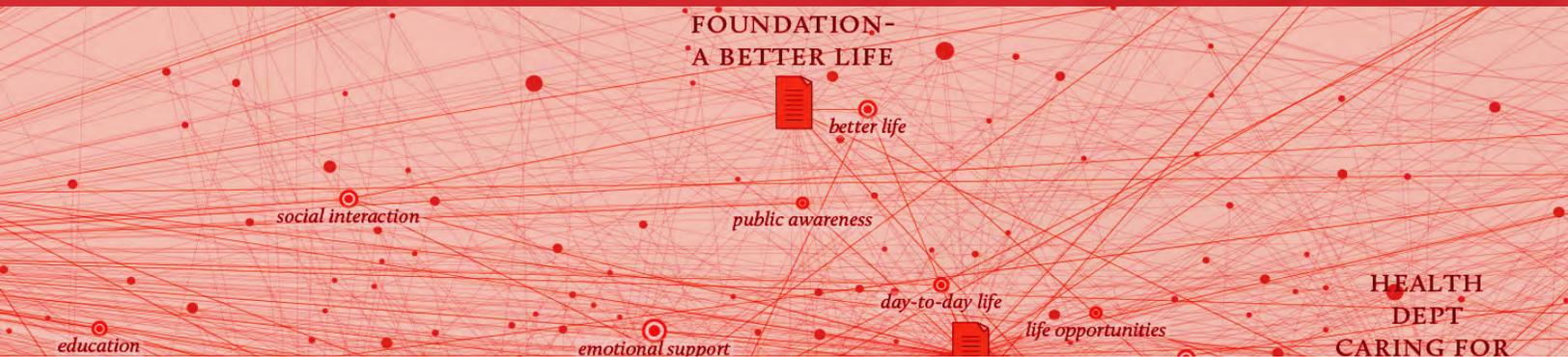


**The Office of the Provost,
The College of Humanities and Social Sciences
The College of Science and Mathematics and
The Department of Justice Studies**

proudly present



Mapping Complexity in the Social Sciences

Big Data, Social Media & Data Visualization

**Workshop
September 23-24, 2015**

Mapping Complexity in the Social Sciences: Big Data, Social Media & Data Visualization

WORKSHOP

SYNOPSIS

This project consists of an interactive, praxis-oriented workshop to introduce new, innovative social science research methods to capture complexity in our data-driven world. Geared towards Montclair State University faculty, the workshop aims at launching a multi-country research collaboration with international scholars.

OBJECTIVES

This two-day workshop will bring together international programmers, designers, developers and researchers from across multiple disciplines to explore innovative forms of studying and analyzing big data and social media. It introduces participants to different software technologies that help visualize these data sets with the goal of preserving correlational and causal complexity.

The first part of the workshop features introductory remarks by Dean Robert Friedman who is the head of the College of Humanities and Social Sciences at Montclair and a passionate advocate of digital humanities. Following the Dean's speech, Arnaud Kurze, the conference organizer and Assistant Professor of Justice Studies at Montclair, will present an overview of the project and collaboration prospects. Then Donato Ricci, Lead Designer at Medialab Sciences Po in Paris (France), will introduce the link between different methodological concepts including content extraction, data analysis and visualization. Professor Ricci is the founder of a text-analysis software called Sven, an experimental tool to collect, organize and analyze text fragments from online and offline documents. By increasing the information accessibility via visualization methods and automatic term extractions, tools like Sven allow researchers to follow emerging issues through time and provides them with a better understanding on the information collected. In the afternoon, he will lead a

hands-on workshop session, responding to questions, such as: What forms of visualization are most suited for particular data sets? How do we process big amounts of data effectively and present them coherently and compellingly?

Day 2 includes a lecture by Daniele Guido, Researcher at the Digital Humanities Lab at the Centre Virtuel de la Connaissance sur l'Europe (Luxembourg). Building on the concepts elaborated the previous day, his methodology-based talk will focus on the study of networks, concepts and actors. To this end, he will introduce the web platform histoGraph, a tool that helps researchers explore large multimedia archives. This platform also enables users to find and identify the most relevant documents for research and helps discover connections between individuals based on the selected documents in the archive. Additionally, Katherine Herbert, and Jerry Alan Fails, both Associate Professors of Computer Science at Montclair State University, will present their research on big data, mobile phone applications and environmental issues. The afternoon session of Day 2 will be dedicated to applying the theoretical concepts of the morning lecture in a praxis-oriented and interactive workshop setting. Questions that will be addressed include: Who is connected to whom? Who is influential in different networks? And, time permitting, how do geographical factors affect social connections online?

