

5-7 APRIL 2017
VODAFONE VILLAGE
MILAN



**PROGRAM
2017**

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Program Overview

APRIL 5

<i>Time</i>	<i>Session</i>	<i>Paper</i>
8:30 - 9:30	Registration/Welcome	
9:30 - 10:30	Soc Session Economic	4
10:30-11:00	Coffee Break	
11:00-12:30	Session 2: Mobility	5
12:30-14:00	Lunch	
14:00-15:30	Session 3: Social Network	5
15:30-16:00	Coffee Break	
16:00-17:30	Session 4: Social Good	5
17:30-18:30	Poster Session 1	12
18:30-19:30	Welcome Reception	

APRIL 6

<i>Time</i>	<i>Session</i>	<i>Paper</i>
9:30-10:30	Keynote	
10:30-11:00	Coffee Break	
11:00-12:30	Session 5: Health	5

12:30-14:00	Lunch	
14:00-15:30	Session 6: Quality & Privacy	6
15:30-16:00	Coffee Break	
16:00-17:30	Session 7: Social Network	5
17:30-18:30	Poster Session 2	14

APRIL 7

<i>Time</i>	<i>Session</i>	<i>Paper</i>
9:30-10:30	Keynote	4
10:30-11:00	Coffee Break	
11:00-12:30	Session 8: Mobility	6
12:30-14:00	Lunch	
14:00-15:30	Session 9: Social Good	5
15:30-16:00	Coffee Break	
16:00-17:30	Session 10: Telco Applications	5

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PROGRAM
DAY BY DAY

APRIL 5

8:30-9:30 Registration/Welcome

9:30-10:30 SESSION 1: SOCIO-ECONOMIC

Higher-order correlations of consumption patterns in social-economic networks

Presents – Marton Karsai

Mobile phone-based Credit Scoring

Presents – Skyler Speakman

Mobile Wallet Usage Study. Applying CDR models to increase Mobile Wallet Adoption & Activity

Presents – Soren Heitmann

Longitudinal Analysis of Mobile Savings Accounts

Presents – Skyler Speakman

10:30-11:00 CoffeeBreak

11:00-12:30 SESSION 2: MOBILITY

Route flow estimation using trips extracted from cellular network data

Presents – Nils Breyer

Improving human mobility prediction with geo-tagged pictures

Presents – Mariano Beirão

Inferring Commuting Statistics in Greater Jakarta from Social Media Locational Information from Mobile Devices

Presents – Jonggun

An emergent strategy for characterizing crowd dynamics via GPS data

Presents – Luca Alfeo

Inferring customer visitors by means of WiFi crumbs

Presents – Fabio Pinelli

12:30-14:00 Lunch

14:00-15:30 SESSION 3: SOCIAL NETWORK

Age disparities in ethnic segregation: a study of activity spaces using the Call Detail Record dataset

Presents – Siiri Silm

The Ripple Effect: You Are More Influential Than You Think

Presents – Yan Leng

Cohesive groups in urban area: characterization of p-cliques in mobile phone graph

Presents – Sabrina Gaito

Personality Traits and Ego-Network Dynamics

Presents – Simone Centellegher

Why people stop calling? The temporal weakness of decaying ties

Presents – Esteban Moro

15:30-16:00 CoffeeBreak

16:00-17:30 SESSION 4: SOCIAL GOOD

A tool for estimating and visualizing poverty maps

Presents – Rachael Dottle

Inside Out: to understand crime mechanisms look at urban fabric first
Presents – Marco De Nadai

LDA Mapping of Regional Socioeconomic Status
Presents – Lingzi Hong

Rapid Assessments of Population Displacement in the 2015 Nepal Earthquake
Presents - Elisabeth zu Erbach-Schoenberg

Uncovering the Spread of Chagas Disease in Argentina and Mexico
Presents - Carlos Sarrate

17:30-18:30 POSTER SESSION 1 POSTER FROM 1 TO 12

18:30 -19:30 Welcome Reception

APRIL 6

10:00-10:30 Keynote

Presents – Dino Pedreschi

10:30-11:00 CoffeeBreak

11:00-12:30 SESSION 5: HEALTH

Spatially explicit modeling of potential Ebola spread in Senegal
Presents – Lorenzo Mari

Anticipatory Monitoring of Depressive States through the Analysis of Multimodal Phone Data
Presents – Mirco Musolesi

Assessing the use of mobile phone data to describe recurrent mobility patterns in spatial epidemic models
Presents – Paolo Bajardi

Are you getting sick? Predicting Flu-Like Symptoms Using Human Mobility Behaviours
Presents – Gianni Barlacchi

Impact of Human Mobility on Spread of Dengue in Sri Lanka
Presents – Lasantha Fernando

12:30-14:00 Lunch

14:00-15:45 SESSION 6: DATA QUALITY AND PRIVACY

Geographical veracity of indicators derived from mobile phone data.

Presents - Maarten Vanhoof

Preserving Mobile Subscriber Privacy in Open Datasets of Spatiotemporal Trajectories

Presents – Marco Fiore

Detecting the leakage of personal confidential information from mobile data

Presents – Xinhai Liu

Biases and errors in the temporal sampling of random movements

Presents – Riccardo Gallotti

Application of trajectory based models for continuous behavioural user authentication through anomaly detection

Presents – Piotr Jankowiak

Time Accuracy Analysis of Post-Mediation Packet-Switched Charging Data Records for Urban Mobility Applications

Presents – Oscar Francisco Peredo Andrade

15:45-16:15 **Coffee Break**

16:15-17:30 SESSION 7: SOCIAL NETWORK

What comes first? Social strength or common friends?

