

Daniele Quercia

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Summary

Daniele Quercia is a computer scientist, has been named one of **Fortune magazine's 2014 Data All-Stars**, and spoke about "happy maps" at **TED** (seen by 1.6M+). He is interested in the relationship between online and offline worlds, and his work has focused in the area of urban computing. His research received **best paper awards** from ACM Ubicomp 2014 and from AAAI ICWSM 2015, and an honorable mention from AAAI ICWSM 2013. He was Research Scientist at **Yahoo Labs**, a Horizon senior researcher at The Computer Laboratory of the **University of Cambridge**, and Postdoctoral Associate at the **MIT**. He received his PhD from **UC London**. His thesis was sponsored by Microsoft Research Cambridge and was nominated for BCS Best British PhD dissertation in Computer Science.

Education

University College London, London, UK

PhD in Computer Science. December 05-April 09.

Title: Trust Models for Mobile Content-Sharing Applications.

Candidate for BSC distinguished award - best British PhD dissertation in computer science.

London Business School, London, UK

Student of Technology Electives. September 04-April 09.

MBA Courses: Understanding Entrepreneurial Management, New Technology Ventures, and Finance and Value Creation. Collaborated with other students to:

Assess commercial potentials of a portable diagnostic device for hepatitis C;

Study the market feasibility of RFID for baggage handling.

Politecnico di Torino, Torino, Italy

Master of Science in Computer Engineering. September 97-November 03.

Final mark: 110/110. Thesis title: "Distributed Speech Recognition over IP Networks".

Universitaet Karlsruhe, Karlsruhe, Germany

Exchange student at the department of Computer Science. September 02-September 03.

University of Illinois at Chicago, Chicago, US

Master of Science in Computer Engineering. August 00-May 02.

Joint double-degree program between Politecnico di Torino and UIC.

Working Experience

Yahoo Labs, Barcelona, Spain

Research Scientist. October 12-present.

Working in the areas of social computing, mobile, personalization, and computational social science.

University of Cambridge, Cambridge, UK

Senior Researcher. January 12-Sept 12.

Researcher. February 10-December 11.

Working on mobile social-networking applications for the 5-year UK "Digital Economy" Grand Challenge.

Massachusetts Institute of Technology, Cambridge, US

Postdoctoral Associate in Urban Informatics. February 09-January 10.

Worked on social networks in a city context. Analyzed two large communication networks built using 12 billion records of individual landline calls in Great Britain and 810 million records of individual mobile phone calls in Belgium. Research question: Is there anything different about the way people communicate with each other in big cities as opposed to small villages.

University College London, London, UK

Research Fellow. February 09-March 09.

Worked on (mobile) social networks. Built a mobile phone tool called "FriendSensing" that recommends social contacts based on co-location traces gathered using Bluetooth.

National Institute of Informatics (NII), Tokyo, Japan

Visiting Researcher. November 07-March 08.

Researched how portable devices select services in a fully distributed way. Java prototype implemented.

Spanish Scientific Research Council, Barcelona, Spain

Visiting Researcher in Artificial Intelligence. May 07-July 07.

Researched how mobile users may attack reputation systems. Worked with Dr. Jordi Sabater, expert in reputation management for agent-based systems.

University College London, London, UK

Research Fellow. March 04-November 05.

Collaborated with 13 industrial and academic partners under the direction of Prof. P. Kirstein and Dr. S. Hailes. Designed a JAVA software architecture for portable devices that adapts to context changes. Managed deliverables and project reviews.

Telecom Italia Learning Services, L'Aquila, Italy

Intern. August 03-September 03.

Summer Internship Grant awarded to outstanding Economics and Computer Engineering students. Researched Application Service Provisioning (ASP) and formulated a business plan for ASP services in Chile titled "ASP market penetration in Chile".

Southern DataStream, LaBelle, US

Intern. December 01-March 02.

Managed programming team through problem study, brainstorming and solution development. Designed MacArthur Agro-Ecology Research Center website. Managed the MySQL/PHP database of the Water Quality Research Project at University of Florida. Collaborated with other interns to set up a videoconferencing web service.

Teaching Experience

University of Cambridge, Cambridge, UK

September 10-July 10.

University College London, London, UK

March 04-January 09.

Politecnico di Torino, Torino, Italy

September 99-July 00.

Amdia High School, Gracanica, Bosnia

July 98-September 98.

Publications

In Journals

J. An, D. Quercia, M. Cha, K. Gummadi, and J. Crowcroft. Sharing political news: the balancing act of intimacy and socialization in selective exposure. *EPJ Data Science*, 2014.

