



IEEE SocialCom 2011

IEEE PASSAT 2011

The Third IEEE International Conference on Social Computing

The Third IEEE International Conference on Privacy, Security, Risk and Trust

October 9-11, 2011

MIT, Boston, USA

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Program of SocialCom/PASSAT-2011 AT A GLANCE

October 8, 2011 (Saturday)					
14:00-18:00	Registration (MIT Media Lab) Address: 20 Ames Street, E15-383, Cambridge, MA				
October 9, 2011 (Sunday)					
7:00	Registration				
7:15-8:30	Breakfast				
08:30-10:30	Tutorial 1 (E14-674)	MSM-11 (E14-633)	SON-11 (E14-525)	SCUS-11 (E14-244)	SBABC-11 (E14-240)
10:30-10:45	Coffee Break				
10:45-12:15	Tutorial 2 (E14-674)	MSM-11 (E14-633)	SON-11 (E14-525)	SCUS-11 (E14-244)	SBABC-11 (E14-240)
12:15-13:00	Lunch				
13:00-13:05	SocialCom Chair Remarks (E14-674) Sandy Pentland/Alessandro Vinciarelli		PASSAT Chair Remarks (E14-633) John Clippinger/Elisa Bertino		
13:05-15:30	SocialCom Session A1(E14-674)		PASSAT Session B1(E14-633)		
15:30-15:40	Coffee Break				
15:40-17:15	SocialCom Session A2 (E14-674)		PASSAT Session B1(E14-633)		
17:15-18:00	Panel on CyberBullying (E14-674) Chair: Henry Lieberman				
17:15-18:30	SocialCom Poster Session A10/ PASSAT Poster Session B5 (E-14)				
18:30-	Dinner on your own				
October 10, 2011					
7:00	Registration				
7:00-8:00	Breakfast				
8:00-11:00	SocialCom Session A3 (E14-674)		SPSN Session 1 (8:00-10:15) (E14-633) SPSN Keynote Speech (10:15-11:00) (E14-633) Speaker: Max Little Chair: Yaniv Altshuler		
11:00-11:15	Coffee Break				
11:15-12:15	SocialCom Keynote Speech (E14-674) Speaker: Joichi "Joi" Ito Chair: Sandy Pentland		PASSAT Keynote Speech (E14-633) Speaker: Jorge Lobo Chair: Elisa Bertino		
12:15-1:15	Lunch				
13:15-15:45	SocialCom Session A4 (E14-674)		PASSAT B2 (E14-633)		
15:45-16:00	Coffee Break				
16:00-18:00	SocialCom Session A5 (E14-674)		PASSAT B3 (E14-633)		
18:00-19:30	SocialCom Poster Session A11/PASSAT Poster Session B6 (E-14)				
18:00-19:30	Reception with a Meal of Circulated Hors d'Oeuvres (E14 3 rd Floor Atrium)				
19:30-21:30	MIT Media Lab Entertainment Video Show (E14 3 rd Floor Atrium)				
October 11, 2011					
7:00	Registration				
7:00-8:00	Breakfast				
8:00-11:00	SocialCom Session A6 (E14-674)		PASSAT Session B4 (E14-633)		
10:30-11:15	Coffee Break				
11:15-12:15	SocialCom Keynote Speech (E14-674) Speaker: Deb Roy Chair: Alessandro Vinciarelli		PASSAT Keynote Speech (E14-633) Speaker: Jeremy Grant Chair: Elisa Bertino		
12:15-13:15	Lunch				
13:15-15:45	SocialCom Session A7 (E14-674)		SocialCom Session A9 (E14-633)		
15:45-16:00	Coffee Break				
16:00-18:30	SocialCom Session A8 (E14-674)		SPSN Session 2 (16:00-17:45) (E14-633) SPSN Keynote Speech (17:45-18:30) (E14-633) Speaker: Stav Grinshpon Chair: Yaniv Altshuler		
18:30	Conferences End!				



Keynote Speaker: Joichi "Joi" Ito

Joichi "Joi" Ito is an influential thinker, speaker, and seed investor driving the international development of the Internet. He has been a central figure in bringing the commercial Internet to Japan, and he remains the most internationally well-recognized Japanese expert on web 2.0. He was selected as a "Global Leader for Tomorrow" by the World Economic Forum; as one of the 25 Most Influential People on the Web by *BusinessWeek*; as a member of the "Cyber-Elite" by *Time* magazine; as a "Leader of the Pack" by *Newsweek*, and as a member of "The Next Establishment" by *Vanity Fair*.

By the early 1990s, Ito had already realized the power and potential of the Internet, and in 1994, at the age of 28, he founded one of the first web development companies in Japan, Eccosys, which eventually became Digital Garage, now one of the most actively traded public Japanese Internet companies; he also helped establish, and became CEO of, the first commercial Internet service provider in Japan. He helped to found Infoseek Japan—the first commercial search engine in Japan—and served as its chairman. Subsequently, Ito shifted his focus to early-stage venture investing and was an early investor in over 40 companies including Flickr, Six Apart, Last.fm, Kongregate, Kickstarter, and Twitter. He continues to invest in start-up companies through his venture fund, Neoteny Labs, which focuses on Southeast Asia and the Middle East.

In addition to private-sector work, Ito has been part of a wide range of governmental, arts, and non-profit organizations, and has participated in dozens of central and local government study groups, committees, and advisory boards in Japan. He served as a secretariat member of Keizai Doyukai (The Association of Corporate Executives) in Japan, promoting business and government reforms, and has presented at global meetings such as the Trilateral Commission and the World Economic Forum in Davos. For 10 years he has served as a juror for the Prix Ars Electronica.

Though he never completed a college degree, Ito is a self-directed learner who works closely with academia to explore new approaches for learning and collaboration. He currently teaches and lectures at a number of universities. In the United States, he is an affiliate of the Berkman Center for Internet & Society at Harvard University; in Japan he is senior visiting researcher at Keio University SFC Research Institute, and a part-time lecturer at Keo Graduate School of Media Design. He is also a DBA candidate at the Graduate School of International Corporate Strategy, Hitotsubashi University, working on a study of "The Sharing Economy."

Ito has served on numerous non-profit boards involving computing and the Internet, including the Internet Corporation for Assigned Names and Numbers (ICANN); the Open Source Initiative (OSI); Computer Scientists for Social Responsibility (CPSR); and the Internet Association of Japan; the Mozilla Foundation; WITNESS; Start!; and Global Voices, a network of bloggers focusing on free speech and promoting the less-heard voices around the world. For the past 10 years he has served as a juror for Prix Ars Electronica.

In 2003, Ito was invited to join the board of Creative Commons, a non-profit organization focused on developing and supporting legal and technical tools to help everyone from artists to governments, encouraging legal sharing and reuse. He played a key role in expanding the funding and global reach of the organization, which now has affiliates in more than 70 countries. To date, over 500 million pieces of content have been published under Creative Commons licenses.



