

# NATHAN EAGLE

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The Santa Fe Institute  
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email: nathan@mit.edu

## RESEARCH INTERESTS

Engineering Social Systems, Artificial Intelligence for Development, Computational Epidemiology, Appropriate Technology, Large-Scale Network Analysis, Mobile Computing, Global Health, Developmental Entrepreneurship, Prosperity Engineering

## EDUCATION

**Massachusetts Institute of Technology**, Cambridge, MA

2005 PhD, Media Arts and Sciences, MIT Media Laboratory  
Dissertation: *Reality Mining: Machine Perception and Learning of Complex Social Systems*

**Stanford University**, Stanford, CA

2003 MS, Electrical Engineering  
Emphasis: *Computer Vision, Wireless Communications*

2001 MS, Management Science and Engineering  
Emphasis: *System Dynamics, High-Tech Entrepreneurship*

1999 BS, Mechanical Engineering  
Emphasis: *Sensors, Mechatronics*

## EMPLOYMENT

2010 - PRESENT **Massachusetts Institute of Technology**, Cambridge, MA  
*Visiting Assistant Professor, MIT Media Lab*

2010 - PRESENT **Northeastern University**, Boston, MA  
*Research Assistant Professor, Computer Science*

2008 - PRESENT **The Santa Fe Institute**, Santa Fe, NM  
*Omidyar Fellow*

2008 - PRESENT **txteagle Inc.**, Boston, MA  
*Co-Founder & CEO*

2006 - 2009 **Massachusetts Institute of Technology**, Cambridge, MA  
*Research Scientist*

2007 - 2008 **University of Nairobi**, Nairobi, Kenya  
*Fulbright Lecturer*

2006 - 2007 **GSTIT**, Addis Ababa, Ethiopia  
*Adjunct Associate Professor*

2004 - 2006 **Metrospark, Inc.**, New York, NY  
*Co-Founder*

2001 - 2005 **Massachusetts Institute of Technology**, Cambridge, MA  
*Graduate Student Instructor and Researcher*

2001 **Fraunhofer Institute IIF**, Magdeburg, Germany  
*Visiting Scientist*

1999 - 2000 **EcoSystems Pvt. Ltd**, Kathmandu, Nepal

*Research and Development Engineer*

1999 **Zowie, Inc.**, Menlo Park, CA  
*Research Intern*

1997 **NASA / Lockheed Martin**, Moffett Field, CA  
*Student Engineer*

1997 - 1998 **Boeing**, Everett / Kent, WA  
*Summer Intern*

## TEACHING

SUMMER 2010 **Big Data for Social Good**

The Santa Fe Institute, *Complex Systems Summer School (CSSS)*

SUMMER 2010 **Methodologies for Large-Scale Network Analysis**

The Pacific Institute for the Mathematical Sciences, *Bayesian Modeling and Computation for Networks Summer School*

SUMMER 2010 **Mobile Social Sensing**

École Polytechnique Fédérale de Lausanne, *Summer Research Institute (SuRI)*

SUMMER 2010 **Prosperity Engineering: Mobile Crowdsourcing**

Microsoft Research India, *Summer School on Computing for Socio-Economic Development*

SUMMER 2009 **Engineering Complex Social Systems**

The Santa Fe Institute, *Complex Systems Summer School (CSSS)*

SUMMER 2008 **Mobile Web Application Development**

University of Nairobi, *with Peter Wagacha and Rasna Walia*

SUMMER 2008 **Python for Rapid Mobile Application Development**

Makerere University, *with Fisseha Mekuria*

FALL 2007 **SMS Bootcamp**

Makerere University

FALL 2007 **SMS Bootcamp**

Kigali Institute of Science and Technology, *with Santhi Kumaran*

SUMMER 2007 **Mobile Phone Programming for Entrepreneurs**

University of Nairobi, *Teaching Assistants: Eric Magutu*

SPRING 2007 **Python for Rapid Mobile Application Development**

Graduate School of Telecommunications and Information Technology (GSTIT), *with Fisseha Mekuria*

SPRING 2007 **Introduction to Java for Mobile Devices**

Graduate School of Telecommunications and Information Technology (GSTIT), *with Fisseha Mekuria*

FALL 2006 **Rapid Mobile Application Development**

University of Nairobi, *with Peter Wagacha*

SPRING 2005 **MAS 965: Power Laws: Hype or Revelation?**

MIT Media Laboratory, *with Cameron Marlow*

SPRING 2003 - 2005 **MAS 987/15.970: Digital Anthropology**

MIT Media Laboratory, *with Joost Bonsen and Sandy Pentland*

JOURNAL  
PUBLICATIONS

Nathan Eagle, Michael Macy, and Rob Claxton. **Network Diversity and Economic Development**, *Science*, 2010, Vol 328 (5981), pp. 1029-1031.

