Curriculum Vitae – Rossano Schifanella

Personal Information

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Research Interests

My research embraces the creative energy of a range of disciplines across computational social science, network science, urban informatics, and data visualization. It leverages the quantitative analysis of digital data to model qualitative phenomena such as social behavior, aesthetics and creativity in multimedia, or figurative language. More recently, I've been working on the understanding of how modern cities work through the lenses of digital data, and I've been passionate about multidisciplinary approaches to map the invisible, such as web interactive tools to visualize the sensorial and emotional layers of cities.

Current Position

Assistant Professor Computer Science Department, University of Turin, Italy *November 2007-Present*

Working Experience

Visiting Scientist Nokia Bell Labs, Cambridge, UK *September 2016-Present*

Achievements :

- studied the diversity of private activities and economic development of neighborhoods
- studied how social ties affect performance and drive users engagement in a photo sharing platform

Visiting Scientist Yahoo Labs, Barcelona, New York, and London *August 2012-2016*

Working with the Social Media Engagement group in analyzing the behavior of (groups of) individuals and their interactions on social media platforms and the impact that such behavior has on personalization, engagement and user profiling.

Achievements :

- built a computational model to detect creativity in micro videos and sarcastic posts in multimodal content.
- studied the interplay between popularity and quality in photo sharing systems and implemented a framework to discover not popular high-quality content.
- implemented new mapping tools for the exploration of scenic routes in the city.
- modeled urban walkability and sensory experiences at scale through digital data.
- funded the goodcitylife.org community
- filed 2 patents on *"System and method for recommending pleasant routes from the sentiment of geo-tagged photographs"* and *"Method and system for decomposing social relationships into domains of interactions"*.

Visiting Scholar Indiana University, Bloomington, IN, USA *January 2009-May 2012*

Working with the Network & agents Network (NaN) group at the Center for Complex Networks and Systems Research (CNetS) under the supervision of Prof. Filippo Menczer.

Achievements :

- modeled the interplay of the social and semantic components in social media platforms and how the tagging activity influences the explicit representation and formation of social ties.
- studied friendship prediction and homophily in social systems.
- implemented games with a purpose to generate large streams of high-quality social tagging data for improving web search, recommendation, navigation, and categorization.

Research Assistant Computer Science Department, University of Turin, Italy *2006-2007*

Awards and Recognitions

Yahoo Faculty Research and Engagement Program for the project *"Automation of Flickr photos recommendation on mobile devices".* *2013*

Yahoo Faculty Research and Engagement Program for the project *"Exploration of multiplex graphs for recommendation of heterogeneous items".* *2014*

Best Dataset Award at International Conference on Weblogs and Social Media (ICWSM) for the paper *"People are Strange when you're a Stranger : Impact and Influence of Bots on Social Networks"* *2012*

Best Presentation Award at ACM Web Science Conference for the paper *"Reading the Source Code of Social Ties"* *2014*

"Insight. A Data and Design Competition" (finalist) in conjunction with Measure, a Storefront for Art and Architecture exhibit in New York City. *2015*

"Visualizing Cities" (shortlisted for CityVis Award) in conjunction with Habitat III, United Nations Conference on Housing and Sustainable Urban Development, Quito, Ecuador. *2016*

The interactive sensory mapping visualizations have been featured in several blogs on data visualization, in digital art exhibitions, e.g., the "Places & Spaces : Mapping Science" exhibit, "Ciudad Visibile" at the CentroCentro, Madrid, 2016, *"Map Mosaic : From Queens to the World"* at Queens Museum, NYC, and included in the *"The Best American Infographics 2016"* book.

Education

Ph.D. in Computer Science, University of Turin, Italy *2003-2006*
with the thesis "A Legal and Efficient Peer-to-Peer Market Place : Exploiting Fairness and Social Relationship".

M.S. in Computer Science, University of Turin, Italy *1997-2003*
with the thesis "Capacity Planning : characterization and generation of synthetic web traffic based on behavioral data".