Keynote Speaker: Deb Roy

Deb Roy is a tenured member of the MIT faculty and directs the Cognitive Machines group at the MIT Media Lab. A native of Canada, Roy received his bachelor of computer engineering from University of Waterloo in 1992 and his PhD in cognitive science from MIT in 1999. He joined the MIT faculty in 2000.

Roy studies how children learn language, and designs machines that learn to communicate in human-like ways. To enable this work, he has pioneered new data-driven methods for analyzing and modeling human linguistic and social behavior. He has authored numerous scientific papers on artificial intelligence, cognitive modeling, human-machine interaction, data mining and information visualization. Roy's research is frequently featured in the media including the New York Times, Wall Street Journal, WIRED, National Geographic, Science, BBC, and National Public Radio.

Deb Roy is currently on leave from MIT and serves at CEO of Bluefin Labs, a venture-backed technology company that he co-founded. Built upon deep machine learning principles developed in his research over the past 15 years, Bluefin has created a technology platform that analyzes social media commentary to measure real-time audience responses to TV ads and shows. The company is developing products based on this platform to help brands, agencies, and media companies optimize their mass media performance by integrating real time insights minded from social media and other sources of audience response.



Keynote Speaker: Jorge Lobo

Jorge Lobo is a Research Staff Member at IBM T. J. Watson Research Center. Previous to IBM, he was principal architect at Teltier Technologies, a startup company in the wireless telecommunication space acquired by Dynamicsoft, now part of Cisco Systems. Before joining Teltier, he was member of technical staff in the network computing department at Bell Labs and faculty in the department of computer science at University of Illinois at Chicago. For more than a decade he has been working in understanding the role of policy, norms and regulations in computer systems and networks. Policies are pervasive parts of both technical and social systems. Computer systems and networks have policies which govern system configuration, workload management, service provisioning, storage, and access control for the integrity and confidentiality of data and resources. In social systems, organizations have policies and regulations covering proper conduct to protect the safety and privacy of people and for effective and appropriate use of resources. Jorge has been studying languages and system models to describe, analyze and enforce policies. Motivated by work on network management, he did pioneer work at Bell Labs in policy-based network management. He developed the language PDL. PDL was designed to implement application-independent policy servers. A PDL management system was part of the first Lucent softswitch telecommunication network. Other products where his policy research has had significant impact are a Present and Availability server for privacy control at Teltier Technologies, the IBM Policy Management for Autonomic Computing, the IBM Storage Configuration Manager, and role mining for IBM Tivoli Identity Manager.

Jorge is co-founder and member of the steering committee of the IEEE Policy Symposium series. He received a PhD in CS from the University of Maryland at College Park, and a MS and a BE from Simon Bolivar University in Venezuela. He is an ACM Distinguished Scientist.



Keynote Speaker: Jeremy Grant

Talk Title: The National Strategy for Trusted Identities in Cyberspace (NSTIC): Enhancing Online Choice, Efficiency, Security and Privacy

Jeremy Grant is senior executive advisor for identity management at the National Institute for Standards and Technology (NIST). He joined NIST in February, 2011 to manage the establishment of a National Program Office for the National Strategy for Trusted Identities in Cyberspace (NSTIC).

Mr. Grant comes to NIST with a diverse background and deep understanding of identity and cybersecurity issues, having served in a range of leadership positions spanning government and industry. He began his career as a legislative aide in the U.S. Senate, where he drafted the legislation which laid the groundwork for the Department of Defense and GSA smart card and PKI efforts. Mr. Grant then joined MAXIMUS, where he led the division's Security and Identity Management practice, and played a major role in a number of major federal identity and security programs. He then spent three years with Washington Research Group as the firm's identity and cybersecurity market analyst. Most recently, Jeremy served as Chief Development Officer for ASI Government.

Jeremy is a former co-chair of the Identity Management Committee at TechAmerica (previously the Information Technology Association of America). He is a graduate of the University of Michigan.

SocialCom-2011

Session A1: Social Networks (Chair: Ben Shneiderman)

Finding Credible Information Sources in Social Networks Based on Content and Social Structure (25 minutes)

Kevin Canini, Bongwon Suh, Peter Pirolli

The Impacts of Just-In-Time Social Networks on People's Choices in the Real World (25 minutes)

Kwan Hong Lee, Andrew Lippman, Alex Pentland, Elenna Dugundji

NetVisia: Heat Map & Matrix Visualization of Dynamic Social Network Statistics & Content (25 minutes)

Robert Gove, Nick Gramsky, Rose Kirby, Emre Sefer, Awalyn Sopan, Cody Dunne, Ben Shneiderman, Meirav Taieb-Maimon

Link Prediction Based on Subgraph Evolution in Dynamic Social Networks (20 minutes)

Krzysztof Juszczyszyn, Katarzyna Musia, Marcin Budka

Overlapping community structures and their detection on social networks (15 minutes)

Nam P. Nguyen, Thang N. Dinh, Dung T. Nguyen, My T. Thai

DNE: A Method for Extracting Cascaded Diffusion Networks from Social Networks (15 minutes)

Motahhare Eslami, Hamid R. Rabiee, Mostafa Salehi

Session A2: Social Networks (Chair: Alvin Chin)

Predicting Reciprocity in Social Networks (25 minutes)

Justin Cheng, Daniel Romero, Brendan Meeder, Jon Kleinberg

An Agent-Based Model of Epidemic Spread using Human Mobility and Social Network Information (20 minutes)

Enrique Frias-Martinez, Graham Williamson, Vanessa Frias-Martinez

IRONMAN: Using social networks to add incentives and reputation to opportunistic networks (20 minutes)

Greg Bigwood, Tristan Henderson

Link Prediction in Social Networks using Computationally Efficient Topological Features (15 minutes)

Michael Fire, Lena Tenenboim, Ofrit Lesser, Rami Puzis, Lior Rokach, Yuval Elovici

Social Butterfly: Social Caches for Distributed Social Networks (15 minutes)

Lu Han, Badri Nath, Liviu Iftode, S. Muthukrishnan

Session A3: Gaming (Chair: Jennifer Golbeck)

Odd Leaf Out: Improving visual recognition with games (25 minutes)

Derek Hansen, David Jacobs, Darcy Lewis, Arijit Biswas, Jennifer Preece, Dana Rotman, Eric Stevens

The Life Game: Cognitive Strategies for Repeated Stochastic Games (25 minutes)

Kan-Leung Cheng, Inon Zuckerman, Dana Nau, Jennifer Golbeck

Vocal Minority versus Silent Majority: Discovering the Opinions of the Long-Tail (25 minutes)

Eni Mustafaraj, Samantha Finn, Carolyn Whitlock, Panagiotis Metaxas

Analyzing Answers in Threaded Discussions using a Role-Based Information Network (25 minutes)

JeonHyung Kang, Jihie Kim

Coevolving Strategies in Social-Elimination Games (25 minutes)