Nathan Eagle, Aaron Clauset, Alex Pentland, and David Lazer. **Multi-Dimensional Edge Inference**, *Proceedings of the National Academy of Sciences (PNAS)*, 2010, Vol 107 (9), pp. E31.

Nathan Eagle, Alex Pentland, and David Lazer. **Inferring Social Network Structure using Mobile Phone Data**, *Proceedings of the National Academy of Sciences (PNAS)*, 2009, Vol 106 (36), pp. 15274-15278.

Nathan Eagle and Alex Pentland. **Eigenbehaviors: Identifying Structure in Routine**, *Behavioural Ecology and Sociobiology*, 2009, Vol 63 (7), pp. 1057-1066.

Mika Raento, Antti Oulasvirta, and Nathan Eagle. **Smartphones: An Emerging Tool for Social Scientists**, *Sociological Methods and Research*, 2009, Vol 37 (3), pp. 426-454.

Santi Phithakkitnukoon, Ram Dantu, Robert Claxton, and Nathan Eagle, **Behavior Based Call Prediction for a Smart Phone**, *ACM Transactions on Autonomous and Adaptive Systems (TAAS)*, 2009.

Murat Ali Bayir, Murat Demirbas, and Nathan Eagle, **Mobility Proler: A Framework for Discovering Mobility Proles of Cell Phone Users**, *Elsevier Pervasive and Mobile Computing Journal*, 2009, (in submission).

Nathan Eagle. **Behavioral Inference Across Cultures: Using Telephones as a Cultural Lens**, *IEEE Intelligent Systems*, 2008, Vol 23 (4), pp. 60-62.

Nathan Eagle and Alex Pentland. **Reality Mining: Sensing Complex Social Systems**, *Personal and Ubiquitous Computing*, 2006, Vol. 10 (4), pp. 255-268.

Nathan Eagle and Alex Pentland. **Mobile Matchmaking: Proximity Sensing and Cuing**, *IEEE Pervasive Computing*, 2005, 4 (2), pp. 28-34.

Alex Pentland, Tanzeem Choudhury, Nathan Eagle, and Push Singh. **Human dynamics: computation for organizations**, *Pattern Recognition Letters*, 2005, 26, pp. 503-511.

Nathan Eagle. **Can Serendipity Be Planned?** *MIT Sloan Management Review*, 2004, Vol. 46, No. 1, pp 10-14.

Michael Sung, Jonathan Gips, Nathan Eagle, Anmol Madan, Ron Caneel, Rich DeVaul, Joost Bonsen, and Alex Pentland, **MIT.EDU: M-learning Applications for Classroom Settings**, *J. of Computer Assisted Learning*, 2004, 21(3), pp. 229-237.

Nathan Eagle and Ben Olding. **The Himalayan Water Mill Battery Charger**, *Boiling Point*, 2001, 46, pp. 45-46.

Nathan Eagle and Ben Olding. **A Sustainable Himalayan Energy Source**, *Journal of Renewable Energy for Development*, 2000, 13(4), pp. 3-4.

