



Publications
Talks
Media Exposure

Selected scientific publications

2017



Towards real-time prediction of unemployment and profession

Joint work with MIT Media Lab and MIT Sloan.
Published in Social Informatics, LNCS, Springer.



Improving official statistics in emerging markets using machine learning and mobile phone data

Joint work with MIT Media Lab
Published in EPJ Data Science.



Mapping Poverty using mobile phone and satellite data

Joint work with MIT Media Lab and Flowminder
Published in Royal Society Interface.



Differential Network Effects on Economic Outcomes: A Structural Perspective

Joint work with MIT Media Lab and MIT Sloan.
Published in Social Informatics, LNCS, Springer.



Modeling the Temporal Nature of Human Behavior for Demographics Prediction

Joint work with MIT Media Lab
Published in European Conference on Machine Learning (ECML-PKDD)



Mitigating the risks of financial exclusion: Predicting illiteracy with standard mobile phone logs

Published in International Conference on Behavioral Modeling and Prediction (SBP-BRiMS), Springer.

2016



Deep learning applied to mobile phone data for Individual income classification

Joint work with MIT Media Lab
Published in International conference on Artificial Intelligence (ICAITA 2016)



Detecting climate adaptation with mobile network data:

Anomalies in communication, mobility and consumption patterns during Cyclone Mahasen

Joint work with Flowminder
Published in Climatic Change



Unveiling Hidden Migration and Mobility Patterns in Climate Stressed Regions: A Longitudinal Study of Six Million Anonymous Mobile Phone Users in Bangladesh

Joint work with Flowminder
Published in Global Environmental Change 38 (2016): 1-7

2015



Impact of human mobility on the emergence of dengue epidemics in Pakistan

Joint work with Harvard University
Published in PNAS (2015)

2014



Big Data-Driven Marketing: How Machine Learning outperforms marketers' gut-feeling

Joint work with MIT Media Lab
Published in Social Computing, Behavioral-Cultural Modeling, & Prediction, Washington, USA (2014), LNCS Vol. 8393 (Springer)



Handset-centric view of smartphone application use

Joint work with Cambridge University
Published in Procedia Computer Science



Small circles: Mobile Telephony and the cultivation of the private

Published in The Information Society

2013



Comparing and visualizing the social spreading of products on a large-scale social network

Published in The influence on Technology on Social Network Analysis and Mining, Springer

2012



The activation of core social networks in the wake of the 22 July Oslo bombing

Published in IEEE Advances in Social Network Analysis and Mining



Small and Even Smaller Circles: The Size of Mobile Phone-Based Core Social Networks in Scandinavia and South Asia

Published in Journal of Intercultural Communication Research



The socio-demographics of texting: An analysis of traffic data

Published in New Media & Society



A Social Network Study of Android VS Apple Smartphone battle

Published in IEEE Business Applications of Social Network Analysis

2010



Product adoption networks and their growth in a large mobile phone network

Published in IEEE Advances in Social Network analysis and Mining, 208-216, 2010

Media Exposure

-  Mobile phone and satellite data to map poverty, **Science Daily, Feb 2017**
-  Poverty mapped in near real-time using mobile phone and satellite data, **Seeker, Feb 2017**
-  How metadata can reveal what your job is, **Vice Media, Dec 2016**
-  Researcher uses mobile phone data to predict illiteracy, **Engadget, July 2016**
-  Mobile phone data reveals literacy rates in developing countries, **MIT Technology Review, July 2016**
-  Report to President Obama: Big Data and Privacy, **White House, May 2014**
-  How Big Data can serve development, **Gates Foundation, 2014**
-  May 17th in 25 seconds, **Dagens Næringsliv, May 2014**
-  Will Big Data end the Executive Gut Feeling, **Telenor Group, Feb 2013**
-  Bringing together the brightest minds in Big Data, **Telenor Group, May 2013**
-  Big Data - Good for the World, good for Business, **VG Nett, E24 news, May 2013**
-  Big Data – 90% of all data has been generated the two last years, **IT News, Feb 2013**
-  Cell phone data analysis dials in crime networks, **Science News, Mar 2013**
-  How Big Cities Can Lead to Small Thoughts, **Wall Street Journal, Mar 2012**
-  How friends influence gadget adoption, **MiT Technology Review, Jun 2011**
-  Apple product fever, **Science News, Jun 2011**
-  Telenor researchers reveal how iPad spreads, **Telenor Group, May 2011**
-  Big Data Analytics in Telenor Group, **Article in Norwegian Marketing Association**
-  How friends influence gadget adoption, **Times of India, Jun 2011**
-  Wireless companies could use your friends, **MiT Technology Review, Jul 2010**
-  A Vital New Marketing Metric: The Network Value of a Customer, **Predictive-marketing.com, Sept 2010**

Talks

Scientific conferences

2017

Differential Network Effects on Economic Outcomes: A Structural Perspective

Joint work with MIT Media Lab and MIT Sloan.
Social Informatics, Oxford University, 2017

Towards real-time prediction of unemployment and profession

Joint work with MIT Media Lab and MIT Sloan.
Social Informatics, Oxford University, 2017

