



Workshop on the Future of Social Networking: Experts from Industry and Academia

<http://www.cl.cam.ac.uk/research/srg/netos/socialnets>
Cambridge United Kingdom, 18th November 2010

8:30-8:50 Registration and Coffee

8:50-9:00 Welcome

Session 1

9:00- 9:45	Birds of a Feather Shop Together	Sharad Goel (Yahoo! Research, USA)
9:45-10:30	Making Sense of the Information in the Real Time Web	Jurgen Van Gael (Microsoft FUSE Labs, UK)
10:30-10:45	The Online Community Development Process	Richard Millington (FeverBee)

10:45-11:10 Coffee Break

Session 2

11:10-11:55	Industry Directions - where social network providers are heading	Richard Allan (Facebook, UK)
11:55-12:10	The Future of International Education: Rafi.ki, a Network of Learners	Andrea LaRocca (Rafi.ki)
12:10-12:25	The Best Advice Does Not Always Come From Your Friends	Andrew J Scott (Rumble)

12:25-13:40 Buffet Lunch

2F Tower Lounge Bar and Roof Terrace

Session 3

13:40-14:25	Privacy Leakage on OSNs	Balachander Krishnamurthy (AT&T Research, USA)
14:25-15:10	Hermes: Clustering Users in Large-Scale E-mail Services	Christos Gkantsidis (Microsoft Research Cambridge, UK)

15:10-15:50 Coffee Break
+ Poster/Demo Session

Session 4

15:50-16:05	Finding and Future Direction of the W3C Social Web Incubator Group (SWXG)	Mischa Tuffield (Garlik Ltd)
16:05-16:20	Authentication in the Social Web	Joseph Bonneau (Univ. Cambridge, Computer Lab. Security Group)
16:20-16:35	Industrial Symbiosis: Networking for Improved Environmental Performance	Teresa Domenech (UCL, Political Science)
16:35-16:50	Horizon- Becoming Dataware	Richard Mortier (Horizon Digital Economy Research, Nottingham University)

16:50-17:00 Discussion Setup

17:00-17:45 A Panel
+ Open Discussion

17:45-18:00 Closing

18:00-19:00 Reception at Møller Centre

2F Tower Lounge Bar and Roof Terrace

LIVEBLOG:

<http://eusocialnets.blogspot.com>

CONTACT: social-nets@cl.cam.ac.uk

Twitter hashtag:

[#socialnets_ws](https://twitter.com/socialnets_ws)

WiFi SSID: møller

Abstract of Talks

M1. Birds of a Feather Shop Together

[Sharad Goel](#) (Yahoo! Research, USA)

Abstract: Adoption is often predicted using individual-level attributes such as age, sex, and geographic location. The principle of homophily suggests that social data (e.g., the attributes of people with whom one is in contact) might also have predictive value, however a lack of such social network data has limited research into this question. To assess whether social data can improve predictive models in a variety of domains, we construct a network from email and instant message exchanges and apply it towards making individual-level predictions of retail spending, joining a recreational league, and reacting to online advertisements. In each instance, we find that network data help identify those individuals most likely to adopt, and moreover, that these data often improve upon traditional indicators. In predicting repeat adoption, we find social data generally diminish in utility, but can remain informative even in the presence of strong predictors. This is joint work with Daniel Goldstein.

Bio: Sharad Goel is a Senior Research Scientist in the Microeconomics and Social Systems group at Yahoo! Research. He is interested in empirical and theoretical problems at the intersection of computer science and the social sciences, particularly questions motivated by sociology and economics.

M2. Making Sense of the Information in the Real Time Web

[Jurgen Van Gael](#) (Microsoft FUSE Labs, UK)

Abstract: Every day we are told about information overflow; how so much data is coming at us through so many channels that it is difficult to weed out the gems that are important to us from all the noise. We believe that the solution to this problem is personalization.

In this talk I will describe some recent work at Microsoft Research which approaches personalization from two different angles: on one hand, we use computational methods to find statistical correlations in large amounts of data. On the other hand, we augment the algorithmic approach with human intelligence. Through social networks we can leverage the trust relation between friends and followers to improve personalization beyond the computational approach.