- BOOKS Nathan Eagle and Kate Greene. *Reality Mining: Using Big Data to Engineer a Better World*, MIT Press, (in prep).
- BOOK Nathan Eagle. **Mobile Phones as Social Sensors**, *The Handbook of Emergent Technologies in Social Research*, Oxford University Press, (in press).
- CHAPTERS Nathan Eagle. **The Economics of Innovation: The African Telecommunications Industry**, *SMS Uprising: Mobile Phone Activism in Africa*, Fahamu Books, 2010.
- Nathan Eagle. **txteagle: Mobile Crowdsourcing**, *Internationalization, Design and Global Development*, pp. 447-456, 2009.
- CONFERENCE PAPERS Jameson Toole, Nathan Eagle, and Joshua Plotkin. **Quantifying Crime Waves**, *AAAI Spring Symposium 2010*, (in press).
- Amy Wesolowski and Nathan Eagle. **Parameterizing the Dynamics of Slums**, *AAAI Spring Symposium 2010*, (in press).
- Joshua E. Blumenstock, Dan Gillick, and Nathan Eagle. **Who's Calling? Demographics of Mobile Phone Use in Rwanda**, *AAAI Spring Symposium 2010*, (in press).
- Nathan Eagle, Yves-Alexandre de Montjoye, and Luís M. A. Bettencourt. **Community Computing: Comparisons between Rural and Urban Societies using Mobile Phone Data**, *IEEE Social Computing 2009*, pp. 144-150 (9% acceptance rate).
- Nathan Eagle. **Engineering a Common Good**, *IEEE Engaging Data*, Boston, MA 2009. (in press).
- Nathan Eagle, John Quinn, and Aaron Clauset. **Methodologies for Continuous Cellular Tower Data Analysis**, *Pervasive 2009 Springer-Verlag Lecture Notes in Computer Science 5538*, pp. 342 - 353.
- Nathan Eagle, John Quinn, and Aaron Clauset. **Location Segmentation, Inference and Prediction for Anticipatory Computing**, *AAAI Spring Symposium 2009*, Stanford University.
- Nathan Eagle, David Lazer, and Alex Pentland. **Mobile Phone Data for Inferring Social Network Structure**, *Proceedings of the First International Workshop on Social Computing, Behavioral Modeling, and Prediction*, pp. 79-88, April 2008.
- Aaron Clauset and Nathan Eagle. **Persistence and periodicity in a dynamic proximity network**, *DIMACS Workshop on Computational Methods for Dynamic Interaction Networks*, 2007.
- Nathan Eagle, David Lazer, and Alex Pentland. **Sensing Social Network Evolution**, *Sunbelt XXV, International Social Network Conference*, Redondo Beach, CA. February 2005.
- Nathan Eagle, Leon Danon, and Derek Cummings. **Genetically Modified Network**

**Topologies**, *MIT Media Lab Vision and Modeling TR-587*, Presented at the *International Conference on Complex Systems*, Boston, MA. May 2004.

Nathan Eagle and Alex Pentland. **The Organization Life Log**, *Proceedings of the Seventh IEEE International Symposium on Wearable Computing (ISWC)*, pp. 256-257, 2003.

Nathan Eagle and Alex Pentland. **Social Network Computing**, *UbiComp 2003: Ubiquitous Computing, Springer-Verlag Lecture Notes in Computer Science 2864*, pp. 289-296, 2003.

Nathan Eagle, Push Singh, and Alex Pentland. **Common Sense Conversations: Understanding Casual Conversation using a Common Sense Database**, *Proceedings of Artificial Intelligence, Information Access, and Mobile Computing Workshop at the 18th International Joint Conference on Artificial Intelligence (IJCAI)*, Acapulco, Mexico. August 2003.

Nathan Eagle and Alex Pentland. **Sensors for Complex Human Networks**, *Sunbelt XXIII, International Social Network Conference*, Cancun, Mexico. February 2002.

Nathan Eagle and Alex Pentland. **Collaboration from Conversation**, *CSCW 2002 Workshop on Ad Hoc Communications and Collaboration in Ubiquitous Computing Environments*.

INVITED  
ARTICLES AND  
UNREFERRED  
PUBLICATIONS

Nathan Eagle and Eric Horvitz. **Artificial Intelligence for Development (AI-D)**, *Proceedings of the CCC Workshop on Computer Science and Global Development*, 2009, pp. 41-43.

Nathan Eagle. **Mobile Phones and African Entrepreneurship**, *ACM Interactions*, 2007, Vol. 14(5), pp. 14-15.

Nathan Eagle and Alex Pentland. **Organizational rhythms - the search for the patterns of the aggregate**, *Vodafone Receiver*, 14, 2005.

Nathan Eagle. **Using Mobile Phones to Model Complex Social Systems**, *O'Reilly Network*, 2005.

Nathan Eagle. **Feature Selection Analysis**, *MIT Media Lab Vision and Modeling TR-557*, 2002.