D. Quercia, D. Saez. Mining Urban Deprivation from Foursquare: Implicit Crowdsourcing of City Land Use. *IEEE Pervasive Magazine* 2014.

L. Capra, D. Quercia. Middleware for Social Computing: A Roadmap. Springer Journal JISA. 2012 (special issue for FOME at ACM/IFIP/USENIX Middleware).

D. Quercia, G. Di Lorenzo, F. Calabrese, C. Ratti. Mobile Phones and Outdoor Advertising: Measurable Advertising. *IEEE Pervasive Computing Magazine*.

D. Quercia, J. Ellis, and L. Capra. Using Mobile Phones to Nurture Social Networks. *IEEE Pervasive Computing Magazine*. July-September 2010.

D. Quercia, M. Lad, S. Hailes, and L. Capra. Survivable wireless networking - autonomic bandwidth sharing in mesh networks. *BT Technology Journal*. Springer Verlag. 2006.

In (Peer-Reviewed) Conference Proceedings

I. Kayes, N. Kourtellis, D. Quercia, A. Iamnitchi, F. Bonchi. Cultures in Community Question Answering. In *Proc. of ACM HT*, 2015.

Daniele Quercia, Rossano Schifanella, Luca Maria Aiello, Kate McLean. Smelly Maps: The Digital Life of Urban Smellscapes. In *Proc. of AAAI ICWSM*, 2015.

Miriam Redi, Daniele Quercia, Lindsay Graham, Samuel Gosling. Like Partying? Your Face Says It All. Predicting the Ambiance of Places with Profile Pictures. In *Proc. of AAAI ICWSM*, 2015 (**best paper award**).

Carmen Karina Vaca, Daniele Quercia, Francesco Bonchi, Piero Fraternali. Taxonomy-based Discovery and Annotation of Functional Areas in the City In *Proc. of AAAI ICWSM*, 2015.

D. Quercia, R. Schifanella, L. M. Aiello, A. Davies. The Digital Life of Walkable Streets. In *Proc. of ACM WWW*, 2015.

I. Kayes, N. Kourtellis, D. Quercia, A. Iamnitchi, F. Bonchi. The Social World of Content Abusers in Community Question Answering. In *Proc. of ACM WWW*, 2015.

A. Venerandi, G. Quattrone, L. Capra, D. Quercia, D. Saez-Trumper. Measuring Urban Deprivation from User Generated Content. In *Proc. of ACM CSCW*, 2015.

J. An, D. Quercia, J. Crowcroft. Partisan Sharing: Facebook Evidence and Societal Consequences. In *Proc. of ACM COSN*, 2014.

M. Saveski, D. Quercia, A. Mantrac. The Geography of Online News Engagement. In *Proc. of Springer SocInfo*, 2014.

D. Quercia, R. Schifanella, L. M. Aiello. The shortest path to happiness: Recommending beautiful, quiet, and happy routes in the city. In *Proc. of ACM HyperText*, 2014.

C. Brown, C. Efstratiou, I. Leontiadis, D. Quercia, C. Mascolo, J. Scott, P. Key. The Architecture of Innovation: Tracking Face-to-Face Interactions with UbiComp Technologies In *Proc. of ACM Ubicomp*, 2014 (**best paper award**).

E. M. Daly, D. Dahlem, D. Quercia. The New Blocs on the Block: Using Community Forums to Foster New Neighbourhoods. In *Proc. of ACM WebSci*, 2014.