Bio: Jurgen is an applied research at Microsoft Research FUSE Labs where I work on incorporating the latest research in machine learning and probabilistic modelling into new applications and services. Before joining FUSE Labs, Jurgen was a graduate student at the University of Cambridge working on Bayesian nonparametric models with Prof. Zoubin Ghahramani. Jurgen earned his MSc. from the University of Wisconsin at Madison where he worked on statistical natural language processing with Prof. Jerry Zhu. Jurgen's undergraduate degree is from the University of Leuven.

S1. The Online Community Development Process

Richard Millington ([FeverBee](#))

Abstract: There is a practically gap between the theory and the develop of online communities. There are plenty of papers about facilitating communities, responding to problems, spreading influence and network impacts but few about the actual process of building an online community from humble beginnings. This practically gap. There is little academic theory to back up the process of developing online communities. This lack of reliable theory is the reason why most online communities fail. Some communities were bad concepts to begin with ("hey, lets start an online community for our toilet paper brand"), others have a good idea but terrible execution. Much time, money and potential has been wasted on failed community efforts. We need to fix this

before too many companies become disillusioned with the most important change to communications in decades. In this talk, Richard will present his process for developing online communities and highlight areas that need greater research. This process will include the pre-launch stages, covering the early decisions that need to be made before launching a community, the launch phase – how to identify and attract your first members, the bonding phase – how to unite a community around common symbols, and the perpetual success phase – where the community takes a life of its own. This process isn't perfect. There are gaps in the knowledge of community managers. Richard will address three of these in his talk and suggest how they can be tackled. These include:

1. What is the optimal group size for maximum efficiency?
2. How does influence spread amongst a group?
3. How do variations in culture impact the community development process?

Bio: Richard Millington is an online community specialist and founder of FeverBee Ltd, a community consulting firm. Richard has spent over a decade in the community building trenches, worked on 12 successful online community projects and contributed to the success of dozens more. Richard's clients have included international organizations, several Fortune 500 companies and many entertainment brands. Familiar names include The United Nations, Novartis, The Global Fund, BAE Systems, AMD and Future Publishing. From IRC to Twitter, from listservs to Facebook, from fights to parties, from celebrations to deaths, Richard has seen it all. Today, he joins the workshop to talk you through his process for launching an online community and put forward some questions that need your help.

M3. Industry Directions - Where Social Network Providers are Heading

Richard Allan (Facebook, EU)

Abstract: Richard will describe recent developments on the Facebook service and outline future trends for where it is heading. He will use these insights to highlight the areas where research might be of particular interest.

Bio: Richard Allan joined Facebook in June 2009 to lead the company's public policy work in Europe. Richard works on a broad portfolio of issues including privacy, online child safety, freedom of Expression, e-commerce regulation and public sector uses of social media. He appears regularly in the media as a spokesman for Facebook. Prior to joining Facebook, Richard was European Government Affairs Director for Cisco from September 2005 and has been an academic visitor at the Oxford Internet Institute. From 2008 to 2009 Richard was Chair of the UK Cabinet Office's Power of Information Task Force working on improving the use of government data. Richard was Member of Parliament for Sheffield Hallam from 1997 to 2005 where he specialized in technology policy issues. In July 2010, Richard was appointed to the House of Lords in the UK Parliament. In the early part of his career Richard was an archaeologist, an NHS IT professional and a locally elected Councillor.

S2. The Future of International Education: Rafi.ki, a Network of Learners

Andrea LaRocca ([Rafi.ki](#))

Abstract: As an online learning community that connects students and teachers around the world to work on projects together, Rafi.ki is a social network based approach to education. Through Rafi.ki, students can access student-friendly content on global issues and then engage with these through interactive features such as quizzes, polls and activities. They can also pursue a full global experience by communicating, through chat and messaging, with students and teachers around the world. In other words, Rafi.ki is a social network that makes international education and experiences accessible to everyone. Rafi.ki also provides teachers with lesson plans and resources to teach a range of global issues and gives them with similar international networking opportunities. Teachers may also use Rafi.ki to connect with other schools that they may wish to collaborate

with on different projects. Rafi.ki thus allows students and teachers to expand the scope of their education through international connections and through learning in a unique manner. With schools from 123 countries and 60,000 students from over 2,350 primary and secondary schools online, Rafi.ki is a quickly growing educational tool for the future. It provides international access to schools and students who may be otherwise limited in their travel abilities and brings international education into the daily classroom. Rafi.ki, quite literally, puts the world at students' and teachers' fingertips.