Kan-Leung Cheng, Ugur Kuter, Jennifer Golbeck

Illicit Bits: Detecting and Analyzing Contraband Networks in Massively Multiplayer Online Games (20 minutes)
Muhammad Ahmad, Brian Keegan, Sophia Sullivan, Dmitri Williams, Jaideep Srivastava, Noshir Contractor

An Exploratory Study of Player Performance, Motivation, and Enjoyment in Massively Multiplayer Online Role-Playing Games (15 minutes)
Kyong Jin Shim

Dynamics of Social Interactions in a Network Game (15 minutes)
Rajiv Maheswaran, Yu-Han Chang, Eunkyung Kim, Luyan Chi

Session A4: Prediction (Chair: Alessandro Vinciarelli)

Predicting Personality from Twitter (25 minutes)
Jennifer Golbeck, Cristina Robles, Michon Edmonson, Karen Turner

Churn Prediction in MMORPGs using player motivation theories and ensemble approach (25 minutes)
Zoheb Borbora, Kuo-Wei Hsu, Jaideep Srivastava, Dmitri Williams

How (Not) To Predict Elections (15 minutes)
Panagiotis Metaxas, Eni Mustafaraj, Daniel Gayo-Avello

The Evolution of Ego-Centric Triads: A Microscopic Approach toward Predicting Macroscopic Network Properties (15 minutes)
Mina doroud, Prantik Bhattacharyya, S. Felix Wu, Diane Felmlee

Our Twitter Profiles, Our Selves: Predicting Personality with Twitter (15 minutes)
Daniele Quercia, Michal Kosinski, David Stillwell, Jon Crowcroft

Content-based prediction of temporal boundaries for events in Twitter (15 minutes)
Akshaya Iyengar, Tim Finin, Anupam Joshi

Predicting the Political Alignment of Twitter Users (15 minutes)
Michael Conover, Bruno Gonçalves, Jacob Ratkiewicz, Alessandro Flammini, Filippo Menczer

Session A5: Social Search and Understanding (Chair: Jerome Picault)

Fortune Monitor or Fortune Teller: Understanding the Connection between Interaction Patterns and Financial Status (25 minutes)
Wei Pan, Nadav Aharony, Alex Pentland

Using Social Sensing to Understand the Links Between Sleep, Mood, and Sociability (25 minutes)
Sai Moturu, Inas Khayal, Nadav Aharony, Wei Pan, Alex Pentland

Leveraging User Diversity to Harvest Knowledge on the Social Web (20 minutes)
Jeon-Hyung Kang, Kristina Lerman

The Connected States of America: Inferring Communities from Communication (20 minutes)
Francesco Calabrese, Dominik Dahlem, Alexandre Gerber, DeDe Paul, Xiaoji Chen, James Rowland, Christopher Rath, Carlo Ratti

The Need for Champions for Approximate Social Search in the Absence of Communication Infrastructure (15 minutes)
Yves-Alexandre de Montjoye, Jesika Haria, Manuel Cebrian, Alex (Sandy) Pentland

Effectiveness of Cooperative Customer Navigation between Robots around a Retail Shop -- toward obtaining customers' purchasing behaviors (15 minutes)
Koji Kamei, Tetsushi Ikeda, Hiroyuki Kidokoro, Masayuki Shiomi, Akira Utsumi, Kazuhiko Shinozawa, Takahiro Miyashita, Norihiro Hagita

Session A6: Social Mining, Analysis and Recommendation (Chair: Alessandro Vinciarelli)

Unveiling Hidden Patterns to Find Social Relevance (20 minutes)
Enkh-Amgalan Baatarjav, Ram Dantu

Profile Mining in CVS-Logs and Face-to-Face Contacts for Recommending Software Developers (20 minutes)
Björn-Elmar Macek, Martin Atzmüller, Gerd Stumme
Triangles to Capture Social Cohesion (20 minutes)
Adrien Friggeri, Guillaume Chelius, Eric Fleury

Are Humans like Ants? – Analyzing Collective Opinion Formation in Online Discussions (20 minutes)
Carolin Kaiser, Alexander Piazza, Johannes Kröckel, Freimut Bodendorf

Get Online Support, Feel Better---Sentiment Analysis and Dynamics in an Online Cancer Survivor Community (20 minutes)
Baojun Qiu, Kang Zhao, Prasenjit Mitra, Dinghao Wu, Cornelia Caragea, John Yen, Greta Greer, Kenneth Portier

Network-Centric Recommendation: Personalization with and in Social Networks (15 minutes)
Amit Sharma, Dan Cosley

Towards Computational Proxemics: Inferring Social Relations from Interpersonal Distances (15 minutes)
Marco Cristani, Giulia Paggetti, Alessandro Vinciarelli, Loris Bazzani, Gloria Menegaz, Vittorio Murino

Session A7: Forum Analysis (Chair: Scott Piao)

Comparing Twitter Summarization Algorithms (25 minutes)
David Inouye, Jugal Kalita

In the Mood for Being Influential on Twitter (20 minutes)
Daniele Quercia, Jonathan Ellis, Licia Capra, Jon Crowcroft

Anticipating Discussion Activity \on Community Forums (20 minutes)
Matthew Rowe, Sofia Angeletou, Harith Alani

Measuring Opinion Relevance in Latent Topic Space (20 minutes)
Wei Cheng, Xiaochuan Ni, Jian-Tao Sun, Xiaoming Jin, Hye-Chung Kum, Xiang Zhang, Wei Wang

Group Membership and Diffusion in Virtual Worlds (20 minutes)
David Huffaker, Chun-Yuen Teng, Matthew Simmons, Liuling Gong, Lada Adamic

Anti-Preferential Attachment: If I Follow You, Will You Follow Me? (20 minutes)
Juan Lang, S. Felix Wu

The Role of (Non-)Conformism in Rating Platforms (15 minutes)
Chih-Chun Chen, Camille Roth

Group-In-a-Box Layout for Multi-faceted Analysis of Communities (15 minutes)
Eduarda Mendes Rodrigues, Natasa Milic-Frayling, Marc Smith, Ben Shneiderman, Derek Hansen

Session A8: Modeling (Chair: Felix Wu)

Modeling Information Diffusion in Networks with Unobserved Links (25 minutes)

Quang Duong, Michael Wellman, Satinder Singh

Read What You Trust: An Open Wiki Model Enhanced by Social Context (25 minutes)

Haifeng Zhao, William Kallander, Tometi Gbedema, Felix Wu

Game Theoretic Modeling and Computational Analysis of N-Player Conflicts over Resources (15 minutes)

Noam Hazon, Nilanjan Chakraborty, Katia Sycara

Expert-Driven Topical Classification of Short Message Streams (15 minutes)

Krishna Kamath, James Caverlee

RESCOT: Reliable Scheduling of Social Computing Tasks (20 minutes)

Sergej Sizov

The Influence of Distance, Time, And Communication Network Structures on the Choice of Communication Partners (15 minutes)

