

KEYNOTE TALK
Tuesday, December 15, 2015
8:30 AM – 9:30 AM / Ballroom 5

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Visualization and Analysis of Urban Data

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Abstract

Today, 50% of the world's population lives in cities and the number will grow to 70% by 2050. Urban data opens up many new opportunities to improve cities and people's lives. In NYC, by integrating and analyzing data sets from multiple city agencies, the Bloomberg administration was able improve the success rate of inspections. A marked reduction in crime both in New York and Los Angeles has been in part attributed to data-driven policing. Policy changes have also been triggered by data-driven studies that, for example, showed correlations between foreclosures and increase in crime, the effects of subsidized housing on surrounding neighborhoods, and how low income households use the flexibility provided by vouchers to reach neighborhoods with high performing schools. But in each of these successes, the level of effort required to gather, integrate, analyze the relevant data, design and refine models, or develop and deploy apps, is staggering. Further as data volumes and data complexity continue to explode, these problems are only getting worse. In this talk, we will provide an overview of research in the development of new methods and systems for enabling interdisciplinary teams to better understand cities. We will also show some applications of our work.



Speaker Bio-Sketch: Cláudio Silva is a professor of computer science and engineering and data science at New York University. Claudio's research lies in the intersection of visualization, data analysis, and geometric computing, and recently he has been interested in the analysis of urban data and sports analytics. He has published over 220 journal and conference papers, is an inventor of 12 US patents. His work received over 10,000 citations according to Google Scholar and an h-index of 50. Cláudio has served on the editorial boards of several journals, including IEEE Transactions on Big Data, ACM Transactions on Spatial Algorithms and Systems, Computer Graphics Forum, The Visual Computer, Graphical Models, Computer and Graphics, Computing in Science and Engineering, and IEEE Transactions on Visualization and Computer Graphics. He helped developed a number of award-winning software systems, most recently Major League Baseball (MLB) MLB.com's Statcast player tracking system. He is an IEEE Fellow and was the recipient of the 2014 IEEE VGTC Visualization Technical Achievement Award "in recognition of seminal advances in geometric computing for visualization and for contributions to the development of the VisTrails data exploration system." He is currently Chair of the IEEE Technical Committee on Visualization and Graphics.