Recent Projects

Goodcitylife.org Goodcitylife.org is a global group of researchers and practitioners who think about fundamental urban problems that have received little attention and put forward ideas not to make cities smarter, but dwellers happier. Recently, for example, social media data has been used to map the sensorial and emotional layers of cities. Those layers will make a variety of applications possible, from urban planning to health informatics.

Happy Maps Happy Maps uses geo-tagged pictures and the associated metadata to build an alternative cartography of a city weighted for human emotions. Happy Maps adopts a routing algorithm that suggests a path between two locations that is the shortest route that maximizes the emotional gain. That nice, pleasant detour that would be a couple of minutes longer than the shortest route could result in a completely different walking experience.

Smelly Maps Smelly Maps proposes a new way of capturing the entire urban smellscape of a city from social media data (i.e., tags on Flickr pictures or tweets). Cities are victims of a discipline's negative perspective, only bad odors have been considered. The Smelly Maps project aims at disrupting this negative view and, as a consequence, being able to celebrate the complex smells of our cities.

Chatty Maps Urban sound has a huge influence over how we perceive places. To capture both unpleasant and pleasant sounds, Chatty Maps proposes a new methodology that relies on tagging information of geo-referenced pictures. From picture tags, it studies the relationship between soundscapes and emotions, and the relationship between soundscapes and people's perceptions, mapping which areas in a city are chaotic, monotonous, calm, and exciting. Those insights promise to inform the creation of restorative experiences in our increasingly urbanized world.

Selected Publications

- *The Emotional and Chromatic Layers of Urban Smells*, D. Quercia, L. M. Aiello, R. Schifanella, International Conference on Web and Social Media (ICWSM 2016)
- *Chatty maps : constructing sound maps of urban areas from social media data*, L. M. Aiello, R. Schifanella, D. Quercia, F. Aletta, Royal Society Open Science (RSOS 2016)
- *Leveraging User Interaction Signals for Web Image Search*, N. O'Hare, P. De Juan, R. Schifanella, Yunlong He, Dawei Yin, Yi Chang, ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016)

- *Detecting Sarcasm in Multimodal Social Platforms*, R. Schifanella, P. de Juan, J. Tetreault, Liangliang Cao, ACM Multimedia
- *An Image is Worth More than a Thousand Favorites : Surfacing the Hidden Beauty of Flickr Pictures* R. Schifanella, M. Redi, L. M. Aiello, International Conference on Web and Social Media (ICWSM 2015)
- Smelly Maps : The Digital Life of Urban Smellscapes, D. Quercia, R. Schifanella, L. M. Aiello, K. McLean, International Conference on Web and Social Media (ICWSM 2015)
- *The Digital Life of Walkable Streets*, D. Quercia, L. M. Aiello, R. Schifanella, A. Davies, International Conference on World Wide Web (WWW 2015)
- *A Large-Scale Study of User Image Search Behavior on the Web*, J.Y. Park, N. O'Hare, R. Schifanella, A. Jaimes, C. Chung, Conference on Human Factors in Computing Systems (CHI 2015)
- *Cold-start News Recommendation with Domain-dependent Browse Graph*, M. Trevisiol, L.M. Aiello , R. Schifanella, A. Jaimes, Conference Series on Recommender Systems (RecSys 2014)
- *The shortest path to happiness : Recommending beautiful, quiet, and happy routes in the city*, D. Quercia, R. Schifanella, L. M. Aiello, Conference on Hypertext and Social Media (HyperText 2014)
- *6 Seconds of Sound and Vision : Creativity in Micro-Videos*, M. Redi, N. O'Hare, R. Schifanella, M. Trevisiol, A. Jaimes, Conference on Computer Vision and Pattern Recognition (CVPR 2014)
- *Reading the Source Code of Social Ties*, L. M. Aiello, R. Schifanella, B. State, Conference on Web Science (WebSci 2014)
- *The Role of Information Diffusion in the Evolution of Social Networks*, L. Weng, J. Ratkiewicz, N. Perra, B. Gonçalves, C. Castillo, F. Bonchi, R. Schifanella, F. Menczer, and A. Flammini, SIGKDD Intl. Conf. on Knowledge Discovery and Data mining (KDD 2013)
- *Friendship prediction and homophily in social media*, L. M. Aiello, A. Barrat, R. Schifanella, C. Cattuto, B. Markines, F. Menczer, ACM Transactions on the Web (TWEB 2012)
- *On the Dynamics of Human Proximity for Data Diffusion in Ad-Hoc Networks*, A. Panisson, A. Barrat, C. Cattuto, W. Van den Broeck, G. Ruffo, R. Schifanella, Ad Hoc Networks 2012
- *People are Strange when you're a Stranger : Impact and Influence of Bots on Social Networks*, L. M. Aiello, M. Deplano, R. Schifanella, G. Ruffo, International Conference on Weblogs and Social Media (ICWSM 2012)
- *Folks in Folksonomies : Social Link Prediction from Shared Metadata*, R. Schifanella, A. Barrat, C. Cattuto, B. Markines, and F. Menczer, International Conference on Web Search and Data Mining (WSDM 2010)

