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**INTERESTS**      Human Computer Interaction, Human Behaviour Modelling, Digital Health, Social Computing, Mobile Sensing, Context-aware Computing, Anticipatory Computing.

**CURRENT POSITION**      Postdoctoral Research Fellow in Data Science at the Department of Geography, University College London, UK

**EDUCATION**      *Alan Turing Institute, UK*  
Enrichment Year Ph.D. Student (September 2016 - February 2017)

*University College London, UK*  
Visiting Ph.D. Student (June 2015 - February 2017)

*University of Birmingham, UK*  
Ph.D. Student (January 2014 - February 2017)  
Thesis title: A Framework for Intelligent Mobile Notifications.  
Summary: Understanding and predicting human behaviour for interacting with mobile devices by using the contextual information obtained from the embedded sensors. Applying insights to build an intelligent mechanism for delivering right information at the right time and to construct techniques for predicting the cognitive context as well as the wellbeing of people.  
Supervisor: Mirco Musolesi and Robert Hendley.

*University of Birmingham, UK*  
M.Sc. in Human Computer Interaction (September 2012 - September 2013)  
Dissertation title: SenSocial: A Middleware for Integrating Online Social Networks and Mobile Sensing Data Streams.  
Supervisor: Mirco Musolesi and Veljko Pejovic.  
Grade - Distinction.

*MJP Rohilkhand University, India*  
B.Sc. Computer Applications (August 2007 - July 2010)  
Grade - 1st (75% marks).

## HONORS & AWARDS

Esri Development Center Student of the Year (2017).  
Best paper award at UbiComp (2016).  
Gaetano Borriello award for best student paper at UbiComp (2016).  
Google Internet of Things (IoT) Technology Research Award (2016).  
Ph.D. Fellowship from HCI Centre, University of Birmingham (2014 - 2017).  
Best use of APIs at Pan Pearson Hackathon (2013).  
M.Sc. Scholarship for excellent background, University of Birmingham (2012).  
Best algorithm for catalan numbers, TCS (2011).  
India's Top Logic Developers by NIIT (2009).

## PUBLICATIONS

A. Mehrotra and M. Musolesi. *Time Matters: Exploiting Temporal Information from GPS Traces for Mood Prediction*. Submitted to IMWUT.

A. Mehrotra and M. Musolesi. *Using Unsupervised Deep Autoencoders to Automatically Extract Mobility Features for Predicting Depressive States*. Submitted to IMWUT.

A. Mehrotra, R. Hendley and M. Musolesi. *NotifyMeHere: Intelligent Notification Delivery in Multi-Device Environments*. Submitted to MobileHCI.

E. Peltonen, E. Lagerspetz, J. Hamberg, A. Mehrotra, M. Musolesi, P. Nurmi and S. Tarkoma. *The Hidden Image of Mobile Apps: Geographic, Demographic, and Cultural Factors in Mobile Usage*. Submitted to MobileHCI.

A. Mehrotra, V. Pejovic and M. Musolesi. *FutureWare: Designing a Middleware for Anticipatory Mobile Computing*. Submitted to IEEE Transactions of Software Engineering.

A. Mehrotra and M. Musolesi. *Intelligent Notification Systems: A Survey of the State of the Art and Research Challenges*. Submitted to ACM Computing Surveys.

Nora Ptakauskaite, Anna Cox, Mirco Musolesi, Abhinav Mehrotra, James Cheshire and Chiara Garattini. *Personal Informatics Tools Benefit from Combining Automatic and Manual Data Capture in the Long-Term*. CHI'18 Adjunct. Montreal, Canada. 2018.

S. Muller, G Harari, W. Wang, A. Mehrotra, J. Rentfrow, and S. Gosling. *Exploring the psychological characteristics associated with GPS-based measures of physical mobility*. European Conference on Psychology. Zadar, Croatia. 2018.

Gatis Mikelsons, Matthew Smith, Abhinav Mehrotra, Mirco Musolesi. *Towards Deep Learning Models for Psychological State Prediction using Smartphone Data: Challenges and Opportunities*. ML4H'17 (Colocated with NIPS'17). Long Beach, California, USA. December 2017.

