Distinguished Lectures
Fall 2019

Dr. Claudio Silva
Professor
Tandon School of Engineering
Center for Data Science
New York University

Urban Data Science

Monday, December 2, 2019
Reception with refreshments: 10:30 a.m.
Lecture: 11:00 a.m.-12:00 noon
Morgan Library Event Hall

Sports Analytics: Game Reconstruction Visualization, and Data Analytics

Tuesday, December 3, 2019
Lecture: 10:00-11:00 a.m.
Lory Student Center 304

Sponsored by
Colorado State University's Information Science and Technology Center (ISTeC)

In conjunction with the Department of Computer Science and Department of Electrical and Computer Engineering Seminar Series

Abstracts

Urban Data Science

The large volumes of urban data, along with vastly increased computing power, open up new opportunities to better understand cities. Encouraging success stories show that data can be leveraged to make operations more efficient, inform policies and planning, and improve the quality of life for residents. However, analyzing urban data often requires a staggering amount of work, from identifying relevant data sets, cleaning and integrating them, to performing exploratory analyses and creating predictive models that take into account spatio-temporal processes. Visual analytics systems can greatly help in the analysis of urban data allowing domain experts from academia and city governments better understand cities. In this talk, we discuss our work in building a visual analytics framework to interactively explore large spatio- temporal data sets and give an overview of our research that combines visualization and data management to tackle these challenges.

Sports Analytics: Game Reconstruction Visualization, and Data Analytics

While there has always been interest in analyzing sports data, this research area has received significantly more attention in recent years due to both the recognition of the importance of objective statistics and the proliferation of available data. New technology is starting to enable the capture of game play at unprecedented levels of detail, including the tracking of positions of all players and game events at all times. Instead of being starved for data, analysts now have access to volumes of highly accurate gameplay data. This data deluge requires the development of novel visualization and machine learning tools and is leading to major new developments in sports data science. In this talk, we will review recent developments in this area and the enabling technologies. We will also cover our recent work, including the development of the Statcast Baseball Metrics Engine (BME) and related data science tools and techniques. This is joint work with Dr. Carlos Dietrich, and many others at NYU and MLB Advanced Media.

Speaker Biography

Cláudio T. Silva is Professor of Computer Science and Engineering and Data Science at New York University. His research has focused on data science, visualization, graphics, and geometry processing. Recently he has been particularly interested in urban and sports applications. He received his BS in mathematics from Universidade Federal do Ceará (Brazil), and his MS and PhD in computer science at SUNY-Stony Brook. Since his PhD, he has published over 250 peer reviewed journal and conference papers, and he has been an inventor on 12 US patents. He has advised or co-advised 14 post-docs, 20 PhD and 9 MS students.

Claudio is a Fellow of the IEEE and has received the IEEE Visualization Technical Achievement Award. The MLB.com's Statcast player tracking system, which he helped develop, won the Alpha Award for Best Analytics Innovation/Technology at the 2015 MIT Sloan Sports Analytics Conference, and more recently a 2018 Technology & Engineering Emmy Award from the National Academy of Television Arts & Sciences. Silva's work has been covered in The New York Times, The Economist, ESPN, and other major news media.

To arrange a meeting with the speaker, please contact Prof. Sid Suryanarayana, Sid.Suryanarayanan@colostate.edu.

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