Mitigating the risks of financial exclusion : Predicting illiteracy with standard mobile phone logs

Social Computing, Behavioral-Cultural Modeling and Prediction, Washington, USA, 2017

Mapping poverty using mobile phone and satellite data

Joint work with MIT Media lab and Flowminder
Netmob, Milan, Italy, 2017

Making Money: Evidence from Individually Matched network, education and income data

Joint work with MIT Media lab and MIT Sloan
International conference on computational social science, Cologne, Germany, 2017

Modeling the Temporal Nature of Human Behavior for Demographics Prediction

Joint work with MIT Media Lab
ECML-PKDD 2017

2016

Deep Learning Applied to Mobile Phone Data for individual Income classification

Joint work with MIT Media lab
International Conference of Artificial Intelligence, Bangkok, 2016

2015

Using Mobile Phone Data for Poverty Estimates in Bangladesh

Invited Speaker
United Nations Big Data for Official Statistics, Abu Dhabi, 2015

Predicting Gender from Mobile Phone Metadata

Joint work with MIT Media lab
Netmob, Massachusetts Institute of Technology (MIT), Boston, US, 2015

Investigating Social Influence through large-scale field experimentation

Joint work with Northeastern University
Netmob, Massachusetts Institute of Technology (MIT), Boston, US, 2015

Dynamics of Social and Spatial Segregation using mobile phone data

Netmob, Massachusetts Institute of Technology (MIT), Boston, US, 2015

A cross country study of gender prediction using mobile phone metadata

Joint work with MIT Media lab
NetSci-X, Rio De Janeiro, Brasil, 2015

Smartphone application co-usage: Could we predict your next app?

Joint work with Cambridge University
NetSci-X, Rio De Janeiro, Brasil, 2015

Social Influence and Complex Contagion

Joint work with Northeastern University
Workshop on information in Networks, Stern School of Business, New York, US, 2015

2014

Big Data And Social change in Underdeveloped Countries

Rockefeller Centre, Bellagio, Italy (2014)

Big Data-Driven Marketing: How Machine Learning outperforms marketers gut-feeling

Joint work with MIT Media Lab

Social Computing, Behavioral-Cultural Modeling and Prediction, Washington, USA, 2014

2013

Accelerating Internet Growth in Asia using Viral Spreading

Joint work with Northeastern University

Netmob, Massachusetts Institute of Technology (MIT), Boston, US, 2013

Big Data: Rewards and Risks for the Social Sciences

Oxford Internet Institute, University of Oxford, UK, 2013

Testing contagion in small groups via Direct Marketing

Joint work with Northeastern University

Stern School of Business, New York, US, 2013

Apple VS Android: Signals of success in the Social Network

ECCS 2013 International conference on Complex Systems , Quantifying Success satellite session

World Trade Center, Barcelona, Spain, 2013

Clustering of Smartphone ownership in Development Countries

Netmob, Massachusetts Institute of Technology (MIT), Boston, US, 2013

2012

Apple VS Android: A comparison of Social Effects in Adoption

Netmob, Massachusetts Institute of Technology (MIT), Boston, US, 2012

The activation of social networks in the wake of the Oslo 22 July Bombing

INSNA Social Network Analysis Conference

Sunbelt XXXII, Redondo, California, US, 2012

2011

Comparing and visualizing the social spreading of products on a large-scale social Network

WIDS, Massachusetts Institute of Technology (MIT), Boston, US, 2011

2010

Social Network Monsters in Telecom Call Graphs

INSNA Social Network Analysis Conference

Sunbelt XXX, Riva Del Garda, Italy, 2010

Telecom Service Diffusion and Influence in a network of interlocking directorates

INSNA Social Network Analysis Conference

Sunbelt XXX, Riva del Garda, Italy, 2010

Product Adoption, Network Structure and Growth in a Large Mobile Phone Network

ASONAM 2010, Advances in Social Network Mining and Analysis, Odense, Denmark (2010)

2009

Product Spreading and Network Structure for an inter firm communication network

INSNA Social Network Analysis Conference, Sunbelt XXIX, San Diego, US, 2009

Talks

Industrial conferences

Big Data Science from a telecom perspective
2015 The Decision Support Day, Oslo, Norway

Data Science on large mobile phone datasets
2015 Santander Digital Week, Oslo, Norway

Data science
2015 Innovation Day, Affecto, Oslo, Norway

Big Data and Predictive Analytics (international keynote)
2013 Big Data Europe, Zurich, Switzerland

Improving Business With Data Science
2014 Gurus of Business Intelligence, Oslo Spektrum, Norway

Big Data - how far can we go?
2013 New Media Network, Oslo, Norway

13 times better hitrate with Machine Learning
2013 IT-Tinget, Tønsberg, Norway

Using Big Enough Data to Give the Customers what they want
2013 Telenor Group, Oslo, Norway

Big Data in Telecom: Making an impact on peoples lives
2013 Arrangement with UN Global Pulse, NorthEastern University (200 ppl), Oslo, Norway

Insights and applications of customer data: Focus on Advanced Analytics
2011 Information Management, Oslo, Norway, Norway

Advanced Analytics in Telecom
2012 Information Management, Copenhagen, Denmark