nature – Parks – Greenways". Regarding the resilient urban systems, there are two essential scientific methods of green structures and ecological structures which will be explained accordingly from both a quantitative and qualitative perspective.

Biography

LI Mengyixin, associate professor in the School of Architecture and Urban Planning, Beijing University of Civil Engineering and Architecture (BUCEA), the young scholar of Beijing Overseas Talents Program, received her Ph.D. in Landscape Architecture, Technical University of Munich (TUM), Germany. She is the committee member of Beijing Overseas Talents Association, the member of History and Theory Committee and Territorial Landscape Committee of Chinese Society of Landscape Architecture, the member and secretary of Cultural Landscape Committee of Chinese Society of Landscape Architecture, the member of 'China Urban Landscape Lab', TUM and the leading member of the EU Collaborative Classes instructional team of Politecnico di Milano (POLIMI), Italy. She is mainly engaged in the research and teaching of green open space, cultural landscape, and post-industrial landscape.

LECTURE 10

27 July

20:00-

21:00



Laxmi Thapa

President, ISPRS Student Consortium

thapalaxmi278@gmail.com

Introduction of ISPRS Student Consortium

The International Society for Photogrammetry and Remote Sensing Student Consortium, (ISPRS SC) was established in 2004. As the official representation of the students and the youth to ISPRS, it works directly under the ISPRS Council. The main purpose of the ISPRS SC is to link students, young researchers and professionals in different countries, who are interested in photogrammetry, remote sensing and spatial information sciences, by providing a platform for exchange of information and organizing student-specific events and other activities that integrate students and the youth more effectively into ISPRS activities. The members of the organization are students and young professionals/researchers under the age of 35, who share the same interest in photogrammetry, remote sensing and geospatial information sciences.

Biography

Laxmi Thapa completed Master degree in Geospatial Technologies through Erasmus Mundus joint master degree programme in NOVA IMS, Portugal, University of Muenster, Germany and Universitat Jaume I, Spain and received Bachelor's degree in Geomatics Engineering from Kathmandu University, Nepal. Currently, she is working as a Survey Officer in Survey Department of Government of Nepal. Her research interests include application of AI in earth observation & geospatial technologies, LIDAR technology and UAV Photogrammetry.

LECTURE 11

27 July



Dr. Xiaowei Shan

Associate Professor, BUCEA, China

shanxiaowei@bucea.edu.cn

21:00-
22:00

Advanced Robotics and Industrialized Building Systems

Robot science fiction vs. robot reality;
Artificial intelligence and robotics;
Robotic mechanical system;
Advanced robotics and industrialized building systems at the School of Mechanical-Electronic and Vehicle Engineering;
Frontier development of robotics.

Biography

Dr. Xiaowei Shan is associate professor of Beijing University of Civil Engineering and Architecture, who is also distinguished scholar of Beijing Overseas Talent Aggregation Project. Shan obtained her PhD degree from McGill University, Canada. She worked as a former Postdoctoral researcher at the robotics laboratory at the Ecole Polytechnique of Montreal. Her research interests include: robotics, micro-electro-mechanical systems (MEMS), dynamics and control of mechanical systems.

LECTURE 12

27 July



Dr. Wei Huang

Professor, Tongji University, China

wei_huang@tongji.edu.cn

22:00-
23:00

Spatio-temporal Analysis for Human Urban Activities

A massive influx of population into urban areas has boosted urbanization. It, on the one hand, has stimulated rapid regional economic growth. On the other hand, it has also caused various urban issues, which plays a negative role in urban sustainable development. A better understanding of complex urban human activities is key to tackle such urban challenges and is an effective way to advance urban sustainable development. Therefore, it is vital to study urban human activities to further uncover and better understand its patterns. The talk reports data-driven methods and applications for urban human activity modeling.

Biography

Dr. Wei Huang is a Professor in the College of Surveying and Geo-informatics at Tongji University, China and Associate Editor for ISPRS IJGI. Prior to Tongji, he was a Planner at the Ministry of Transportation Ontario, Canada. From 2016 to 2018, he was a Postdoctoral Research Fellow in the GIScience research group at Heidelberg University in Germany. He received his PhD from the Department of Civil Engineering, Toronto Metropolitan University (formerly Ryerson University), Canada in 2016. His research interests include urban mobility, spatial analytics and GIScience.

LECTURE 13

28 July



Dr. George Zillante

Professor, University of Adelaide, Australia

george.zillante@adelaide.edu.au

15:00-

16:00

Resilience: A personal perspective

Resilience, particularly when dealing with Cities has been discussed for some time through both an academic and research lens. This is an appropriate and scientific way to go but little work has been done to verify that the Science meets the political and lobbying practices often engaged in by industry and Government alike. Similarly, resilience has generally been studied from a uni-disciplinary perspective and there is not a lot of data or studies that straddle different academic and professional disciplines as a unit.

This presentation offers an insight based on the background of a multidisciplinary individual who has been involved at the senior level in the practice, research, and teaching of resilience from an applied perspective across 4 different Discipline areas. In a sense, it is a case study of one person's experience across these 4 disciplines spanning some 50 years of professional practice, research, and experience.