- V. Zambaldi, J.P. Pesce, D. Quercia, V. Almeida. Lightweight Contextual Ranking of City Pictures: Urban Sociology to the Rescue. In *Proc. of AAAI **ICWSM***, 2014
- S. Tchokni, D. Ó Séaghdha, D. Quercia. Emoticons and Phrases: Status Symbols in Social Media. In *Proc. of AAAI **ICWSM***, 2014
- D. Castilho, P. Melo, D. Quercia, F. Benevenuto. Working with Friends: Unveiling Working Affinity Features from Facebook Data. In *Proc. of AAAI **ICWSM***, 2014
- J. An, D. Quercia, J. Crowcroft. Recommending Investors for Crowdfunding Projects. In *Proc. of ACM **WWW***, 2014.
- C. Vaca Ruiz, D. Quercia, L.M. Aiello, P. Fraternali. Taking Brazil's Pulse: Tracking Growing Urban Economies from Online Attention. In *Proc. of ACM **WWW***, 2014 (Web Science Track)
- E. Graells, M. Lalmas, D. Quercia. People of Opposing Views can Share Common Interests. In *Proc. ACM **WWW***, 2014 (Poster Session)
- G. Quattrone, A. Mashadi, D. Quercia, C. Smith, L. Capra. Modelling Growth of Urban Crowd-Sourced Information. In *Proc. ACM **WSDM***, 2014.
- D. Quercia, N. O'Hare, H. Cramer. Aesthetic Capital: What Makes London Look Beautiful, Quiet, and Happy? In *Proc. of ACM **CSCW***, 2014
- C. Brown, C. Efstratiou, I. Leontiadis, D. Quercia, C. Mascolo. Tracking serendipitous interactions: How individual cultures shape the office. In *Proc. of ACM **CSCW***, 2014
- R. Garcia-Gavilanes, Yelena Mejova, D. Quercia, Twitter ain't Without Frontiers: Economic, Social, and Cultural Boundaries in International Communication. In *Proc. of ACM **CSCW***, 2014
- R. Garcia-Gavilanes, D. Quercia, A. Jaimes. Cultural Dimensions in Twitter: Time, Individualism, and Power. In *Proc. of AAAI **ICWSM***, 2013 (**honorable mention**)
- D. Quercia. Don't Worry, Be Happy: The Geography of Happiness on Facebook. In *Proc. of ACM **WebSci***, 2013
- J. An, D. Quercia, J. Crowcroft. Why individuals seek diverse opinions (or why they don't). In *Proc. of ACM **WebSci***, 2013
- J. An, D. Quercia, M. Cha, K. Gummadi, J. Crowcroft. Traditional media seen from social media. In *Proc. of ACM **WebSci***, 2013
- D. Quercia, J.P. Pesce, J. Crowcroft, V. Almeida. Psychological Maps 2.0: A web engagement enterprise starting in London. In *Proc. of ACM **WWW***, 2013 (acceptance: 15%)
- Z. Wang, D. Quercia, D. Ó Séaghdha. Reading Tweeting Minds: Real-time Analysis of Short Text for Computational Social Science. In *Proc. of ACM **Hypertext***, 2013
- C. Smith, D. Quercia, L. Capra. Finger On The Pulse: Identifying Deprivation Using Transit Flow Analysis. In *Proc. of ACM **CSCW***, 2013

- X. Sha, D. Quercia, P. Michiardi, M. Dell'Amico. Trend Makers and Trend Spotters in a Mobile Application. In *Proc. of ACM **CSCW***, 2013
- X. Sha, D. Quercia, P. Michiardi, M. Dell'Amico. Spotting Trends: The wisdom of the few In *Proc. of ACM **RecSys***, 2012 (acceptance:20%)
- D. Saez-Trumper, D. Quercia, J. Crowcroft. Ads and the City: Considering Geographic Distance Goes a Long Way. In *Proc. of ACM **RecSys***, 2012 (acceptance:20%)
- D. Quercia, H. Askham, and J. Crowcroft. TweetLDA: Supervised Topic Classification and Link Prediction in Twitter. In *Proc. of the 4th ACM Web Science (WebSci)*, 2012
- D. Quercia, H. Askham, and J. Crowcroft. Loosing "Friends" on Facebook. In *Proc. of the 4th ACM Web Science (WebSci)*, 2012
- D. Quercia, D. Las Casas, J.P. Pesce, D. Stillwell, M. Kosinski, V. Almeida, J. Crowcroft Facebook and Privacy: The Balancing Act of Personality, Gender, and Relationship Currency In *Proc. of the 6th AAAI Conference on Weblogs and Social Media (**ICWSM**)*, 2012 (full paper acceptance rate: 20%)
- D. Quercia, L. Capra, J. Crowcroft. The Social World of Twitter: Topics, Geography, and Emotions. In *Proc. of the 6th AAAI Conf. on Weblogs and Social Media (**ICWSM**)*, 2012 (full paper acceptance rate: 20%).
- D. Quercia, D. O`Seaghdha, J. Crowcroft. Talk of the City: Our Tweets, Our Community Happiness. In *Proc. of the 6th AAAI Conf. on Weblogs and Social Media (**ICWSM**)*, 2012
- N. Lathia, D. Quercia, J. Crowcroft. The Hidden Image of the City: Sensing Community Well-Being from Urban Mobility. In *Proc. of the 10th Springer Conf. on Pervasive Computing (**Pervasive**)*, 2012
- Y.C. Zhang, D. O`Seaghdha, D. Quercia, T. Jambor. Auralist: Introducing Serendipity into Music Recommendations. In *Proc. of the 5th ACM Conference on Web Search and Data Mining (**WSDM**)*, 2012 (full paper acceptance rate: 8%).
- D. Quercia, R. Lambiotte, M. Kosinski, D. Stillwell, J. Crowcroft. The Personality of Popular Facebook Users. In *Proc. of the 15th ACM Conference on Computer Supported Cooperative Work (**CSCW**)*, 2012.
- D. Quercia, J. Ellis, L. Capra, J. Crowcroft. Tracking "Gross Community Happiness" from Tweets. In *Proc. of the 15th ACM Conference on Computer Supported Cooperative Work (**CSCW**)*, 2012.
- D. Quercia, J. Ellis, L. Capra, J. Crowcroft. In the Mood for Being Influential on Twitter In *Proc. of the 3rd IEEE Conference on Social Computing (**SocialCom**)*, 2011.
- D. Quercia, M. Kosinski, D. Stillwell, J. Crowcroft. Our Twitter Profiles, Our Selves: Predicting Personality with Twitter. In *Proc. of the 3rd IEEE Conference on Social Computing (**SocialCom**)*, 2011.
- D. Quercia, I. Leontiadis, L. McNamara, C. Mascolo, J. Crowcroft. SpotME If You Can: Randomized Responses for Location Obfuscation on Mobile Phones. In *Proc. of the 31st IEEE Conference on Distributed Computing Systems (**ICDCS**)*, 2011 (acceptance: 15%)