Bio: Andrea LaRocca is an Assistant Programmes Coordinator at Rafi.ki, an online learning community for students and teachers around the world. She has extensive knowledge of international education, as in addition to her work at Rafi.ki, she has trained and taught as an English teacher in the both the US and the UK. Andrea also holds a Masters degree in English literature.

S3. The Best Advice Does Not Always Come From Your Friends

Andrew J Scott ([Rumble](#))

Abstract: Recommendation services have been in existence for years, yet so few –if any- consumer services deliver truly personalised recommendations. Rumble was created to solve that problem. Andrew will explain why and how he created Rumble to do that and the bumps along the way.

Bio: Andrew is Founder/CEO of Rumble, an internet company which personalises the physical world to your tastes, via your mobile phone. A passionate advocate of everything mobile, Rumble is his sixth technology start-up. After publishing an Atari ST fanzine at age fourteen, Andrew started his first company in 1989 and went on to run a successful web development company through the dot com years serving blue chip clients, which he sold in 2000. There he developed larger scale web sites including world's first online digital video news archive ([www.BritishPathe.com](#)) with sister company Cambridge Imaging, which contained thousands of hours of video and over 12 million images. Other start-ups have included an interactive personal fitness website (InTraining) with Olympian Dave Morgan, a CRM and marketing startup (TelephoneWizard), the UK's first interactive SMS flirting service (DinnerDateAuctions) and Europe's first location based social network (playtxt). With 20+ years in technology, Andrew also sits on the board of UnLtdWorld (an online platform which connects and empowers social entrepreneurs), Tiramizoo (a local delivery platform), 1541 (an entrepreneur group) and is a founding member of [www.mlove.com](#) . He is active in the European start-up community, splitting the bulk of his time between London and San Francisco.

M4. Optimal Marketing and Pricing over Social Networks

[Vahab Mirrokni](#) (Google Research, New York, USA)

Abstract: We discuss the use of social networks in implementing viral marketing strategies. While influence maximization has been studied in this context , we study revenue maximization, arguably, a more natural objective. In our model, a buyer's decision to buy an item is influenced by the set of other buyers that own the item and the price at which the item is offered. I will survey results from a sequence of four recent work on this topic. The talk is based on several papers including a WWW 2008 paper and two WINE 2010 papers.

Bio: Vahab Mirrokni is a Senior Research Scientist at Google Research in New York. He received his Ph.D from MIT in 2005 and his B.Sc from Sharif University in 2001. He joined Google after two years at Microsoft Research and a year at MIT and Amazon.com. He is a co-winner of the SODA 2005 best student paper award and the ACM EC 2008 best paper award. Vahab's research interests include algorithmic game theory, combinatorial optimization, social network analysis, and Internet Economics. At Google, he is working on various algorithmic and economic problems related to the Internet search and online advertisement.

M5. Privacy Leakage on OSNs

Balachander Krishnamurthy ([AT&T Labs—Research, USA](#))

Abstract: Our earlier longitudinal study (spanning thousands of Web sites in different categories, languages, and countries) showed how information related to individual users is aggregated as they browse seemingly unrelated Web sites. I'll present our discovery of large-scale leakage of personally identifiable information (PII) via popular Online Social Networks (OSN) to the same set of aggregators. PII leakage is also seen in mobile OSNs; the novel concerns include combination of new features unique to mobile access and induced leakage via traditional OSNs.

Bio: Balachander Krishnamurthy (<http://www.research.att.com/~bala/papers>), of AT&T Labs--Research, has authored and edited 10 books, over 80 papers, and holds 26 patents. His most recent book is "Internet Measurements: Infrastructure, Traffic and Applications" (550pp, Wiley) and his previous book 'Web Protocols and Practice' (672 pp, Addison-Wesley) has been translated into Chinese, Japanese, Portuguese, and Russian. He has started several conferences including the Internet Measurement Conference and the Workshop on Online Social Networks.

