



Northeastern

Department of Civil and Environmental Engineering

Sustainable Infrastructure Design, Construction, and Operation

Lucio Soibelman

Professor and Chair

**Sonny Astani Department of Civil and Environmental Engineering
University of Southern California, Los Angeles, CA**

Thursday, February 12th, 2015

12pm-1pm

305 Shillman Hall

Abstract

Infrastructure systems, broadly defined to include buildings and other facilities, transportation infrastructure, telecommunication networks, the power grid and environmental 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 processes they create. Such continuous state awareness and proactive decision making will allow these systems to be more efficiently and effectively managed in both normal and abnormal conditions.

There are many technological developments and research projects that already support, or begin to support this 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 (ICT), 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 overall performance of these systems.

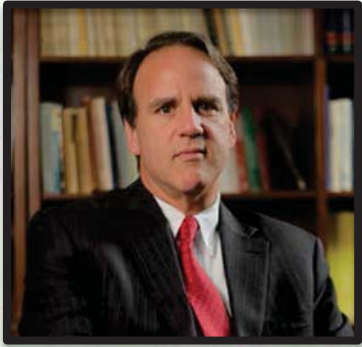
Bio

Professor Soibelman obtained his Bachelor and Masters 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. In January 2012 he joined the University of Southern California as the Chair of the Sonny Astani Department of Civil and Environmental Engineering.

During the last 15 years he focused his research on advanced data acquisition, management, visualization, and mining for construction and operations of advanced infrastructure systems. He published over 100 books, books chapters, journal papers, conference articles, and reports and performed research with funding from NSF (NSF career award and several other NSF grants), NASA, DOE, US Army, NIST, IBM, Bosch, IDOT, RedZone Robotics among many others funding agencies. He is the current chief editor of the American Society of Civil Engineers Computing in Civil Engineering Journal. In 2010 he received the ASCE Computing in Civil Engineering Award, in 2012 received the 2011 FIATECH Outstanding Researcher Celebration of Engineering & Technology Innovation, or CETI, Award, and in 2013 he was elected an ASCE fellow.

His areas of interest are: Use of information technology for economic development, information technology support for construction management, process integration during the development of large-scale engineering systems, information logistics, artificial intelligence, data mining, knowledge discovery, image reasoning, text mining, machine learning, advanced infrastructure systems, sensors, streaming data, and Multi-reasoning Mechanisms.



Lucio Soibelman, PhD

Department of Civil & Environmental Engineering
UNIVERSITY OF SOUTHERN CALIFORNIA



USC Viterbi
School of Engineering

Sonny Astani
Department of Civil and Environmental Engineering

Education

- PhD, Civil Engineering Systems, *MASSACHUSETTS INSTITUTE OF TECHNOLOGY*
- MS, Civil Engineering, *UNIVERSIDADE FEDERAL DO RGS*
- BS, Civil Engineering, *UNIVERSIDADE FEDERAL DO RGS*

Research Interests

- IT for construction management
- Development of large-scale engineering systems
- Information logistics
- Artificial intelligence
- Data mining
- Multi-reasoning mechanisms

Selected Service and Awards

- ASCE Fellow
- Co-chief Editor of the ASCE Journal of Computing in Civil Engineering
- NSF CAREER award
- ASCE Computing in Civil Engineering Award (2010)
- FiATECH Outstanding Researcher Celebration of Engineering & Technology Innovation (2012)