A full list of references is available here :
http://www.di.unito.it/~schifane/publications.html

Event organization and Scholarly Service

Event Organization

- Workshops Chair at the 20th ACM Conference of Hypertext and Hypermedia. *2009*
- Organizer of the Workshop *"What's in a dyad ? Interaction and Exchange in Social Media"* in conjunction with the 6th International Conference on Social Informatics (SocInfo). *2014*
- Organizer of the Tutorial *"The Lifecycle of Geotagged Social Media Data"* in conjunction with the International AAAI Conference on Web and Social Media (ICWSM) and ACM Multimedia Conference. *2016*
- Organizer of the tutorial *"The Lifecycle of Geotagged Social Media Data"* in conjunction with the World Wide Web (WWW) conference and organizer of the tutorial *"Integrating Social Theory with Computational and Spatial Methods for Urban Data Science"* at the European Symposium Series on Societal Challenges in Computational Social Science. *2017*
- Organizer of the *"Eighth International Workshop on Location and the Web"* in conjunction with The Web Conference (WWW). *2018*

Program Committee

Member of the PC of major conferences in the social media area including WWW, WSDM, ICWSM, ACM MM, WebSci, HyperText, SocInfo. Reviewer for several journals including TKDE, JOCCH, TOIT, Machine Learning, ComCom, JSS.

Selected Press Coverage

My recent work has been covered by more than 200 news articles published by prestigious news outlets worldwide including :

- Computers Can Sense Sarcasm ? Yeah, Right. Scientific American, Aug 2016
- London stinkmap could change urban planning. Wired, Jun 2015.
- In World of Email, ASAP Is Relative. Wall Street Journal, Oct 2015.
- Behind The Numbers : Predicting Consumer Behavior. Wall Street Journal, Oct 2015.
- Computational Aesthetics Algorithm Spots Beauty That Humans Overlook. MIT Tech Review, May 2015.
- The Shortest Paths to Happiness. Literally. TED Ideas, Feb 2015.
- Experimental Map Finds Scenic Route. ABC Sept 2014.
- How Yahoo Research Labs Studies Culture as a Formal Computational Concept. MIT Tech Review, Aug 2014.
- We Need This : A Maps App That Algorithmically Finds You the Scenic Route. Wired, Jul 2014.
- Quiet Socialbot Quickly Gains a Following. New Scientist, Mar 2011.

Teaching

Instructor of several courses in undergraduate and master programs in Computer Science and Mathematics, including :

- Basic and Advanced Java Programming
- Web Technologies
- Computer System Architecture
- Computer Networks
- Databases and Algorithms

Languages

Italian : native
English : fluent written and spoken