Nathan Eagle and Alex Pentland. **Information Explication from Computer-Transcribed Conversations: The Weighted Markov Classifier**, *MIT Media Lab Vision and Modeling Technical Report*, 2001.

PATENTS  
PENDING

Nathan Eagle and Alex Pentland. **Combined short range radio network and cellular telephone network for interpersonal communications.**, *U.S. Patent Application Serial No. 60/568,482*. MIT ID: 10705T. Assignee: Massachusetts Institute of Technology.

FELLOWSHIPS  
AND AWARDS

- 2009 **MIT Technology Review**  
*TR35: Top Innovator under 35 Award*
- 2009 **National Science Foundation**, \$100,000  
*PI on SBIR for NDM Labs*
- 2009 **The National Academy of Science**, \$62,500  
*Co-PI on NAKFI Complexity Grant: The Search for Universal Laws of Human Movement (with Marta Gonzalez)*
- 2009 **The National Academy of Science**, \$37,500  
*Co-PI on NAKFI Complexity Grant: Behavioral Network Analysis (with David Lazer and Junkka-Pekka Onnela)*
- 2008 - 2011 **The Santa Fe Institute**, \$165,000  
*Omidyar Fellowship*
- 2007 - 2008 **The Fulbright Commission**, \$60,000  
*Fulbright Lecturer and Research Fellowship: Mobile Phones in Kenya*
- 2001 - 2004 **The MIT Media Laboratory**, \$150,000  
*Media Lab Europe Fellowship*  
*Media Lab Asia Fellowship*
- 2000 - 2001 **The Fulbright Commission**, \$45,000  
*Fulbright Student Scholarship: Appropriate Technology in Nepal*
- 1999 **Stanford Technology Ventures**  
*Mayfield Fellowship*

INDUSTRY COL-  
LABORATIONS

- 2009 **Royal Bank of Canada**  
Venture Funding: \$1,000,000 to support *txteagle*
- 2009 **Flywheel Ventures**  
Venture Funding: \$50,000 to support *txteagle*
- 2009 **Qualcomm Ventures**  
Venture Funding: \$100,000 to support *txteagle*
- 2009 **Nokia**  
Research Funding: \$300,000 to support *EPRM*
- 2009 **Safaricom**  
Application Prototyping: *Deployment of the txteagle USSD service in Kenya*  
Data Sharing: *Call Data Records from 2006-2009*
- 2008 **VIVA Dominicana**  
Application Prototyping: *Deployment of the txteagle service in the Dominican Republic*  
Data Sharing: *Call Data Records from 2005-2008*
- 2008 **Integrated Media Measurement Inc. (IMMI)**  
Data Sharing: *1,000,000 hours of mobile phone behavioral data*
- 2008 **MTN Rwanda**  
Data Sharing: *Complete National Call Data Records from 2005-2008*
- 2008 **Nokia Siemens Networks**  
Research Funding: \$45,000 to support *EPRM*

2007 - 2008 **Nokia Research**  
 Application Prototyping: *Mosoko - Mobile Craig's List for East Africa*  
 Research Funding: \$80,000 to support EPROM

2006 - 2008 **British Telecom**  
 Data Sharing: *12B calls from 150M numbers in the UK during August 2005*

2006-2008 **Nokia Corporate**  
 Research Funding: *\$60,000 to support EPROM*  
 Data Sharing: *750,000 hours of mobile phone behavioral data*

2004 - PRESENT **Nokia University Relations**  
 Research Funding: *\$145,000 and 75 S60 Phones to support EPROM*  
 Research Funding: *100 S60 Phones for the Reality Mining and Serendipity projects*  
*Selected as a Forum Nokia Champion*

SYMPOSIUM CHAIR **Artificial Intelligence for Development (AI-D)**  
 AAAI Spring Symposium  
 Stanford, CA – March 2010

PROGRAM COMMITTEE  
 NetSci 2010, ACM SIGDEV 2010, AAAI ICWSM 2010, WWW 2009: Data Mining and Machine Learning, SNS 2010, MDG 2010, SocInfo 2010, IEEE SCMP 2009, IEEE SMW 2009, IEEE ICWSM 2009, IMT4SC 2009, ACM WiNS-DR 2009, WWW 2009: Social Networks and Web 2.0 track, SIMPLEX 2009, ACM MobiHoc 2008, WiNS-DR 2008