Christoph Stadtfeld, Andreas Geyer-Schulz, Otto Allmendinger

Aborting a Message Flowing Through Social Communities (15 minutes)

Cindy Hui, Malik Magdon-Ismael, William Al Wallace, Mark Goldberg

Session A9: Trust, Reputation and Privacy (Chair: Yan Sun)

Predicting Trust and Distrust in Social Networks (25 minutes)

Thomas DuBois, Jennifer Golbeck, Aravind Srinivasan

Defending Multiple-user multiple-target Attacks in Online Reputation Systems (25 minutes)

Yuhong Liu, Yan Sun, Ting Yu

Models of Web Page Reputation in Social Search (25 minutes)

Kevin McNally, Michael P. O'Mahony, Barry Smyth

Relationship Privacy Preservation in Publishing Online Social Networks (20 minutes)

Na Li, Nan Zhang, Sajal Das

Caretaker: A Social Game for Studying Trust Dynamics (15 minutes)

Nicholas Violi, Jennifer Golbeck, Kan-Leung Cheng, Ugur Kuter

From Privacy Concern to Uses of Social Network Sites: A Cross-Cultural Study (15 minutes)

Li Chen, Ho Keung Tsoi

SocialCom Poster Session A10

Tie Formation on Twitter: Homophily and Structure of Egocentric Networks
Munmun De Choudhury

Two-Layered Structure of Social Network revealed by Data Analysis of Telecommunication Services
Hideyuki Koto, Masaki Aida, Hajime Nakamura

Cross-Pollination of Information in Online Social Media: A Case Study on Popular Social Networks
Paridhi Jain, Tiago Rodrigues, Gabriel Magno, Ponnurangam Kumaraguru, Virgílio Almeida

Emotions in product reviews -- Empirics and models
David Garcia, Frank Schweitzer

Empirical Comparison of Information Spreading Algorithms in The Presence of 1-Whiskers
Kazem Jahanbakhsh, Valerie King, Gholamali C. Shoja

Enabling Cross-Site Content Sharing between Social Networks
Mohamed Shehab, MooNam Ko, Hakim Touati

Modelling Influence in a Social Network: Metrics and Evaluation
Behnam Hajian, Tony White

Finding Event-Specific Influencers in Dynamic Social Networks
Christopher Schenk, Douglas Sicker

Recommendations Based on User-generated Comments in Social Media
Andrew Messenger, Jon Whittle

A Dynamic Community Creation Mechanism in Opportunistic Mobile Social Networks
Daqing Zhang, Zhu Wang, Bin Guo, Vaskar Raychoudhury, Xingshe Zhou

Out of Sight Out of Mind - How Our Mobile Social Network Changes During Migration
Santi Phithakkitnukoon, Francesco Calabrese, Zbigniew Smoreda, Carlo Ratti

VisionBlocks: A Social Computer Vision Platform
Abhijit Bendale, Kevin Chiu, Kshitij Marwah, Ramesh Raskar

Connecting People in the Workplace Through Ephemeral Social Networks
Alvin Chin, Hao Wang, Lijun Zhu, Bin Xu, Ke Zhang, Hao Wang

Social Networking Analysis: A State of the Art and the Effect of Semantics
Charalampos Chelmiss, Viktor K. Prasanna

Data mining in on-line social network for marketing response analysis
Jerzy Surma, Anna Furmanek

From Earthquakes to “#morecowbell”: Identifying Sub-Topics in Social Network Communications
Alana Platt, Cynthia Hood, Levi Citrin

Groups in Academic Social Networking Services - An exploration of their potential as a platform for multi-disciplinary collaboration
Jung Sun Oh, Wei Jeng

Visual Analysis of Temporal Trends in Social Networks Using Edge Color Coding and Metric Timelines
Udayan Khurana, Viet-An Nguyen, Hsueh-Chien Cheng, Jae-wook Ahn, Xi Chen, Ben Shneiderman

Collaboration Emergence in Social Networks with Informational Natural Selection
Daniel Farenzena, Ricardo Araujo, Luis Lamb

Labeled Influence Maximization in Social Networks for Target Marketing
Fa-Hsien Li, Cheng-Te Li, Man-Kwan Shan

Social Network Models
Whitman Richards

Detecting Ambiguous Author Names in Crowdsourced Scholarly Data
Xiaoling Sun, Jasleen Kaur, Lino Possamai, Filippo Menczer

Enhancing Mobile Malware Detection with Social Collaboration
Liu Yang, Vinod Ganapathy, Liviu Iftode

LICOD: Leaders Identification for Community detection in Complex Networks
Rushed Kanawati

Design Issues in Minimizing Infrastructure Requirements of Mobile Social Software Introduction System
Sava Stakic, Srdjan Stakic

MET: Multi-party e-commerce transaction model
Keren Jin, Jiafeng Zhu, Guangbin Fan

Snag'em- Creating and Monitoring Strong Community Connections through games
Evie Powell, Felesia Stukes, Tiffany Barnes, Heather Lipford

Urban Radar: An Enabler for Place-aware Spontaneous Interactions
Byoungoh Kim, Gonzalo Huerta-Canepa, Dongman Lee

Towards a generic socio-cultural profile for collaborative environments
Fadoua Ouamani, Narjès Bellamine Ben Saoud, Henda Ben Ghezala

Dynamic Community Detection with Temporal Dirichlet Process
Xuning Tang, Christopher Yang

A proposed model to include social and emotional context in a Group Idea Generation Support System
João Laranjeira, Goreti Marreiros, Carlos Freitas, Ricardo Santos, João Carneiro, Carlos Ramos

Predicting Levels of Rapport in Dyadic Interactions Through Automatic Detection of Posture and Posture Congruence

Juan Lorenzo Hagad, Roberto Legaspi, Merlin Suarez, Masayuki Numao

An Exploratory Study of Player and Team Performance in Multiplayer First-Person-Shooter Games
Kyong Jin Shim

Exploring the Spatiality of Networked Social Media as the Third Space
Chamari Edirisinghe, Adrian Cheok, Ryohei Nakatsu, Johannes Widodo

Social Event Detection in Massive Mobile Phone Data Using Probabilistic Location Inference
vincent traag, arnaud browet, francesco calabrese, frederic morlot

Identification of Groups in Online Environments: The Twist and Turns of Grouping Groups
Iftekhar Ahmed, Channing Brown, Andrew Pilny, Dora Cai, Yannick Ada, Marshall Poole

A Semantic Tag Recommendation Framework for Collaborative Tagging Systems

Zinovia Alepidou, Konstantinos N. Vavliakis, Pericles A. Mitkas

Social distance drives the convergence of preferences in an online music sharing network
Lily Tran, Manuel Cebrian, Coco Krumme, Alex Pentland

Coalescing Twitter Trends: The Under-Utilization of Machine Learning in Social Media
Michael Brennan, Rachel Greenstadt

