



# 2015 International Workshop on Trajectory-based Behaviour Analytics

January 25–26, 2015, Austin Texas, USA — Held in Conjunction with the Twenty-Ninth AAI Conference on Artificial Intelligence (AAI 2015)  
(<http://wp.csiro.au/trba2015/>)

## Call for Papers

In recent years, data driven scientific discovery approach has already been agreed to be an important emerging paradigm for computing in areas including social network, service, Internet of Things (or sensor networks), and cloud. Under this paradigm, big data is the core that drives new researches in many domains, from environmental to social. One important source of information for potential value creation is the real-time trajectory data obtained from entities including animals, robots and humans. The trajectory information naturally reveals the details of instantaneous behaviours conducted by entities, which is closely related with complex behaviours in the form of multiple interdependent multivariate time series data with varied locations. This forms the need and emergence of behaviour modelling (i.e. understanding behaviours from cognitive and analytics perspectives) and behaviour system construction (i.e. developing cognition-as-a-service systems to support decision making). The 2015 Workshop on Trajectory-based Behaviour Analytics (TrBA 2015) focuses on addressing deep science and research questions related to behavioural analytics for real-time trajectory-driven data applications as well as its value delivery platform systems. Its main goal is to promote behavioural analytics by defining its relevant challenging problems and emerging issues. It also serves as a regular event for research peers to exchange new ideas and identify future research directions.

Topics include, but are not limited to:

- (a) Trajectory-based Behaviour Representation and Modelling
  - Trajectory-based behaviour definition and representation
  - Trajectory-based behaviour domain and context modelling
  - Temporal-spatial relationship modelling among trajectories
  - Visualization of real time trajectory-based behaviours
- (b) Trajectory-based Behaviour Network
  - Trajectory-based behaviour networking and interactions
  - Trajectory-based behaviour graph construction and analysis
  - Convergence and divergence of trajectory-based behaviours
  - Trajectory-based behaviour/economic/social network topological structures
- (c) Multiple/heterogeneous Trajectory-based Behaviour Integration
  - Cognitive computing on complex/heterogeneous trajectory-based behaviours
  - Collaborative filtering, mining and prediction
  - MapReduce and Hadoop for processing, resource scheduling and SLA
  - Trajectory-based behaviour sharing and privacy preserving
- (d) Trajectory-based Behaviour Dynamics and Evolution
  - Trajectory-based behaviour system establishment and platform development
  - Trajectory-based behaviour evolution, adaption and emergence
  - Trajectory-based behaviour and social dynamics
  - Trajectory-based Behaviour related knowledge management and life cycle

### Submission Guidelines

All submissions will be reviewed by the Program Committee on the basis of technical quality, relevance to big data and trajectory-based behaviour analytics, originality, significance, and clarity. All papers must be submitted electronically through the paper submission system (<https://easychair.org/conferences/?conf=trba2015>) in PDF format only. Papers must be formatted in AAI two-column, camera-ready style; see the author instruction page for details <http://www.aaai.org/Conferences/AAAI/2015/aaai15call.php>. Papers that do not comply with the Submission Guidelines will be rejected without review. Papers must be in high-resolution PDF format, formatted for US Letter (8.5" x 11") paper, using Type 1 or TrueType fonts. Submitted papers may be no longer than 7 pages with page 7 containing nothing but references. All accepted papers will be published by AAI in a separate AAI 2015 workshop proceeding. Selected high-quality papers accepted and presented in the workshop will also be invited for extension and publication in the special issue of Journal of Computer and System Sciences (<http://www.journals.elsevier.com/journal-of-computer-and-system-sciences/>, a SCI journal, with **impact factor 1.091**).

### Important Dates

Electronic submission of full papers due: October 14, 2014  
Notification of paper acceptance: November 14, 2014  
Camera-ready of accepted papers due: November 21, 2014  
Workshop date: January 25-26, 2015

### Workshop Co-chairs:

Dr. Can Wang, Digital Productivity and Services Flagship, CSIRO, Australia ([canwang613@gmail.com](mailto:canwang613@gmail.com)) (Contact Co-chair)  
Dr. Chi-Hung Chi, Digital Productivity and Services Flagship, CSIRO, Australia ([chihung.chi@csiro.au](mailto:chihung.chi@csiro.au))  
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