WORKSHOP ORGANIZER **Incorporating Mobile Phone Programming in Computer Science Curriculum**  
 Capetown, South Africa – April 2008  
 Enrollment: 20 Computer Science faculty from 12 universities across Sub-Saharan Africa

**Asterisk Bootcamp: Voice Apps for the Developing World**  
 Nairobi, Kenya – November 2007  
 Enrollment: 25 Kenyan computer scientists, *with Marc Covitz and Christian Croft*

REFEREE  
 IEEE Transactions on Pattern Analysis and Machine Intelligence, ACM Transactions on Knowledge and Data Engineering, IEEE Transactions on Mobile Computing, CHI 2009, IEEE Pervasive Computing, Information Technologies & International Development, CSCW 2008, Pervasive 2008, Communications of the ACM, ACM TOMCCAP 2007, IEEE Computer, Environment and Planning B, IEEE Intelligent Systems, CHI 2006, Journal of Computer Mediated Communication, IEEE Transactions on Computers, CHI 2005, ICMI 2005, UBICOMP 2005, IUI 2005, ISWC 2005

PARTICIPANT  
 2004-2008 Nokia Course Curriculum Development Events  
 2006 Wilderness Medical Technician (WEMT) Certification  
 2003 Complex Systems Summer School, Santa Fe Institute

EDITOR  
 Complexity and Social Networks Blog of the Institute for Quantitative Social Science and the Program on Networked Governance, Harvard University

EXPERT  
WITNESS

Martin, Disiere, Jefferson and Wisdom, L.L.P.  
*Case:* Charles Russell vs. Interinsurance Exchange of the Auto Club, 2006 - 2008  
*Subject of Opinion:* Estimating the location of a user using cellular phone records and cellular tower information.

INVITED TALKS

- 5/2010 **Big Data, Global Development, and Complex Social Systems**  
SFI Public Lecture, Santa Fe, NM
- 3/2010 **Human Mobility: The Statistical Physics of When, Where, and How**  
American Physical Society (APS) Annual Meeting, Portland, OR
- 12/2009 **Mobile Application Development for Entrepreneurs: Opportunities for the South African Market**  
Nokia Developers Forum, Johannesburg, South Africa
- 11/2009 **Big Data, Global Development, and Complex Social Systems**  
Berkman Center, Harvard University, Cambridge, MA
- 10/2009 **Engineering a Social Good**  
IEEE Engaging Data, Cambridge, MA
- 9/2009 **Big Data, Global Development, and Public Health**  
Harvard School of Public Health, Boston, MA
- 8/2009 **Community Computing: Comparisons between Rural and Urban Societies using Mobile Phone Data**  
IEEE Social Computing, Vancouver, Canada
- 7/2009 **txteagle: Mobile Crowdsourcing**  
HCII, San Diego, CA
- 7/2009 **Investigation of Complex Social Systems from Communication Data: Scaling to 1 Billion**  
Qualcomm, San Diego, CA
- 7/2009 **txteagle: Mobile Crowdsourcing**  
Strathmore Mobile Bootcamp, Nairobi, Kenya
- 6/2009 **Investigation of Complex Social Systems from Communication Data: Scaling to 1 Billion**  
Microsoft Research, Redmond, WA
- 6/2009 **Scaling of Human Behavior**  
Telefonica, Madrid & Barcelona, Spain
- 5/2009 **Scaling of Human Behavior**  
NTT DoCoMo, Tokyo, Japan
- 5/2009 **Methodologies for Continuous Cellular Tower Data Analysis**  
Pervasive09, Nara, Japan
- 4/2009 **The Length of Weak Ties**  
Studying Society in a Digital World, Princeton University, Princeton, NJ
- 3/2009 **Scaling Human Behavior**  
Heinz School, CMU, Pittsburgh, PA
- 3/2009 **txteagle: Mobile Crowdsourcing**  
Nokia Research Center, Palo Alto, CA