Gianni Barlacchi, Christos Perentis, Abhinav Mehrotra, Mirco Musolesi, Bruno Lepri. *Are you getting sick? Predicting flu-like symptoms using human mobility behaviors*. EPJ Data Science. Springer 2017.

A. Mehrotra, R. Hendley and M. Musolesi. *Interpretable Machine Learning for Mobile Notification Management: An Overview of PrefMiner*. GetMobile: Mobile Computing and Communications 21, 2 (2017): 35-38.

A Mehrotra, F Tsapeli, R Hendley and M Musolesi. *MyTraces: Investigating Correlation and Causation between Users' Emotional States and Mobile Phone Interaction*. IMWUT 1, 3 (2017). Presented at UbiComp'17.

A Mehrotra, S Muller, G Harari, S Gosling, C Mascolo, M Musolesi and J Rentfrow. *Understanding the Role of Places and Activities on Mobile Phone Interaction and Usage Patterns*. IMWUT 1, 3 (2017). Presented at UbiComp'17.

S Muller, G Harari, A Mehrotra, S Matz, P Khambatta, M Musolesi, C Mascolo, S Gosling, P Rentfrow. *Using human raters to characterize the psychological characteristics of GPS-based places*. UbiComp'17 Adjunct. Maui Hawaii, USA. 2017.

A. Mehrotra and M. Musolesi. *Designing Effective Movement Digital Biomarkers for Unobtrusive Emotional State Mobile Monitoring*. MobiSys'17 Adjunct. Niagara Falls, NY, USA. 2017.

A. Mehrotra and M. Musolesi. *Sensing and Modeling Human Behavior Using Social Media and Mobile Data*. Book Chapter in Bo Huang (Ed.), Comprehensive Geographic Information Systems. Elsevier 2017.

V. Pejovic, A. Mehrotra and M. Musolesi. *Anticipatory Mobile Digital Health: Towards Personalised Proactive Therapies and Prevention Strategies*. Book Chapter in Mihai Nadin (Ed.), Anticipation and Medicine. Springer. 2017.

A. Mehrotra, R. Hendley and M. Musolesi. *PrefMiner: Mining User's Preferences for Intelligent Mobile Notification Management*. UbiComp'16. Heidelberg, Germany, September 2016. **Best Paper Award**.

A. Mehrotra, R. Hendley and M. Musolesi. *Towards Multi-modal Anticipatory Monitoring of Depressive States through the Analysis of Human-Smartphone Interaction*. UbiComp'16 Adjunct. Heidelberg, Germany, September 2016.

A. Mehrotra, V. Pejovic, J. Vermeulen, R. Hendley and M. Musolesi. *My Phone and Me: Understanding User's Receptivity to Mobile Notifications*. CHI'16. San Jose, CA, USA, April 2016.

A. Mehrotra, M. Musolesi, R. Hendley and V. Pejovic. *Designing Content-driven Intelligent Notification Mechanisms for Mobile Applications*. UbiComp'15. Osaka, Japan, September 2015.

A. Mehrotra, J. Vermeulen, V. Pejovic and M. Musolesi. *Ask, But Don't Interrupt: The Case for Interruptibility-Aware Mobile Experience Sampling*. UbiComp'15 Adjunct. Osaka, Japan, September 2015.

V. Pejovic, A. Mehrotra and M. Musolesi. *Investigating The Role of Task Engagement in Mobile Interruptibility*. MobileHCT'15 Adjunct. Copenhagen, Denmark, August 2015.

A. Mehrotra, V. Pejovic and M. Musolesi. *SenSocial: A Middleware for Integrating Online Social Networks and Mobile Sensing Data Streams*. ACM/IFIP/USENIX Middleware'14. Bordeaux, France, December 2014.

