



Call for Papers

Journal of Computer and System Sciences

(<http://www.journals.elsevier.com/journal-of-computer-and-system-sciences/>, Indexed by SCI-E)

Special Session on “Trajectory-based Behaviour Analytics”

Aims and Scope

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). This special session will include papers based on the presentation at the First International Workshop on Trajectory-based Behaviour Analytics (<http://wp.csiro.au/trba2015>), as part of the Twenty-Ninth AAAI Conference on Artificial Intelligence 2015 (<http://www.aaai.org/Conferences/AAAI/aaai15.php>) and papers submitted for this call for papers. All submitted papers are subjected to the same review process as those papers accepted for publication in the regular issues.

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 Procedure

Each paper, written in English, should follow the submission guidelines found at <http://ees.elsevier.com/jcss/>. Authors must select “**SI: Behaviour Analytics**” when they reach the “Article Type” step in the submission process. All submitted papers will be reviewed by at least three reviewers and selected based on their originality, significance, relevance, and clarity of presentation. Papers extended from conference/workshop versions should be clearly stated and should have at least 30% different materials from their original versions. The covering letter should indicate the names of the authors and their affiliations, addresses, faxes, and e-mails.

Schedule

Paper Submission Due:	April 1, 2015
Completion of first review cycle	May 15, 2015
Deadline for submitting the revised paper:	July 15, 2015
2 nd review completion:	September 15, 2015
Camera-ready Manuscript Due:	November 30, 2015

Guest Editors

Dr. Chi-Hung Chi, Digital Productivity and Services Flagship, CSIRO, Australia (email: chihung.chi@csiro.au)
Dr. Can Wang, Digital Productivity and Services Flagship, CSIRO, Australia (email: Can.Wang@csiro.au)
Dr. Yu Zheng, Microsoft Research, Beijing, China (email: yuzheng@microsoft.com)