Cognitive efficiency as a causal mechanism for social preferences
Nisheeth Srivastava, Paul Schrater

Visualizing the Blogosphere with BlogConnect
Justus Bross, Patrick Schilf, Maximilian Jenders, Christoph Meinel

A Temporal Analysis of Geographical Distances in Computer Science Collaborations
Pramod Divakarmurthy, Pooja Biswas, Ronaldo Menezes

Supervised Rank Aggregation for Predicting Influence in Networks
Karthik Subbian, Prem Melville

How network structure affects social creativity
Siddhartha Bhattacharyya, Stellan Ohlsson

Mapping the Blogosphere — Towards a Universal and Scalable Blog-Crawler
Patrick Hennig, Philipp Berger, Justus Bross, Christoph Meinel

Live Broadcasting – The Feeling of Presence and Social Interaction
Anneli Avatare Nöu, Marie Sjölander

Link Biased Strategies in Network Formation Games
Shaun Lichter, Christopher Griffin, Terry Friesz

Anomaly Detection on Collective Moving Patterns: Manifold Learning based Analysis of Traffic Streams
Su Yang, Wenbin Zhou

Task-based Services Composition for Ubiquitous Computing
Hyung-Jun Yim, Yun-Young Hwang, Kyu-Chul Lee

“I Can Haz Emoshuns?” – Understanding Anthropomorphosis of Cats among Internet Users
Derek Foster, Ben Kirman, Conor Linehan, Shaun Lawson, Daniel Mills, Sarah Ellis, Helen Zulch

Explorations in Massively Collaborative Problem Solving
Kshanti Greene, Dan Thomson, Pietro Michelucci

SocialCom Poster Session A11

pieTime: Visualizing Communication Patterns
Ou Jie Zhao, Tiffany Ng, Dan Cosley

Edit wars in Wikipedia
Robert Sumi, Taha Yasseri, Andras Rung, Andras Kornai, Kanos Kertesz

Incremental Relabeling for Active Learning with Noisy Crowdsourced Annotations
Liyue Zhao, Gita Sukthankar, Rahul Sukthankar

Simulating Audiences: Automating Analysis of Values, Attitudes, and Sentiment
Clay Templeton, Ken Fleischmann, Jordan Boyd-Graber

Elderly's Social Presence supported by ICTs
Christiane Moser, Verena Fuchsberger, Katja Neureiter, Wolfgang Sellner, Manfred Tscheligi

Combining Evidence for Social Situation Detection
Georg Groh, Christoph Fuchs, Alexander Lehmann

Intent-Driven Behavioral Modeling During Cross-Border Epidemic
Eunice Santos, Eugene Santos Jr, John Korah, Jeremy Thompson, Keumjoo Kim, Riya George, Qi Gu, Jacob Jurmain, Suresh Subramanian (UTEP) and John Wilkinson

SSDE-Cluster: Fast Overlapping Clustering of Networks Using Sampled Spectral Distance Embedding and GMMs
Jonathan Purnell, Malik Magdon-Ismail

Motivation for Participation in Online Neighborhood Watch Communities: An Empirical Study Involving Invitation Letters
Nicholas Violi, Ben Shneiderman, Art Hanson, PJ Rey

A Survey of Crowdsourcing Systems
Man-Ching YUEN, Irwin KING, Kwong-Sak LEUNG

A Study of Social Interactions in Online Health Communities
Christopher YANG, Xuning Tang, Jia Huang, Jennifer Unger

Tracking and Predicting Evolution of Social Communities
Mark Goldberg, Malik Magdon-Ismail, Srinivas Nambirajan, James Thompson

Masquerading as a trustworthy entity through Portable Document File (PDF) Format
Gundeep Bindra

Beyond FOAF: Challenges in Characterizing Social Relations
Jan Hauffa, Gottlieb Bossert, Nadja Richter, Florian Wolf, Marin Zec, Nora Liesenfeld, Georg Groh

Rational Choice and Barriers To Exponential Complexity In Social Optimization Computations Under Uncertainty
Chjan Lim

Beyond the Human Computation Metaphor
Yiftach Nagar

What's Happening: Finding Events Nearby Using Twitter
Taehyun Kim, Gonzalo Huerta-Canepa, Jongheon Park, Dongman Lee, Meeyoung Cha

The Effect of Post Type, Category and Posting Day on User Interaction Level on Facebook
Irena Pletikosa Cvijikj, Erica Dubach Spiegler, Florian Michahelles

Generic Model of Activity-level in Workplace Communication
Tomoaki Akitomi, Koji Ara, Junichiro Watanabe, Kazuo Yano

Unsupervised Opinion Phrase Extraction and Rating in Chinese Blog Posts
Jenq-Haur Wang, Chi-Ching Lee

Extracting Social Dimensions using Fiedler Embedding
Xi Wang, Gita Sukthankar

Group Abstraction for Large-Scale Agent-Based Social Diffusion Models
Alexei Sharpanskykh, Jan Treur

Estimating Twitter User Location Using Social Interactions – A Content Based Approach
Swarup Chandra, Latifur Khan, Fahad Bin Muhaya

Discovering Collective Mobility Patterns
Zhenmei Liao, Su Yang, Jianning Liang

An Agent-based Evolutionary Model of Leadership
Alexei Sharpanskykh, Brian Spisak

Privacy and Information Markets: Controlling Information Flows in Decentralized Social Networking
Georg Groh, Stefan Birnkammerer

Towards privacy in a context-aware social network based recommendation system
Po-Wah Yau, Allan Tomlinson

Practice Makes Perfect: Motivating confident on-line privacy protection practices
Lizzie Coles-Kemp, Elahe Kani-Zabihi

Secure and Policy-Private Resource Sharing in an Online Social Network
Stefano Braghin, Vincenzo Iovino, Giuseppe Persiano, Alberto Trombetta

Inferring Profile Elements from Publicly Available Social Network Data
Piotr Kozikowski, Georg Groh

Trust me, I 'm an Expert: Trust, Homophily and Expertise in MMOs
Muhammad Ahmad, Iftekhar Ahmad, Jaideep Srivastava, Marshall Poole

Finding Community Structure with Performance Guarantees in Complex Networks
Thang Dinh, My Thai

An Examination of the Techniques and Implications of Crowd-sourced Collection of Forensic Data
Daniel Compton, Drew Hamilton

Contextual Modeling of Personality States Dynamics in Face to Face Interactions
Jacopo Staiano, Bruno Lepri, Kyriaki Kalimeri, Fabio Pianesi, Nicu Sebe

Litter: A Lightweight Peer-to-Peer Microblogging Service
Pierre St Juste, David Wolinsky, Patrick Boykin, Renato Figueiredo

Not all is Gold that Glitters Response time & satisfaction rates in Yahoo! Answers
Sheizaf Rafaeli, Amit Rechavi

A Feasibility Study on Extracting Twitter Users' Interests using NLP Tools for Serendipitous Connections
Scott Piao, Jon Whittle