IMPACT

This workshop will help social scientists working on a variety of sociopolitical, socioeconomic and sociocultural issues to better capture correlational and causal complexity by providing specific tools for mixed methods, including text analysis, data mining and data visualization, among others. The event also aims at fostering interdisciplinary collaboration.

WORKSHOP AGENDA

DAY 1 WEDNESDAY SEPTEMBER 23, 2015

Morning Session (Science Hall, Sokol Seminar Room)

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|---------------------|--|
| 9:00 am - 10:00 am | Coffee and introductions |
| 10:00 am - 10:15 am | Opening remarks (Dean Friedman) |
| 10:15 am - 10:30 am | Project presentation (Kurze) |
| 10:30 am - 12:30 pm | Lecture on Sven and other research tools in the social sciences and humanities (Ricci) |

Break

- | | |
|--------------------|---|
| 12:30 pm - 2:00 pm | Lunch break (Atrium/Patio CELS Building, Brown Bag) |
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Afternoon Session (University Hall, Room 1120)

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|-------------------|-----------------------------------|
| 2:00 pm - 4:00 pm | Workshop I (closed, led by Ricci) |
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DAY 2 THURSDAY SEPTEMBER 24, 2015

Morning Session (Science Hall, Sokol Seminar Room)

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|---------------------|--|
| 9:00 am - 10:00 am | Coffee and networking |
| 10:00 am - 11:30 am | Lecture on exploring large data archives (Guido) |
| 11:30 am - 12:30 pm | Lecture on big data, the environment & mobile apps (Herbert & Fails) |

Break

- | | |
|--------------------|---|
| 12:30 pm - 2:00 pm | Lunch break (Atrium/Patio CELS Building, Brown Bag) |
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Afternoon Session (University Hall, Room 1120)

- | | |
|-------------------|-----------------------------------|
| 2:00 pm - 3:45 pm | Workshop II (closed led by Guido) |
| 3:45 pm - 4:00 pm | Closing remarks (Kurze) |

ABOUT THE PARTICIPANTS

Dr. Jerry Alan Fails is Associate Professor of Computer Science at Montclair State University. He received his PhD in Computer Science from the University of Maryland in 2009, where he spent six years as an active member of the Human-Computer Interaction Lab. His research on Human-Computer Interaction focuses particularly on technologies that support children's creativity, mobility, and collaboration.

Dr. Robert Friedman is Dean of the College of Humanities and Social Sciences at Montclair State University. While his primary field of research is American literature, particularly the role of the metaphor in shaping 19th-Century American thought and culture, he is a passionate advocate of digital humanities, studying the ways information technologies affect how new knowledge is generated and distributed. As Director of the Institute of Technology at the University of Washington, he oversaw the 2012 creation of the Center for Data Science, which has brought in over \$3M in external funding to conduct use-inspired, data-centric research into health, environmental and social media systems.

Daniele Guido is a researcher at the Digital Humanities Lab at the Centre Virtuel de la Connaissance sur l'Europe in Luxembourg. He holds a graduate degree in Communication Design from the Politecnico di Milano in Italy. Before joining the Digital Humanities Lab in Luxembourg, he was a visual designer and interface developer at the Medialab Sciences Po in Paris, France. His research interests lie in data mining applications, text analysis and network exploratory tools.

Dr. Katherine Herbert is Associate Professor of Computer Sciences at Montclair State University. Prior to her position at Montclair, she worked at the Data Knowledge Engineering Lab at the New Jersey Institute of Technology, where she also received her doctorate in 2004. Her current research explores the use of mobile phone applications to raise awareness about environmental problems. While her work focuses on applicability and implementation, it has timely policy-implications for law-makers and advocacy groups.

Dr. Arnaud Kurze is Assistant Professor of Justice Studies at Montclair University. His research focuses on human rights and post-conflict and post-authoritarian justice. Drawing on political sociology, his current research project explores youth activism in post-revolutionary Tunisia using mixed methods and big data. He regularly contributes analyses and op-ed articles online for think tanks and other institutions. He received numerous awards and fellowships from many progressive institutions, including the Woodrow Wilson Center.

Dr. Donato Ricci is the Lead Designer at the Medialab Sciences Po in Paris, France. He received his PhD in 2005 in Industrial Design and Multimedia Communication at Politecnico di Milano in Italy and a Post-Doc under Bruno Latour. His works have been featured in several conferences and exhibition (MediaLAB Prado – Visualizar08; SIGGRAPH09 Conference; MIT Humanities + Digital Conference), publication and showcases (Data Flow; Malofiej; Visual Complexity; Information Graphics; Information Design).