S4. Finding and Future Direction of the W3C Social Web Incubator Group (SWXG)

Mischa Tuffield ([Garlik Ltd](#))

Abstract: As a W3C Incubator group (XG), the primary responsibility was to produce a final report summarising discussions with other groups, and was to propose a way forward for the W3C to participate productively in the wider Social Web ecosystem. The Incubator group has surveyed the landscape of community driven standards, focusing on the wider Social Web initiatives from outside the W3C, in order to facilitate future W3C efforts in and around the Social Web. The talk will start by defining the concepts of interest to the XG, followed by a description of the work undertaken by the group, and will hint at the future direction recommended by SWXG to the W3C.

Bio: Mischa Tuffield is a Researcher/Developer at Garlik, a UK based online identity startup, where his interests in Personal Information and Semantic Web meet. Mischa is an active member of the W3C, holds a PhD in Computer Science from the University of Southampton, and an AI degree from the University of Edinburgh.

S5. Authentication in the Social Web

Joseph Bonneau ([University of Cambridge, Computer Laboratory Security Group](#))

Abstract: The growth of the social web and the large number of websites now including social features has introduced new demands for authentication and identity management online. Websites increasingly allow users to share all or some of their identity across websites, between sites and third party applications, and between non-browser clients and sites. This has brought new challenges for users, who are expected to maintain a large number of passwords and understand an increasingly complicated communications model to avoid fishing. This talk will discuss the complicated state of authentication on the web, from the "open pile" of OpenID, OAuth, Yadis, and others to proprietary protocols like Facebook Connect, Windows CardSpace, Google AuthSub, 3-D Secure and more.

Bio: Joseph Bonneau is a PhD candidate in the Security Group at the University of Cambridge, studying human authentication and the social web. He holds BS and MS degrees from Stanford University where he researched applied cryptography and side-channel cryptanalysis and worked as a cryptographer at Cryptography Research Inc. before moving to Cambridge.

S6. Industrial Symbiosis: Networking for Improved Environmental Performance

Teresa Domenech ([UCL, Political Science](#))

Abstract: Industrial ecology has emerged as a body of knowledge that focuses on the possibilities of minimising the materials and energy requirement of the industrial sector, by transforming waste streams into valuable inputs, through the building of complex material and energy flow systems. Within this field, Industrial symbiosis (IS) explores the inter-company dimension in moving towards more closed-loop industrial systems, by looking at networks of industrial companies exchanging waste flows and sharing resources. Equally important for the practical implementation of IS initiatives as the study of the patterns material and energy flows within the industrial system, is the understanding of the organisational, institutional and social aspects that govern those material flows and the performance of the networks. Even given the potential economic and environmental benefits, the process of emergence and development of these networks seems far from straightforward. The effective operation of such networks relies heavily on aspects such as trust and general reciprocity. In this presentation I will explore the networking dynamics of IS networks and their contribution to innovation and to the triple bottom line of organisations. Aspects regarding the structure, morphology and patterns of coordination of these networks will be briefly reviewed.

Bio: Teresa Domenech has a PhD on Industrial Symbiosis Networks awarded by the University College London (UCL). She is also research assistant at the Bartlett School of Graduate Studies (UCL) and coordinates the MSc module on Industrial Symbiosis. Her research interests cover the areas of industrial symbiosis, industrial ecology, innovation and environmental networks and, more widely, sustainability issues. She has taken part in a European funded project to research the applicability of industrial ecology and networking principles to the design of industrial estates and planning policies. She has also worked as environmental consultant providing assistance to industrial companies.

S7. Horizon- Becoming Dataware

Richard Mortier ([Nottingham University, Horizon Digital Economy Research](#))

Abstract: As we go about our lives, each of us creates and manages personal digital data about our online and real-world activities. Horizon Digital Economy Research is an RCUK research hub investigating the many different challenges surrounding collection and exploitation of these personal contextual footprints. Currently, many companies exploit our contextual footprints for their own gain, often without much explicit understanding or involvement on our part. Building an ecosystem around exploitation of our contextual footprints that maintains acceptable levels of privacy, both when our data is being exploited individually and as part of a group, is key to enabling growth in value of our social and personal data. After introducing Horizon, I will describe our initial steps toward a system in which we are trying to enable third parties to compute over personal data while providing individually acceptable privacy guarantees.