PASSAT-2011

Session B1: Privacy (Chair: Frederic Prost)

Practical Privacy-Preserving Multiparty Linear Programming Based on Problem Transformation (25 minutes)
Jannik Dreier, Florian Kerschbaum

Achieving Full Security in Privacy-Preserving Data Mining (25 minutes)
Marina Blanton

PrivacyJudge: Effective Privacy Controls for Online Published Information (15 minutes)
Bastian Könings, David Piendl, Florian Schaub, Michael Weber

Intelligent Reactive Access Control for Moving Personal Data (25 minutes)
Yang Wang, Armen Aghasaryan, Arvind Shrihari, David Pergament, Guy-Bertrand Kamga, Stéphane Betgé-Brezetz

Privacy-preserving Tabu Search for Distributed Graph Coloring (20 minutes)
Yuan Hong, Jaideep Vaidya, Haibing Lu, Basit Shafiq

Information Integration and Analysis: A Semantic Approach to Privacy (20 minutes)
Madan Oberoi, Pramod Jagtap, Anupam Joshi, Tim Finin, Lalana Kagal

An Approach to Community-Oriented Email Privacy (20 minutes)
Dennis Kafura, Denis Gracanin, Manuel Perez-Quinones, Tom DeHart, Sherley Codio

Privacy: Gone with the Typing! Identifying Web Users by Their Typing Patterns (15 minutes)
Prima Chairunnanda, Nam Pham, Urs Hengartner

Privately detecting pairwise correlations in distributed time series (15 minutes)
Mehmet Sayal, Lisa Singh

Secure information sharing on support of emergency management (25 minutes)
Barbara Carminati, Elena Ferrari, Michele Guglielmi

Information Sharing Across Private Databases: Secure Union Revisited (15 minutes)
Li Xiong, Pawel Jurczyk

Session B2: Trust and Risk (Chair: Bruno Crispo)

A Probabilistic-Based Trust Evaluation Model using Hidden Markov Models and Bonus Malus Systems (20 minutes)
Kevin Ouyang, Binod Vaidya, Dimitrios Makrakis

Accessing Trusted Web Sites From Low-integrity Systems Without End-host Snooping (15 minutes)
Billy Lau, Atul Prakash, Venkatanathan Annamalai

TGIS: Booting Trust for Secure Information Sharing in Dynamic Group Collaborations (15 minutes)
Katharine Chang, Xinwen Zhang, Guoqiang Wang, Kang G. Shin

Session B3: Security (Chair: Christopher Griffin)

Protecting cryptographic keys on client platforms using virtualization and raw disk image access (25 minutes)
Sujit Sanjeev, Jatin Lodhia, Raghunathan Srinivasan, Partha Dasgupta

YAASE: Yet Another Android Security Extension (20 minutes)

Giovanni Russello, Bruno Crispo, Earlence Fernandes, Yuri Zhauniarovich

Security Status of VoIP Based on the Observation of Real-World Attacks on a Honeynet (20 minutes)
Markus Gruber, Florian Fankhauser, Stefan Taber, Christian Schanes, Thomas Grechenig

Software based remote attestation for OS kernel and user applications (20 minutes)
Raghunathan Srinivasan, Partha Dasgupta, Tushar Gohad

CoRPPS: Collusion Resistant Pseudonym Providing System (15 minutes)
Belal Amro, Albert Levi, Yucel Saygin

Estimating Security Coverage for Cloud Services (15 minutes)
Dipankar Dasgupta, Md Moshir Rahman

Session B4: Web Assurance and Others (Chair: Latifur Khan)

Aintno: Demonstration of Information Accountability on the Web (25 minutes)
Joe Pato, Sharon Paradesi, Ian Jacobi, Fuming Shih, Sam Wang

Towards a game theoretical Model for Identity Validation in Social Network Sites (25 minutes)
Anna C Squicciarini, Christopher Griffin, Smitha Sundareswaran

Botnet with Browser Extensions (15 minutes)
Lei Liu, Xinwen Zhang, Songqing Chen

An Analysis of Black-Box Web Application Security Scanners against Stored SQL Injection (15 minutes)
Nidal Khoury, Pavol Zavarisky, Dale Lindskog, Ron Ruhl

Insider Threat Detection Using Stream Mining and Graph Mining (25 minutes)
Pallabi Parveen, Jonathan Evans, Bhavani Thuraisingham, Kevin W. Hamlen,
and Latifur Khan

Enforcing Dynamic Interference Policy (20 minutes)
Frederic Prost

Performance Evaluation of Oracle VM Server Virtualization Software 64 bit Linux Environment (15 minutes)
Emmanuel Ibidokun, Pavol Zavarisky, Ron Ruhl, Dale Lindskog

An Analysis of CVSS v2 Environmental Scoring (15 minutes)
Ayodele Ibidapo, Pavol Zavarisky, Dale Lindskog, Ron Ruhl

Auditing Information Leakage for Distance Metrics (15 minutes)
Yikan Chen, David Evans

PASSAT Poster Session B5

Privacy Goals and Settings Mediator Model for PHRs
Reza Samavi, Mariano Consens, Thodoros Topaloglou

A Decentralized Group Privacy Protocol for Vehicular Networks
Hagen Stübing, Marco Pfalzgraf, Sorin A. Huss

Do the Privacy Policies Reflect the Privacy Controls on Social Networks: A Qualitative Study
Pauline Anthonysamy, Awais Rashid, Phil Greenwood

Camouflaged Private Communication
Erez Waisbard, Ely Porat, Amir Herzberg, Nir Soffer

A Privacy-Aware Bayesian Approach for Combining Classifier and Cluster Ensembles
Ayan Acharya, Eduardo Hruschka, Joydeep Ghosh

Supportive, Comprehensive and Improved Privacy Protection for Web Browsing
Delfina Malandrino, Vittorio Scarano

A Secure and Distributed Framework to Identify and Share Needed Information
Wei Jiang, Bharath Kumar Samanthula

PASSAT Poster Session B6

TISS-loc: Towards User Control of Privacy in Location Disclosure
Dalal Ahmed Al-Arayed, João Pedro Sousa

Secure and Verifiable Outsourcing of Large-Scale Biometric Computations
Marina Blanton, Yihua Zhang, Keith Frikken

Conditional Trust Adjustment and Initialization
Mozhgan Tavakolifard

Preserving Vote Secrecy in End-to-End Verifiable Voting Systems
Wagner Santos, Ruy Queiroz

BM (Break-Merge): An Elegant Approach for Privacy Preserving Data Publishing
Sandeep Varma Nadimpalli, Valli Kumari Vatsavayi

An ontological study of data purpose for privacy policy enforcement
Shan Chen, Mary-Anne Williams

Systematic Deployment of Network Security Policy in Centralized and Distributed Firewalls
Nihel Ben Souayah Ben Youssef and Adel Bouhoula