- D. Quercia, N. Lathia, F. Calabrese, G. Di Lorenzo, J. Crowcroft. Recommending Social Events from Mobile Phone Location Data. In *Proc. of the 10th IEEE International Conference on Data Mining (ICDM)*, 2010 (short+full paper acceptance: 155/797)
- S.L. Lim, D. Quercia, and A. Finkelstein StakeNet: Using Social Networks to Analyse the Stakeholders of Large-Scale Software Projects. In *Proc. of the 32nd Conference on Software Engineering (ICSE)*, 2010 (acceptance rate: 13%).
- S.L. Lim, D. Quercia, and A. Finkelstein StakeSource: Harnessing the Power of Crowdsourcing and Social Networks in Stakeholders Analysis. In *Proc. of the 32nd Conference on Software Engineering (ICSE). Research Demo*, 2010.
- D. Quercia and S. Hailes. Sybil Attacks Against Mobile Users: Friends and Foes to the Rescue. In *Proceedings of the 29th IEEE INFOCOM 2010*. (acceptance rate: 24%).
- D. Quercia and L. Capra. FriendSensing: Recommending Friends Using Mobile Phones. In *Proceedings of the 3rd ACM RecSys*, 2009.
- D. Quercia, S. Hailes, and L. Capra. MobiRate: Making Mobile Raters Stick to their Word In *Proceedings of the 10th IEEE International Conference on Ubiquitous Computing (Ubicomp)*, 2008. (acceptance rate: 15%).
- D. Quercia, S. Hailes, and L. Capra. Lightweight Distributed Trust Propagation. In *Proc. of the 7th IEEE International Conference on Data Mining (ICDM)*, 2007 (acceptance rate: 7%).
- D. Quercia, S. Hailes, and L. Capra TRULLO - local trust bootstrapping for ubiquitous devices. In *Proc. of the 4th IEEE International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (MobiQuitous)*, 2007.
- D. Quercia, S. Hailes, and L. Capra. B-trust: Bayesian Trust Framework for Pervasive Computing. In *Proc. of the 4th Springer Conference on Trust Management (iTrust)*, 2006
- D. Quercia, S. Hailes, and L. Capra. TATA: Towards Anonymous Trusted Authentication. In *Proc. of the 4th Springer Conference on Trust Management (iTrust)*, 2006.

Patents

- N. Barbieri, D. Quercia. Context-Aware Urban Route Recommendation. Filed patent, 2014.
- D. Quercia, F. Bonchi, C. Vaca. A taxonomy-based system for discovering and annotating geofences from geo-referenced data. Filed patent, 2014.
- D. Quercia, M. Lalmas, E. Graells. A system for presenting personalized content from creators of opposing views. Filed patent, 2014.
- L. M. Aiello, D. Quercia, Rossano Schifanella. A system for recommending pleasant routes from the sentiment of geo-tagged photographs. Filed patent, 2013.

Invited Talks/Papers

- Happy & Smelly Maps. Festival Keynote at Imagine Festival (Transport) 2015.
- Smelly Maps. Center for Research in Environmental Epidemiology (CREAL), Barcelona, 2015
- Social Media for Cold Management, Invited talk at WWW SWDM Workshop, 2015.

