

Workshop A3 - New developments in travel diary collection systems based on smartphones and GPS receivers

Workshop chair:

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We have observed a decreasing response rate for traditional travel diary collection methods and an increasing need for a more accurate spatio-temporal description of how people travel over longer periods of time. As a response, scientists proposed systems that automate the collection of travel diaries using devices with location sensing capabilities such as smartphones and GPS receivers. This comes as a natural step forward that has already proven to be complementary to the traditional collection methods. The following four topics will be discussed in the workshop, although they are not mutually exclusive: 1) the current status of travel diary collection systems based on smartphones and GPS receivers, 2) the methodologies to extract semantics from GPS trajectories and auxiliary data, 3) performance and usability considerations for using smartphones and GPS receivers to collect data for generating travel surveys, and 4) the potential applications of finer spatio-temporal granularity survey data.

Papers for oral presentation

- Peter Stopher, Vivian Daigler and Sarah Griffith.
Smartphone App versus GPS Logger: A Comparative Study
- Adrian C. Prelipcean, Yusak O. Susilo and Gyözö Gidofalvi.
Future directions of research for automatic travel diary collection
- Ali Yazdizadeh, Mohsen Rezaei and Zachary Patterson.
Using smartphone travel survey experiment for transportation mode detection: An application on DataMobile trip data in Montreal

Papers for poster presentation related to workshop

- Rafael Ibáñez, Ana Olmeda, Jesús Vázquez, Ignacio Martínez and Tomás Ruiz.
Evaluation of smartphone-based travel survey app to assess effects of changes in transport supply. Field Case Study in Madrid
- Angela Ferreira, Norbert Braendle and Peter Widhalm.
Trip validation interfaces of smartphone-based travel survey solutions put to test: a comparative usability study
- Athena Tsirimpa and Amalia Polydoropoulou.
Transport Survey for Investigating Parking Choice Behavior: A Case Study at Chios Island, Greece
- Chris Harding, Zoe Tenteng Zhang, Siva Srikukenthiran, Khandker Habib and Eric Miller.
On the User Experience and Performance of Smartphone Apps as Personalized Travel Survey Instruments: Results from an Experiment in Toronto
- Michael Camilleri, Adrian Muscat, Maria Attard and Victor Buttigieg. Vjaġġ:
The automated personal trip identification app for mobility data collection in Malta

- Mark Fowler, Maren Outwater, John Gliebe and Courtney Nielson.
Oregon Metro Tour-Based Freight Model Data Collection: Lessons Learned
- Menghan Li, Ajinkya Ghorpade, P. Christopher Zegras, Talip Kilic and Nancy Lozano-Gracia.
Measuring Travel Equity and Representativeness: Social and Technical Challenge of Using Smartphone-based Travel Survey in Dar es Salaam, Tanzania
- Jean-Simon Bourdeau, Grzegorz Wielinski, Catherine Morency, Nicolas Saunier and Martin Trépanier.
Using GPS data from a fleet of shared free-floating cars to estimate parking search time
- Stephan Krygsman and Johann Van Rensburg.
Funding for Roads: New technology delivering new data
- Lei Gong, Toshiyuki Yamamoto and Takayuki Morikawa.
Identification of Activity Stop Locations in GPS Trajectories by DBSCAN-Entropy Method Combined with Support Vector Machines