Risk Mitigation Strategies for Mobile Wi-Fi Robot Toys from Online Pedophiles
Siew Yong, Dale Lindskog, Ron Ruhl, Pavol Zavorsky

Dynamic systems approach to analyzing event risks and behavioral risks with Game Theory
Wolfgang BOEHMER

Access Control Model and Design for Delegation Using Authorization Tokens
Hidehito Gomi

A New Formula of Security Risk Analysis That Takes Risk Improvement Factor into Account
Hiroyuki Sato

Intelligent XML Tag Classification Techniques for XML Encryption Improvement
Faisal Ammari, Joan Lu, Maher Abur-rous

Comparative Analysis of Volatile Memory Forensics: Live Response vs. Memory Imaging
Amer Aljaedi, Dale Lindskog, Pavol Zavorsky, Ron Ruhl, Fares Almari

A New SOA Security Framework Defending Web services Against WSDL Attacks
Narges Shahgholi, Mehran Mohsenzadeh, Mir Ali Seyyedi, Saleh Hafez Qorani

Revisit Dynamic ARIMA Based Anomaly Detection
Bonnie Zhu, Shankar Sastry

A Study of the Effectiveness of CSRF Guard
boyan chen, Pavol Zavorsky, Ron Ruhl, Dale Lindskog

E-Government System Security Model (eGSSM): A Multidimensional, Risk Based Approach to E-Government
David C. Edwards, Pavol Zavorsky, Ron Ruhl, Dale Lindskog, Shaun Aghili

Risk, Uncertainty and Possible Worlds
Xun Wang, Mary-Anne Williams

Trend Analysis of the CVE for Software Vulnerability Management
Yung-Yu Chang, Pavol Zavorsky, Ron Ruhl, Dale Lindskog

Workshop on Security and Privacy in Social Networks (SPSN2011)

Session 1 (Chair: Yaniv Altshuler)

Decoupled Data for Privacy Preserving Record Linkage with Error Management
Hye-Chung Kum and Stanley Ahalt

Encryption for P2P Social Networks
Oleksandr Bodriagov and Sonja Buchegger

Recognizing Your Digital Friends
Patrik Bichsel, Jan Camenisch and Mario Verdicchio

Dirty Deeds Done Dirt Cheap - A Darker Side to Crowdsourcing
Christopher Harris

An Analysis of Anonymity in the Bitcoin System
Fergal Reid and Martin Harrigan

Session 2 (Chair: Yaniv Altshuler)

Analyzing Privacy in Social Networks - An Interdisciplinary Approach
Michael Netter, Sebastian Herbst and Gunther Pernul

Analysis of Mobile P2P malware Detection Framework through Cabir & Commwarrior Families
Muhammad Adeel and Laurissa Tokarchuk

Modeling and Analyzing User Behavior of Privacy Management on Online Social Network: Research in Progress
Ki Jung Lee and Il-Yeol Song

Sharing and Privacy-Aware RBAC in Online Social Networks
Akmad Kamran Malik and Schahram Dustdar

Workshop on Modeling Social Media: User Interface Modeling in Social Media (MSM2011)

Modeling Location-based Profiles of Social Image Media using Explorative Pattern Mining
Florain Lemmerich and martin Atzmueller

Privacy and Security in Multi-modal User Interface Modeling for Social Media
Mohamed Bourimi, Ricardo Tesoriero, Pedro G. Vilanueva, Fatih Karatas and Philipp Schwarte

Modeling user behavior in the adoption and diffusion of Twitter client software
Elenna Dugundji, Ate Poorthuis and Michiel Van Meeteren

Comparing Social Tags to Microblogs
Victoria Lai, Christopher Rajashekar and William Rand

Current and Future Trends in Social Media
Enkh-Amgalan Baatarjav and Ram Dantu

Enhancing Exploratory Search with Hedonic Browsing Using Social Tagging Tools
Hesham Allam

Simulation of User Participation and Interaction in Online Discussion Groups
Else Nygren

Workshop on Social Object Networks (SON2011)

Scientific Social Objects: The Social Objects and Multidimensional Network of the myExperiment Website
David De Roure, Sean Bechhofer, Carole Goble, David Newman

Personal Social Screen – A Dynamic Privacy Assignment System for Social Sharing in Complex Social Object Networks
Lei Li, Tong Sun, Tao Li

Rhythms in Twitter
Dan Chalmers, Simon Fleming, Ian Wakeman, Des Watson

Social Objects Description and Recommendation in Multidimensional Social Networks: OCSO Ontology and Semantic Spreading Activation
Nicolas Marie, Fabien Gandon

Node-pair Feature Extraction for Link Prediction
Tesh Feyessa, Marwan Bikdash and Gary Lebbby

Workshop on Social Connections in the urban Space (SCUS2011)

Urban mobility: velocity and uncertainty in mobile phone data

Thomas Couronné, Ana-Maria Olteanu, Zbigniew Smoreda

Time-Series Monitoring Method of Commercial Accumulations using Digital Yellow Page Data

Hiroaki Sengoku, Yuki Akyama and Ryosuke Shibasaki

Locast Civic Media: extending civic engagement boundaries through mobile media and hyper-local conversations

David Boardman, Federico Casalegno and Steve Pomeroy

Enhancing Engagement in a Mobile Participatory Sensing Project through Location-Based Services and Gaming

Kyungsik Han, Eric A. Graham, Dylan Vassallo, Deborah Estrin

Discovering and classifying errors in wayfinding

Ciaran Owens, Stephen Brewster

Towards congestion detection in transportation networks using GPS data

Armando Bazzani, Bruno Giorgini and Sandro Rambaldi

Workshop on Social Behavioral Analysis and Behavioral Change (SBABC2011)

Discriminating Individually Considerate and Authoritarian Leaders by Speech

Sebastian Feese, Amir Muaremi, Bert Anrich, Gerhard Troster, Bertolt Meyer, and Klaus Jonas

Towards Social Retrieval of Music Content

Giovanna Varni, Gualtiero Volpe, and Barbara Mazzarino

A Framework to Identify Relationships among Students in School Bullying

Masaru Honjo, Toru Hasegawa, Teru Hasegawa, Tatsudya Suda, Koji Mishima, and Toshikazu Yoshida

The Effect of Relational Context on Personal Influence

Hikaru Yamamoto, and Naohiro Matsumara

Persuasive and Social Contagion

Marco Guerini, and Carlo Strapparava

Tutorial 1: Toolkits for Computational Social Science

Tutorial Duration: 8:30-10:30AM, October 9, 2011.

Organizers:

Alex (Sandy) Pentland, MIT Media Laboratory (pentland@media.mit.edu, primary contact)
Nadav Aharony, MIT Media Laboratory (nadav@media.mit.edu)
Wei Pan, MIT Media Laboratory (panwei@media.mit.edu)
Wen Dong, MIT Media Laboratory (wdong@media.mit.edu)

During the last decade the MIT Human Dynamics Lab has developed human behavior measurement tools based on smart phones and social signal processing models that allow us to accurately quantify human behavior in everyday situations on a continuous basis over long time periods. We have recently configured these measurement and modeling tools as open-source platforms that make it easy for other people to do similar deployments.