- 3/2009 **Scaling Human Behavior**  
AAAI Spring Symposium, Stanford, CA
- 3/2009 **txteagle: Mobile Crowdsourcing**  
O'Reilly eTech, San Jose, CA
- 3/2009 **Mobile Phone Data for Development**  
School of Information, Berkeley, Berkeley, CA
- 12/2008 **Scaling in Human Behavioral Data**  
Human Behavior Modeling Workshop, NIPS, Whistler, BC, Canada
- 12/2008 **Open Questions for Human Behavioral Data**  
Workshop on Machine Learning and Networks, Santa Fe Institute, Santa Fe, NM
- 11/2008 **Mobile Phones for Health**  
Models of Social Behavior, National Institute of Health, Bethesda, MD
- 11/2008 **Reality Mining**  
Distinguished Lectures on Network Science and Research, Penn State, State College, PA
- 11/2008 **Opportunities in the East Africa Telecom**  
Forum Nokia Annual Meeting, Budapest, Hungary
- 9/2008 **Mobile Ventures in East Africa**  
Developmental Entrepreneurship, MIT Media Laboratory, Cambridge, MA
- 9/2008 **Large-Scale Behavioral Data: From MIT to Africa**  
Complexity Colloquium, Harvard University, Cambridge, MA
- 5/2008 **Reality Mining**  
Development and Networks Workshop, Arizona State University, Tempe, AZ
- 4/2008 **txteagle: The Mobile Mechanical Turk**  
France Telecom R&D, Cambridge, MA
- 4/2008 **Inference in Large-Scale Behavioral Datasets**  
Carnegie Mellon Statistics Department Seminar, Pittsburgh, PA
- 4/2008 **Inference in Large-Scale Behavioral Datasets**  
Universiteit van Amsterdam, Netherlands (via videoconference)
- 4/2008 **Mobile Phone Data for Inferring Social Network Structure**  
International Workshop on Social Computing, Behavior Modeling and Prediction, 2008, Phoenix, AZ
- 3/2008 **Reality Mining and EPROM**  
SXSW, Austin, Tx
- 3/2008 **Reality Mining and EPROM**  
Trilogy Ventures, Seattle, WA
- 3/2008 **Next Generation Telephony in Africa**  
eComm 2008, Mountain View, CA
- 3/2008 **MIT, Mobile Phones and Africa**  
O'Reilly eTech, San Diego, CA
- 12/2007 **Dynamics of Large-Scale Call Graphs**  
Sprint Research Center, San Mateo, CA
- 12/2007 **Next Steps for Human Behavioral Modeling**  
Nokia Research, Palo Alto, CA
- 12/2007 **Bluetooth Networks as a Proxy for Contact Traces in Epidemiological Models**

- Kenyan Medical Research Institute (KEMRI), Kilifi, Kenya
- 10/2007 **EPROM Case Studies in East Africa**  
MIT Center for Developmental Entrepreneurship, Cambridge, MA
- 10/2007 **MIT, Mobile Phones, and Africa**  
PopTech, Camden, Maine
- 8/2007 **A Mobile Phone Programming Curriculum for Africa**  
The World IT Forum (WITFOR'07), Addis Ababa, Ethiopia
- 4/2007 **The Mobile Phone Phenomena in East Africa**  
Centra, Washington DC
- 4/2007 **Inference from Call Graphs**, Cornell University  
Ithaca, New York
- 3/2007 **Machine Perception and Learning of Complex Social Systems**  
The Santa Fe Institute, Santa Fe, NM
- 3/2007 **Machine Perception and Learning of Complex Social Systems**  
Nokia Research, Palo Alto, CA
- 2/2007 **MIT, Mobile Phones, and Africa**  
MIT Center for Developmental Entrepreneurship, Cambridge, MA
- 2/2007 **EPROM and Reality Mining**  
LIFT, Geneva, Switzerland. February 2007
- 12/2006 **MIT, Mobile Phones, and Africa**  
W3C Workshop on the Mobile Web in Developing Countries, Bangalore, India
- 10/2006 **Network Data Mining: Behavioral Inference of Complex Social Networks**  
British Telecom, Ipswich, England
- 9/2006 **Value Added Services for the African Mobile Market**  
GSTIT, Addis Abeba, Ethiopia
- 5/2006 **Quantifying Word of Mouth Diffusion through Social Networks**  
2nd International Word-of-Mouth Marketing Conference, Barcelona, Spain
- 2/2006 **Mobile Phone Programming**  
University of Nairobi, Nairobi, Kenya
- 12/2005 **Reality Mining at the MIT Media Laboratory**  
University of Melbourne, Australia
- 9/2005 **Mining Mobiles: Behavioral Inference of Complex Social Networks**  
Nokia, Helsinki, Finland
- 8/2005 **Spin Tracking: Information Diffusion through Social Networks**  
Fidelity, Boston, MA
- 6/2005 **Modeling Complex Social Systems**  
O'Reilly Where 2.0 Conference, San Francisco, CA
- 5/2005 **Machine Perception and Learning of Complex Social Systems**  
nTag, Inc., Boston, MA
- 5/2005 **Machine Perception and Learning of Complex Social Systems**  
Microsoft Research, Cambridge, England
- 3/2005 **Mobile Phones as Wearable Sensors**  
MAS 967 - Digital Innovations, Cambridge, MA