Chatty, Happy, and Smelly Maps, Invited talk at WWW LocWeb Workshop, 2015.
 Connected New Urbanism. **Conference Keynotes** at Oxford Connected Life 2015 and at Regulating Smart Cities.
 Computational Urban "Science". Invited Talk, Cambridge Network Day, May 2015.
 Happy & Smelly Maps. 5Talks 2015.
 Happy Maps. **TED** Talk 2014.
 The Pursuit of Urban Happiness. **Conference Keynote** at SocInfo 2014.
 The Pursuit of Urban Happiness. MSM Workshop keynote at WWW 2014.
 Evolutionary Habits on the Web. COOL Workshop keynote at WWW 2014.
 Urban Technologies: get more from human emotions. TEDx Barcelona, 2013.
 Breaking the Walls of Ordinary Beauty, Falling Walls, Berlin, 2012.
 Urban*: Crowdsourcing for the good of London, Workshop keynote at WWW 2013, at ECCS 2013, at ACM CoNext 2012. Cornell Tech New York, Computer Laboratory at University of Cambridge 2012, TU Berlin, UC London, Bite Size Lecture, KMI UK Open University, KAIST Social Media Workshop (invited talk)
 Unleashing the potential of spatial data (invited Talk). Policy-making implications of the data revolution, Cambridge Centre for Science and Policy, 2012.
 The Social World of Twitter: Structural Holes (invited Talk). Network Analysis Speaking Series, Oxford Internet Institute, University of Oxford, 2011.
 Rethinking Mobile Recommendations (Invited talk)
 geomobLDN (Quarterly Meetup for Geo and Mobile Developers), September 2011.
 Personality and Use of Language in Social Media (Invited talk)
 INRIA Grenoble, September 2011.
 The Personality of Popular Facebook Users (Invited talk)
 Network Analysis Speaking Series, Oxford Internet Institute, University of Oxford, 2011.
 International Summer School On Social Networking, Oslo, Norway, August 2011.
 Privacy in Mobile Social-Networking Applications (Invited talk)
 International Web Science Summer School, Galway, Ireland, June 2011.
 Promoting location privacy... one lie at a time. Invited talk at the International (Invited talk) Workshop on Social Media (Brazil) and at *PRIMMA Privacy Workshop (Imperial College)*.
 Social Recommendations: Recommending Social Contacts and Social Events from Mobility Data. (Invited talk) *ETHZ, Imperial College, MIT, Microsoft Research, Politecnico di Torino, University of Bozen, and University College London*.

Scholarly Service

Conference General chair of AAAI **ICWSM** 2015
Conference Track Co-Chair of ACM **Hypertext** 2014
Workshops and Tutorial Chair of ICWSM 2013.

Journal Guest co-editor for: Computer Communications Journal Special Issue on Online Social Networks (Elsevier) 2014; Special issue on Personality in Personalized systems (UMUAI) 2014.

Workshop Organizer of:

City Labs Workshop, co-located with SocInfo 2014
 ACM CIKM Workshop on Location and the Web (LocWeb) 2014
 ECIR Workshop on Context-awareness in Retrieval and Recommendation 2014
 IJCAI Workshop on Understanding the Positive and Negative Sides of Social Media 2013
 AAAI ICWSM Workshop When the City Meets the Citizen (WCMC 2012)
 ACM RecSys Workshop on Personalization in Mobile Applications 2011-12

Program Committee Member of: ACM Multimedia 2014; ACM SIGIR 2014 (short papers); ACM WWW 2012 and 2014; ACM RecSys 2013 and 2014; ACM Multimedia 2014;

ACM COSN 2013; AAAI ICWSM 2013 and 2014 (Senior); 16th CSCW 2013 (Area Chair); ACM CHI 2013

Reviewer for: PLoS ONE; Elsevier "Social Networks"; IEEE TMC; ACM TAAS; IEEE TSC; IEEE Internet Computing Magazine; Springer TSJ; 14th ACM Ubicomp; 49th IEEE GLOBECOM (Network Security); 3rd USENIX NSDI; 5th IEEE P2P.

Honors/Awards

Fortune's 2014 Big Data All-Stars. 2014.

"Fortune's first class of Big Data All-Stars: 20 extraordinary people who we think are the best at connecting the dots, digging deep, and discovering the information that will transform the way businesses operate."

Best Paper Awards.

AAAI ICWSM 2015.

ACM Ubicomp 2014.

Best Paper Nominee. AAAI ICWSM 2013.

A.T. Kerney Award

October 12.

For young scientists to "present breakthroughs in their own research" at Falling Walls. Awarded for urbangems.org.

Microsoft Research Scholar.

December 05-December 08.

Granted by Microsoft Research Cambridge to "recognize scholars who represent the best and the brightest from Europe".

Barcelona, Spain 2015.