The overriding conclusion reached is that the political dimension, when coupled with vested interests makes it very difficult to achieve the ideal scientific levels of resilience propagated by researchers.

Biography

Professor George Zillante is the retired Head of the School of Architecture and Built Environment at the University of Adelaide. Professor Zillante brings a multidisciplinary background in architecture, urban and regional planning, building surveying, business administration and construction to his research and teaching. He has a strong track record in teaching, research, and government advisory roles. His extensive experience in both research and leadership well qualifies him to provide leadership to many research teams and he has been successful in winning many research grants. Professor Zillante achieved Australia's first Doctorate in Building Surveying when he researched the future of the Building Surveying in the early 2000's. Professor Zillante's research reflects his multidisciplinary background and includes, Waste Management in the construction industry, Cultural Change in the construction industry, Building Codes and Standards, Building and Planning Policy, Bushfires and their effect on Urban and Regional development, indigenous housing, affordability and sustainability. Professor Zillante is a devotee of Internationalisation and believes that people from different cultures assist with the learning and employability of Architecture, Construction and Planning Graduates.

He has spent some 50 years assisting the advancement of Design and construction particularly in the areas of education and programme accreditation.

LECTURE 14

28 July



Dr. Emmanuel Essah

Associate Professor, University of Reading, UK

e.a.essah@reading.ac.uk

16:00-

17:00

Sustainability Across Different Scales: the Foundation of Resilient Cities

The seminar aims at providing thought provoking principles and concepts that

- Covers most of the issues typically encountered in the buildings sphere

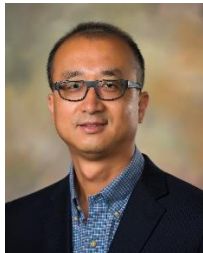
- Covers many issues that are relevant to both developed and developing countries, and
- Can be considered in terms of the broad dimensions of social, environmental and economic.

Biography

Emmanuel is an Associate Professor in Sustainable Technologies in the School of the Built Environment at the University of Reading. He has over 15 years' experience with research involvements relating to energy conservation and management in building, optimising, and improving the use of photovoltaic (PV) systems, moisture transfer effects in buildings and most recently investigating the impact of biophilia on the indoor environmental quality. Through his research, he has worked with colleagues in China, Ghana, Spain, Portugal, South Africa, Botswana and Tunisia, amongst others.

LECTURE 15

28 July



Dr. Junshan Liu

Associate Professor, Auburn University, USA

liujs@auburn.edu

20:00-

21:00

Reality Capture for Built Environment and Heritage BIM

Reality capture techniques, such as LiDAR, 360-degree photography and photogrammetry, have been adopted by the Architecture, Engineering and Construction (AEC) industry with various applications on both new-build and heritage projects. These applications include as-built documentation, renovation design, Heritage Building Information Modeling (HBIM), quality assurance (QA) and quality control (QC), progress reporting, planning, damage assessment, and marketing, etc. In this lecture, students will learn the concept of reality capture, its applications in the AEC industry and a variety of technological tools, such as LiDAR scanners, 3D cameras, drones and construction robot. They will also explore case studies of implementation of reality capture technology on construction projects and heritage sites.

Biography

Professor Liu is the Bob Aderholdt Endowed Associate Professor of the McWhorter School of Building Science at Auburn University, Auburn, Alabama, USA. Liu's teaching and research areas focus on construction InfoTech. Liu has extensive experience of LiDAR scanning, scan-data processing and extrapolations, photogrammetry, Heritage BIM, and UAS. He has had numerous publications on HBIM, BIM, LiDAR and also led multiple digital documentation and preservation projects funded by the US government agencies.

LECTURE 16

28 July



Dr. Shishuo Xu

Associate Professor, BUCEA, China

xushishuo@bucea.edu.cn

21:00-

22:00

Sensing urban dynamics with big data

This lecture covers the fundamentals and the latest research concerning monitoring urban dynamics based on big data. It begins by describing the key issues of sensing urban dynamics,

and explores the opportunities and challenges of adopting big data for such research. Referring to the patterns reflected by big data, this lecture introduces the general workflow, a series of detection methods, experimental process, and evaluation techniques of sensing urban dynamics from the event detection perspective. This lecture sheds light on situational awareness as well as urban management in resilient cities.

Biography

Dr. Shishuo Xu is an Associate Professor in the School of Geomatics and Spatial Informatics, Beijing University of Civil Engineering and Architecture, China. She received the B.Eng. degree in surveying engineering from China University of Mining and Technology, China in 2013 the Ph.D. degree in geomatics engineering from Ryerson University, Canada, in 2020. Her current research interests include geospatial data analysis, event detection using geosocial media data, and urban dynamics and smart city. Dr. Xu was a recipient of Canadian Association of Geographers - Ontario Division (CAGONT) Best Paper Award 2018, Beijing Overseas Talents 2020 and China Scholarship Council (CSC) International Cooperation Funding 2020.

Contact Information

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WeChat QR code for Summer School:

Coming later...