- 2/2005 **My Phone Knows Where I'm Going after this Talk**  
France Telecom, Cambridge, MA
- 11/2004 **Modeling Complex Social Systems**  
New England Complex Systems Institute, Cambridge, MA
- 10/2004 **Life Queries with Mobile Phones**  
Google, Mountain View, CA
- 8/2004 **MIT and Mobile Social Software**  
Future Forward, Portsmouth, NH
- 3/2003 **Organizational Life Logs**  
Provocative Publishing, Information Organized Consortium, Cambridge, MA
- 3/2003 **Socially Curious Handhelds and their Applications within the Organization**  
Curious Machines, Digital Life Consortium, Cambridge, MA
- 12/2002 **Sensors for Complex Human Networks**  
Sunbelt XXIII, International Social Network Conference, Cancun, Mexico
- 12/2002 **Applications for Corporate Mobile Phones**  
Orange Imagineering, Cambridge, MA
- 12/2002 **Reality Mining**  
Microsoft Research, Redmond, WA
- 11/2002 **Quantifying Social Networks with Sensors**  
MIT Sloan 15.974 - Architecting the Knowledge-Driven Organization
- 3/2002 **Drishtee Business Model: The Village Kiosk and Handheld Computer**  
MIT Sloan 15.395 - Entrepreneurship without Borders

## CO-ADVISING

- PHD **Joshua Blumenstock**, BERKELEY, Risk Sharing and Social Norms from Mobile Phone Data, *2008 - present*
- Andrea Vaccari**, UNIVERSITY OF CHICAGO, Inferring Metrics of Consumer Sentiment, *2009 - present*
- MASTERS **Yves-Alexandre de Montjoye**, LOUVAIN, Understanding the Stability of Society, *2008 - present*
- Samson Hussien**, GSTIT, Exposing Security Vulnerabilities in Existing SMS-based Banking Implementations, *2006 - 2007*
- Ashenafi Tadesse**, GSTIT, Architecture and Opportunities for Location-based Services within the Ethiopian Telecommunication Corporation (ETC) Network, *2006-2007*
- Mohammed Temam Ali**, GSTIT, SMS Bulk Messages: Performance Impact on the ETC Network, *2006-2007*
- Michael Lambert**, MIT, AutoDiary Application, *Fall 2004 - Summer 2005*
- UNDERGRADUATE **Jameson Toole**, UNIVERSITY OF MICHIGAN, Quantifying Crime Waves, *2009*
- Amy Wesolowski**, COLLEGE OF THE ATLANTIC, Parameterizing the Dynamics of Slums, *2009*
- Eric Magutu**, UoN, SMS BloodBank, *2006-2007*
- Dennis Muchiri**, UoN, Reality Mining Africa, *2006-2007*
- Geoffrey Muthondu**, UoN, mDSS & Mobile Stock Trading, *2006-2007*
- George Njuguna**, UoN, mDSS & Phone Tracking, *2006-2007*
- John Muli Senga**, UoN, mDSS & Automated Billing System, *2006-2007*
- Daniel Mugami Irungu**, UoN, Mobile Map Service, *2006-2007*
- Zeba Nyikal**, UoN, Mobile Service Oriented Computing, *2006-2007*