In this tutorial we will describe our Android-based open sensing platform and our MATLAB-based social influence modeling tools, covering the function, capability, and typical use. These tools will be made available to interested participants.

The tutorial will include a hands-on session demonstrating some of the platforms' capabilities. We will review configuration, data collection, some back-end basics on how to export the data in a format that is useful for analysis, as well as examples of analysis and visualization of the data.

Finally, we will illustrate the use of these tools together with our mathematical analysis tools on a variety of real-world problems. For additional information see <http://hd.media.mit.edu> and <http://funf.media.mit.edu>

Tutorial 2: Untangling Dark Webs: Theories, Methods, and Models for a Computational Social Science of Clandestine Networks

Tutorial Duration: 10:45am-12:15pm, October 9, 2011.

Organizers:

Brian Keegan, Northwestern University (bkeegan@northwestern.edu)
Muhammad Ahmad, University of Minnesota (mahmad@cs.umn.edu)
Dmitri Williams, University of Southern California (dmitri.williams@usc.edu)
Jaideep Srivastava, University of Minnesota (srivasta@cs.umn.edu)
Noshir Contractor, Northwestern University (nosh@northwestern.edu)

The explosion of digital trace data in from computer-mediated communication technologies, online communities, and social media offers exciting new ways to understand large-scale social phenomena. A key insight for understanding social behavior in both online and offline domains is situating it in larger and more complex networks of user relationships and interactions. These networks emerge, stabilize, and dissolve in response to a variety of endogenous and exogenous processes operating at multiple levels of analysis. Extracting these multi-relational data for network analyses requires novel computational approaches for not only dealing with petascale data, but also imputing relationships from other types of digital trace data. The emerging fields of computational social science, social computing, and web science demand interdisciplinary approaches to developing theories and methods for describing and modeling social behavior so to better answer fundamental questions about general social dynamics.

Massively-multiplayer online games (MMOGs) like World of Warcraft, EverQuest II, and EVE Online have tens of thousands of players who have complex social interactions and organizations within virtual worlds. To the extent that individuals in online games operate under similar motivations and constraints as is encountered in offline contexts, their behavior in online worlds can potentially be generalized and mapped to better understand offline social behavior. MMOGs not only have complex market economies where players barter and exchange for items and services, but illicit markets for other goods and services also exist. “Gold farming” is one example in which players pay real money to outside thirdparty vendor to supply them with in-game currency which allows players to accelerate their progress through the game. The player community and game developers oppose this practice for a variety of economic, legal, and ludic reasons. Thus the agents who procure these virtual currencies and items within the game face the challenge of how to organize themselves to both avoid detection while providing a very profitable service.

Clandestine and deviant behavior is still fundamentally socially-mediated and the fields of social computing and computational social science need to develop theories, methods, and metrics for characterizing and understanding them. These clandestine networks of gold farmers thus provide a model case for understanding larger issues about how clandestine organizations in both online and offline contexts emerge, stabilize, and dissolve. The intrinsically computer-mediated nature of MMOGs allows unobtrusive and exhaustive collection of data about how these organizations structure themselves and evolve over time. Integrating network analysis, statistical models, and machine learning tools with this large-scale data could allow the development of algorithms which improve detection methods, predictive models of how organizations change over time, and metrics for assessing and evaluating the reach and influence of these organizations.

In this tutorial, we will review our prior work which has developed predictive models of likely gold farmers, characterized the structure and resilience of their trade networks, the ways in which these trade networks emerge from complex trust networks, and the ways in which these networks are structured similarly to – and thus potentially generalizable to – offline drug trafficking networks. We discuss how to integrate methods developed for other contexts to a dark/clandestine network context, how to reconcile these methods with the validity concerns about mapping between very different contexts, extending these approaches to other information/communication technology and social media contexts, and the implications for both privacy and “dual use” implementations of this line of research.

Panel: Cyberbullying: Dodging the Bullet

Tutorial Duration: 5:15pm-6pm, October 9, 2011
MIT Media Lab, Room E14-674

Henry Lieberman (Moderator)
Parry Aftab
Karthik Dinakar
Birago Jones

Cyberbullying (harassment of youth on social networks) is a growing problem. Social networks provide many benefits for youth, such as developing new relationships, sharing interests, and practicing reading and writing in a personally meaningful context. But the sporadic outbreak of bullying constitutes a serious threat to social networks. Especially with mobile social platforms, children may find it difficult to escape being targets for bullying.

At the White House Conference on Bullying Prevention, US President Barack Obama and First Lady Michelle Obama expressed their deep personal concern about this scourge. Educators, psychologists, social network providers, and not least of all, children themselves are all seeking solutions to this problem.

While the true solution rests on teaching youth to have healthy personal relationships, we believe that efforts in innovative design of social network software can help deal with the problem. This threat is analogous to the threat spam presented in the early days of the Internet. If spam overwhelmed meaningful email, email would not be a viable as a communications medium. Luckily, the technical solution of spam filters allowed us to dodge that bullet. Spam has not been eliminated, but it is now largely under control. If we are to encourage youth to have positive online social interaction, we must develop solutions for preventing occasional bullying from generating a pervasive social climate of fear.

This panel will address the nature of the Cyberbullying problem, and current efforts in academia, industry, and government to deal with it.

About the participants

Henry Lieberman is Principal Research Scientist at the MIT Media Lab. He heads the Software Agents Group, which works on applying Artificial Intelligence to improve Human-Computer Interaction, especially on Commonsense knowledge bases and reasoning. His group is working on technologies to detect online bullying, and developing new kinds of social network software that help prevent it and mitigate consequences when it does occur.

Parry Aftab is a US lawyer, child advocate and expert in all aspects of cyberlaw. Parry authored the first Internet safety book, *A Parents Guide to the Internet*. She was identified as "the leading expert in cybercrime in the United States," by the Boston Herald. She founded and runs the world's oldest and largest cybersafety charity, now known as WiredSafety. She also created StopCyberbullying.org, the most popular cyberbullying prevention website. The US Congress presented her the President's Service Award from the Clinton White House and in 1999 UNESCO appointed her to head up its online child protection project for the United States. Parry was also named to the Harvard Berkman Center-administered Internet Safety Technical Task Force in 2008. In 2009 she was appointed to the National Telecommunications Information Agency's Online Safety Technology Working Group.

Karthik Dinakar and Birago Jones are graduate research assistants at the MIT Media Lab. They are the authors of the TimeOut social network software. This software uses state-of-the-art natural language understanding for bullying detection, employing a large knowledge base of Commonsense knowledge that contains over a million simple facts about everyday life. On the intervention side, it uses a variety of strategies, such as suggesting appropriate educational material for participants in real time, and alerting network moderators to situations where incidents are escalating or spreading.