**PROFESSIONAL Keynotes**

**ACTIVITIES** Smarticipation workshop at UbiComp (2017)

**Associate Editor**

Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)

**Technical Program Committee Member**

MobiCASE (2018)

MobileSoft (2017)

PervasiveHealth (2017, 2018)

SPWID (2017)

Smarticipation (2016)

**Chair – Student Volunteer**

MobiCASE (2016)

**Reviewer – Journal/Magazine**

ACM ToCHI

IEEE Pervasive Computing

IEEE Signal Processing

ACM Computing Surveys

Transactions on Mobile Computing

Pervasive and Mobile Computing

Interactive, Multimedia, Wearable and Ubiquitous Technologies

**Reviewer – Conferences and Workshops**

CHI: ACM Conference on Human Factors in Computing Systems. (2016, 2017, 2018)

MobileHCI: ACM Conference on Human-Computer Interaction with Mobile Devices and Services. (2017, 2018)

UbiComp: ACM Joint Conference on Pervasive and Ubiquitous Computing. (2016)

ISWC: ACM Symposium on Wearable Computers. (2016)

DIS: ACM Conference on Designing Interactive Systems. (2016)

PervasiveHealth: ACM Conference on Pervasive Computing Technologies for Healthcare. (2015)

MobiCASE: ACM Conference on Mobile Computing, Applications and Services. (2015, 2016)

MUM: ACM Conference on Mobile and Ubiquitous Multimedia. (2015, 2016)

INFOCOM: IEEE Conference on Computer Communications. (2016)

**WORK****EXPERIENCE**

*University College London, UK*

Postdoctoral Research Fellow (February 2017 - present)

*Alan Turing Institute, UK* (2017)

Designation: Internship Project Co-supervisor.

I co-supervised a project “Exploiting Multi-modal Mobile Data Sources for Mental Health Monitoring” that involved four interns. The objective of this project was to characterize the behavioral patterns of individuals using the mobile sensing data and exploit them for predicting individuals’ mood.

*Alan Turing Institute, UK* (2016)

Designation: Intern.

I worked on a project “Machine Classifiers and Neural Similarity Measures” that was supervised by Prof. Bradley C. Love. The objective of this project was to understand

how the brain codes information states by determining what makes two brain states similar. Using an existing data set, various similarity measures were compared with the benchmark to determine the best measure.

*University of Cambridge, UK (2015-2016)*

Designation: Mobile Programmer.

I worked at the Computer Laboratory supervised by Prof. Cecilia Mascolo. The objective of this project was to build a platform for mobile sensing that can enable seamless development of mobile applications. The platform was implemented in both Android and iOS.

*National Instruments R&D, India (2011-2012)*

Designation: Software Technician.

I worked in the LabView Real-Time team. I was responsible for test-automation and stack-validation. Also, I was a member of the development team for the *Test Predictor* - an intelligent tool that uses the past stack-validation results and current changes to predict the test-cases that might fail.

*Tata Consultancy Services, India (2010-2011)*

Designation: Graduate Trainee.

I was a member of the Quality Assurance team for *ASURE* - a backend software for stock management used by Morgan Stanley. I was responsible for validating functionalities of ASURE for the use-cases based on the requirements and approving them as Standard Quality Assured.

## TEACHING EXPERIENCE

Teaching Associate

University College London, UK

September 2015 - March 2017

Modules:

- Mining Social and Geographic Datasets [MSc]
- Geocomputation and Computational Social Science [BSc 2nd year]
- Principles of Spatial Analysis [MSc]

Teaching Associate

University of Birmingham, UK

Aug 2012 - December 2016

Modules:

- Mobile and Ubiquitous Computing [MSc]
- Introduction to HCI [MSc]
- Software Workshop [BSc 1st year]
- Foundation of Computer Science [BSc 1st year]

## TECHNICAL SKILLS

**Programming Languages:** C, C++, Haskell, HTML, Java for Android, J2EE, JAVA script, LabVIEW, Octave, Python, PHP, PyTorch, R, Swift for iOS, TensorFlow, Visual Basic, and XML.

**Databases:** MongoDB and SQL.

**Operating Systems:** PharLAP, OS X, Unix, VxWorks and Windows.

**Evaluation Techniques:** A/B testing, Functional testing, Heuristic evaluation and Stack-validation.