Presents – Esteban Moro

Kernel-based approaches to large social networks

Presents – Till Hoffmann

Familiar Strangers: the Collective Regularity in Human Behaviors

Presents – Yan Leng

Impact of university admission on student's egocentric network

Presents – Márton Karsai

17:30-18:30 POSTER SESSION 2 POSTER FROM 1 TO 13

APRIL 7

10:00-10:30 **Keynote**

Presents – Nuria Oliver

10:30-11:00 **CoffeeBreak**

11:00-12:45 SESSION 8: MOBILITY

More reliable and more accurate traffic models using mobile phone data

Presents – Klaas Friso

Understanding Drivers of Short Term Mobility

Presents – Svetoslava Milusheva

Short-Term Traffic Prediction

Using Visitor Location Registry Data

Presents – Lasantha Fernando

Understanding Multiday Activity Patterns Based on Mobile Internet Usage Behaviour

Presents – Yihong Wang

The Effect of Pokémon Go on The Pulse of the City
Presents – Eduardo Graells

Traffic Analysis of Railways using Call Detail Records
Presents – Hiroki Ishizuka

12:45-14:00 Lunch

14:00-15:30 SESSION 9: SOCIAL GOOD

A Framework for Evacuation Hotspot Detection after Large Scale Disasters using Mobile Phone Location Data
Presents – Takahiro Yabe

Mapping poverty using mobile phone and satellite data -
Presents – Jessica Steele

Estimating population behaviour to describe activity-based land-use in emerging economies using mobile phone event series
Presents – Gregor Engelmann

Targeted disease containment strategies based on spatial network analysis
Presents – Stefano Rubrichi

What does mobile metadata measure? Insights from a pilot study during a sudden emergency
Presents – Carolina Mattsson

15:30-16:00 Coffee Break

16:00-17:30 SESSION 10 : TELCO APPLICATIONS

Predict Cellular Network Traffic with Markov Logic
Presents – Marco Mamei

Towards a data science model for device upgrade
Presents – Roberto Caporicci

On Added Value Of Feature Engineering for Churn Prediction
Presents – Sandra Mitrovic

Layers of social acquaintance for telecommunication churn prediction
Presents – Davide Cellai

Learning about New Technologies: Evidence from Phone Plans in Rwanda
Presents – Daniel BJORKEGREN



**POSTER
SESSION**

**POSTERS CAN BE DISPLAYED
FROM 12:30 APRIL 5
TO 12:00 APRIL 7**

SESSION 1 17:30 - 18:30 APRIL 5

1. Churn Prediction in the Telecommunication Industry using Social Network Analytics • *Presents – Maria Oskarsdottir*
2. Joint Spatial and Temporal Classification of Mobile Traffic Demands • *Presents – Marco Fiore*
3. Understanding mall visiting patterns and mobility in Santiago de Chile with CDR data • *Presents – Mariano Beiró*
4. Developing and Deploying a Taxi Price Comparison Mobile App in the Wild: Insights and Challenges • *Presents – Vsevolod Salnikov*
5. The Cost of Taxing Network Goods: Evidence from Mobile Phones in Rwanda • *Presents – Daniel Bjorkegren*
6. PRIVA'MOV: Analysing Human Mobility Through Multi-Sensor Datasets • *Presents – Antoine Boutet*
7. Developing a mobility monitoring application hand in hand with the end user • *Presents – Jerome Urbain*
8. Effects of Network Architecture on Model Performance when Predicting Churn in Telco • *Presents – Maria Oskarsdottir*
9. A Neural Network Framework for Next Place Prediction • *Presents – Langford Chad*
10. Explorative analyse of two Italian cities: Turin and Venice for diversity • *Presents – Didem Gundogdu*
11. PyMobility: an open source Python package for human mobility analysis and simulation • *Presents – Gianni Barlacchi*
12. An exploratory analysis of ethnic groups in the city of Milan through mobile phone data • *Presents – Gianni Barlacchi*

SESSION 2 17:30 - 18:30 APRIL 6

1. Climate change induced migrations from a cell phone perspective • *Presents – Sibren Isaacman*
2. High speed analysis of volatile mobile data applied to road safety • *Presents – José Gómez Castaño*
3. Context-Aware Recognition of Physical Activities Using Mobile Devices • *Presents – Gabriele Civitarese*
4. Mining the Air - for Research in Social Science and Networking Measurement
5. User Authentication with Neural Networks Based on CDR Data • *Presents – Bartosz Perkowski*
6. Analysis of Tourist Activity from Cellular Network Data • *Presents – Marco Mamei*
7. A neural embedding approach to recommender systems in telecommunication • *Presents – Nikolaos Lamprou*
8. Drivers of spatial heterogeneity of HIV prevalence in Senegal: disentangling key features of human activity and mobility • *Presents – Lorenzo Righetto*
9. Automatic stress assessment using smartphone interaction data • *Presents – Matteo Ciman*
10. A New Point Process Model for the Spatial Distribution of Cell Towers • *Presents – Carlos Sarraute*
11. Evolving connectivity graphs in mobile phone data • *Presents – Sanja Brdar*
12. Using Mobile Phone Signalling Data For Estimating Urban Road Traffic States • *Presents – Thierry Derrmann*
13. Characterizing Significant Places using Temporal Features from Call Detail Records • *Presents – Mori Kurokawa*
14. Estimating the Indicators on Education and Household Characteristics and Expenditure from Mobile Phone Data in Vanuatu • *Presents – Jonggun Lee*



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www.netmob.org

The availability of mobile phone datasets has opened the possibility to improve our understanding of how humans communicate, socialize, move around cities and mobilize. Netmob is the primary conference in the analysis of those datasets in social, urban, societal and industrial issues.

EDITORS Francesco Calabrese, Esteban Moro, Vincent Blondel, Alex 'Sandy' Pentland