Bio: Mort (Richard Mortier) is a Horizon Transitional Fellow in Computer Science at the University of Nottingham. His research interests are currently focused around networked technologies connected with the Digital Economy. In general he is interested in systems and networking, covering operating systems, distributed systems, and local and wide-area networking. Prior to joining Nottingham he spent two years as founder at Vipadia Limited designing and building the Clackpoint and Karaka products, six years as a researcher at Microsoft Research Cambridge, and seven months as a visitor at Sprint ATL, CA. He received a Ph.D. from the Systems Research Group at the University of Cambridge Computer Laboratory, and a B.A. in Mathematics, also from the University of Cambridge.

Speaker change: unfortunately Vahab Mirrokni (Google Research) could not make the workshop due to visa delay. Christos Gkantsidis (Microsoft Research Cambridge) will replace Vahab's slot.

Hermes: Clustering Users in Large-Scale E-mail Services

[Christos Gkantsidis](#) (Microsoft Research Cambridge, UK)

Abstract: Hermes is an optimization engine for large-scale enterprise e-mail services. Such services could be hosted by a virtualized e-mail service provider, or by dedicated enterprise data centers. In both cases we observe that the pattern of e-mails between employees of an enterprise forms an implicit social graph. Hermes tracks this implicit social graph, periodically identifies clusters of strongly connected users within the graph, and co-locates such users on the same server. Co-locating the users reduces storage requirements: senders and recipients who reside on the same server can share a single copy of an e-mail. Co-location also reduces inter-server bandwidth usage.

We evaluate Hermes using a trace of all e-mails within a major corporation over a five month period. The e-mail service supports over 120,000 users on 68 servers. Our evaluation shows that using Hermes results in storage savings of 37% and bandwidth savings of 50% compared to current approaches. The overheads are low: a single commodity server can run the optimization for the entire system.

Bio: Christos is a researcher in the Systems and Networking Group in Microsoft Research, Cambridge, UK. He holds a Ph.D. from Georgia Institute of Technology, Atlanta, GA, USA, and bachelors from University of Patras, Greece, both in computer science. He is interested in content distribution networks, peer-to-peer technologies, analysis and modelling of complex communication networks, and wireless mesh networking. Christos is a member of IEEE and ACM.

Posters

P1. Analysis of Content and Activity in Geo-Social Networks for Place Recommendations

Anastasios Noulas and Cecilia Mascolo (University of Cambridge, Computer Laboratory)

P2. Can We Exploit the Wisdom of Large Ad Hoc Crowds?

Simon Fleming, Ian Wakeman and Dan Chalmers (University of Sussex)

P3. Collaborative Privacy Policy Authoring in a Social Networking Context

Ryan Wishart (Imperial College London)

P4. Distance Matters: Geo-social Metrics for Online Social Networks

Salvatore Scellato, Cecilia Mascolo (University of Cambridge), Mirco Musolesi (University of St. Andrews) and Vito Latora (University of Catania)

P5. Empowering people to fight killer flu with mobile phones and social networking

Chris Watkins (Department of Computer Science, Royal Holloway)

P6. Growth mechanisms in continuously-observed networks: Communication in a Facebook-like community

Tore Opsahl (Imperial College Business School, Imperial College London)

P7. How social media helps the music industry: Tracking artist popularity, fan interactions and media consumption using Musicmetric

Trung Huynh, Gregory Mead, Jameel Syed, and Matthew Jeffery (Musicmetric - www.musicmetric.com)

P8. Open Innovation: how corporate R&D scientists capture and exploit external knowledge from their networks

Anne ter Wal, Paola Criscuolo, and Ammon Salter (Innovation Studies Centre, Imperial College Business School)

P9. Privacy concerns and social network routing

Iain Parris and Tristan Henderson (School of Computer Science, University of St Andrews)

P10. Small-world behavior in time-varying graphs

John Tang, Salvatore Scellato, Mirco Musolesi, Cecilia Mascolo (Computer Laboratory, University of Cambridge) and Vito Latora (Università di Catania)

P11. Studying Location Sharing on Social Networks with Mobile Experience Sampling

Fehmi Ben Abdesslem, Iain Parris and Tristan Henderson (School of Computer Science, University of St Andrews)

P12. Word-of-Mouth based Web Discovery: URL Propagation in Twitter

Jisun An (University of Cambridge), Tiago Rodrigues and Fabrício Benevenuto (Universidade Federal de Minas Gerais), Meeyoung Cha (Graduate School of Culture Technology, KAIST), and Krishna Gummadi (Max Planck Institute for Software Systems)