UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

DREMES

The Dynamic Research Enterprise for Multidisciplinary Engineering Sciences
ZJU-UIUC Joint Research Center

浙江大學 ZHEJIANG UNIVERSITY

Center for Infrastructure Resilience in Cities as Livable Environments
CIRCLE

CIRCLE
Distinguished Lecture Series

Dr. Lucio Soibelman

The Architectural, Engineering, and Construction Industry and the Fourth Industrial Revolution

ABSTRACT: The architectural, engineering, and construction industry is responsible for the design construction, operation, and decommission of buildings and other facilities, transportation infrastructure, telecommunication networks, the power grid, water distribution and wastewater collection systems among many other important and complex systems. Those systems will require more and more that engineers provide a continuous state awareness, assessment and proactive decision making for the complete life cycle of the systems and the processes it creates. Today, during the current 4th industrial revolution, a new group of available digital technologies are allowing us to blur the lines between the physical and digital world creating opportunities for the development of tools that will allow continuous state awareness and proactive decision making to manage buildings and infrastructure systems in both normal and abnormal conditions more efficiently and effectively. There are many technological developments and research projects that already support, or begin to support this vision. Civil Engineers, not just electrical and computer engineers and computer scientists can and should be involved in delivering this overall vision. At this talk professor Soibelman will introduce his vision and work developed within his research group that focus on the application and exploration of emerging Information and Communication Technologies, big data concepts, smart buildings, smart infrastructure systems, machine learning, and artificial intelligence to a broadly defined set of infrastructure systems and associated processes, such as planning, design, construction, facility/infrastructure management, and environmental monitoring, so as to improve their sustainability, efficiency, maintainability, durability, and the overall performance of these systems.

BIO: Professor Soibelman obtained his BS and MS Degrees from the Civil Engineering Department of the Universidade Federal do Rio Grande do Sul, Brazil. He worked as a construction manager for 10 years before moving in 1993 to the US where he obtained in 1998 his PhD in Civil Engineering Systems from the Civil and Environmental Engineering Department at the Massachusetts Institute of Technology (MIT). In 1998 he started as an Assistant Professor at the University of Illinois at Urbana Champaign. In 2004 he moved as an Associate Professor to the Civil and Environmental Engineering Department at Carnegie Mellon University (CMU) and in 2008 was promoted to Professor. From 2012 to 2021, he served as the Chair of the Sonny Astani Department of Civil and Environmental Engineering at the University of Southern California. He is currently the Fred Champion Estate Chair in Engineering and Professor of Civil and Environmental Engineering.

CIRCLE: The Center for Infrastructure Resilience in Cities as Livable Environments is one of three research themes supported by the joint Dynamic Research Enterprise for Multidisciplinary Engineering Sciences (DREMES), established between the University of Illinois at Urbana-Champaign (UIUC) and Zhejiang University (ZJU). The CIRCLE Distinguished Lecture Series is intended to provide opportunities for faculty and students to meet and interact with internationally renowned experts in the field.

To register send an email to circle@intl.zju.edu.cn or scan the QR code. Registration is free.

3 NOV 2021 on zoom | at 8AM CDT - 9PM Beijing Time

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Dr. Lucio Soibelman

第四次工业革命下的建筑、工程和建造业

摘要：建筑、工程和建造业肩负着建筑基础设施、交通基础设施、电信网络、电网、供水和污水收集系统和复杂的系统的设计、建设、运行和拆除工作。这些系统将越来越需要工程师为系统的整个生命周期提供持续的状态感知、评估和前瞻性决策。如今，在第四次工业革命浪潮中，一批新的数字科技允许我们模糊现实世界与数字世界之间的界线，为发展能够高效、有效的对正常或异常条件下的建筑和民用设施进行连续评估和主动决策的工具提供了机会。许多技术发展和研究项目已经支持或开始支持这一观点。除了电气、计算机工程师和 计算机科学家，土木工程师也应当参与到这种变革的实现工作中。 本次演讲中，SOIBELMAN教授将介绍他研究小组的工作重点，以及新兴信息和通信 技术的应用和探索，大数据概念，智能建筑，智能基础设施系统，机器学习，并将人工智能应用于一组广义的基础设施系统和相关过程，如规划、设计、施工、设施/基础设施管理和 环境监测，以提高其可持续性、效率、可维护性、耐久性和这些系统的整体性能。

简介：SOIBELMAN教授在巴西Rio Grande do Sul联邦大学土木工程系获得理学学士和硕士学位，后作为建筑经理从业10年。1998年开始在美国求学并与1998年获得麻省理工学院MIT 土木与环境工程博士学位。随后，他在伊利诺伊大学香槟分校（UNIVERSITY OF ILLINOIS AT URBANA CHAMPAIGN）担任助理教授。2004年，加盟卡内基梅隆大学（CARNEGIE MELLON UNIVERSITY) 任土木与环境工程系副教授，于2008年晋升 为教授。2012年1月，他加入南加州大学 （UNIVERSITY OF SOUTHERN CALIFORNIA） 任SONNY ASTANI 土木与环境工程系主任至2021年。他获得过诸多奖励，是南加州大学的Fred Champion Estate讲座教授。

CIRCLE：宜居城市基础设施韧性中心是伊利诺伊大学厄巴纳–香槟分校（UIUC）格兰杰工程学院和浙江大学（ZJU）建立的三个联合研究中心之一。 CIRCLE 杰出讲座系列旨在为教师和学生提供与该领域国际知名专家会面和互动的机会。

发送邮件至circle@intl.zju.edu.cn或扫描二维码报名，免费注册。

2021年11月3日 zoom | 北京时间：晚上9点

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