**Gilbert Kiplagat Kugun**, UoN, SMS Security, *2006-2007*  
**Simon Githinjingigi**, UoN, 2Factor Mobile Authentication, *2006-2007*  
**Peter Odegi Opiyo**, UoN, Device Route Logging (Checansys), *2006-2007*  
**Reuben Wanjau Kiambo**, UoN, Mobile Based data compression, *2006-2007*  
**O Haron Kebwaro**, UoN, SMS Gateway Development, *2006-2007*  
**Martin Ubindi Ngaira**, UoN, SMS based search engine, *2006-2007*  
**Judith A. Atieno Owigar**, UoN, Mobile Blogging, *2006-2007*  
**Jessica Francisca Colaco**, UoN, AJAX: Wireless Map Service, *2006-2007*  
**Michael Kipkirui Korir**, UoN, SMS Database Interfaces, *2006-2007*  
**Ernest G. Ngaruiya**, MIT, Sim Application Development, *2006-2008*  
**Emre Aciksoz**, MIT, Prosody Analysis / BlueDar, *2003-2005*  
**Lauren Oldja**, MIT, Serendipity, *2005*  
**Solomon Bisker**, MIT, Serendipity, *2004-2005*  
**Doochan Han**, MIT, Serendipity, *2004-2005*  
**Sue Young**, MIT, Reality Mining, *2004*  
**Igor Sylvester**, MIT, Serendipity, *2004*  
**Vladimir Fleurima**, MIT, Serendipity, *2004*  
**Pedro Yip**, MIT, Serendipity, *2004*  
**Steven Kannan**, MIT, Serendipity, *2004*  
**MinJi Kim**, MIT, Gaussian Mixture Models, *2004*  
**Adora Asala**, MIT, Negotiations, *2004*  
**Timothy Chan**, MIT, Social Network Computing, *2003-2004*  
**John Huss**, MIT, Social Network Computing, *2003*  
**Tom Hoover**, MIT, Social Network Computing, *2003*  
**Baoqiang Xiao**, MIT, Conversation Scene Analysis, *2003*  
**Daniel Leeds**, MIT, Conversation Scene Analysis, *2003*  
**T.J. Purtell**, MIT, Social Network Computing, *2002-2003*  
**Reshma Khilnani**, MIT, Media Lab Asia, *2002*

SELECTED

MEDIA

**Cell Phone Data: Can You Track Me Now?**  
 FEBRUARY 2010 NPR  
  
**Cellphone traces reveal you're so predictable**  
 FEBRUARY 2010 New Scientist  
  
**A freelance work force**  
 FEBRUARY 2010 Boston Globe  
  
**Preparing for a mobile phone uprising in Africa**  
 FEBRUARY 2010 The Guardian  
  
**IP Protection Secondary To Support For Small African Innovators**  
 NOVEMBER 2009 Intellectual Property Watch  
  
**Virtual workforce found in Kenyan refugee camp**  
 OCTOBER 2009 New Scientist  
  
**Friends or Acquaintances? Ask Your Cell Phone**  
 AUGUST 2009 Science  
  
**Mobile data show friend networks**  
 AUGUST 2009 BBC News  
  
**Want to know who your friends are? Ask your cellphone**  
 AUGUST 2009 New Scientist

- AUGUST 2009 **Mining mobile-phone data for the public good**  
MIT Technology Review
- AUGUST 2009 **Make money through the mobile phone**  
The Hindu
- APRIL 2009 **Phoning in data**  
Nature
- JUNE 2009 **From little things...**  
ABC Regional
- FEBRUARY 2009 **New service is all in a day's SMS**  
BBC
- FEBRUARY 2009 **Cellphones tap wisdom of the crowds**  
New Scientist
- JANUARY 2009 **Crowd-Sourcing the World**  
MIT Technology Review
- OCTOBER 2008 **Empowering People Through Text Messages**  
Spark, CBC Radio
- JULY 2008 **Real-World Social Networks vs. Facebook 'Friends'**  
Wired
- MAY 2008 **What Your Cell Phone Knows About You**  
Forbes
- APRIL 2008 **The Top 10 Emerging Technologies of 2008: Reality Mining**  
MIT Technology Review
- MARCH 2008 **There's Gold in Reality Mining**  
Business Week
- DECEMBER 2007 **Mobile Phones: Engineering South's Next Generation of Entrepreneurs**  
NowPublic
- DECEMBER 2007 **What Your Phone Knows About You**  
MIT Technology Review
- NOVEMBER 2007 **The Mobile Web: So Close Yet So Far**  
The New York Times
- JUNE 2007 **The iPhone's Untapped Potential**  
MIT Technology Review
- MAY 2007 **Mobilizing Against Malaria**  
Expanding Horizons
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