

1<sup>ST</sup> INTERNATIONAL CONFERENCE ON THE FRONTIERS AND ADVANCES IN DATA SCIENCE (FADS)  
23-25 OCTOBER 2017, XIAN, CHINA  
<http://www.fads.org.uk>

### CALL FOR PAPERS

Our lives and society have been transformed by advances in modern information and communication technologies. Devices such as mobile phones and tablets and applications such as social networks have changed how we interact with the world around us and each other and the way we conduct business, government and science. With computational technologies permeating almost all aspects of human activity the amount of data being generated is constantly increasing and we are surrounded by a wealth of new forms of data. We are at the cusp of a new data and information revolution.

This proliferation of data calls for novel, multi and interdisciplinary approaches in data science and analytics to tackle the problems that data pose. New approaches for harnessing data and drawing insights will bring huge benefits to fields as diverse as health, finance, running smarter cities, the environment, business and public policy.

The First International Conference on Frontiers and Advances in Data Science (FADS) will bring together scientists, professionals, industry practitioners and users from range of disciplinary backgrounds and application domains to share knowledge and the latest developments in data science and analytics.

We invite the submission of original and previously unpublished theoretical and practical work in all fields of data science and analytics including methodologies and techniques for big data. All submissions will be reviewed by at least two members of the Program Committee on the basis of novelty, technical quality, relevance to the conference theme, significance, and clarity of presentation. Accepted papers will be submitted for inclusion into IEEE Xplore and selected papers will be invited to a special Journal issue.

Further information is available from the FADS 2017 website <http://www.fads.org.uk>

FADS welcomes submissions on (but not limited to) the following topics:

#### Data Science Foundations

- Machine Learning
- Mathematical and statistical models
- Novel theoretical models
- Computational Models
- Preprocessing and dimensionality reduction
- Efficiency and complexity
- Optimization

#### Analytics

- Multi-stream reasoning and analytics
- Text analysis and mining
- Causal inference
- Visualisation

- Modelling complex and big data
- Personalisation analytics and recommender systems
- Social network analytics
- Multimedia/image processing and analytics
- Information retrieval and search
- Semantic information extraction and reasoning

#### Data Infrastructure and Management

- New data standards
- Data cleansing
- Data integration
- Data sharing
- Data linkage
- Data curation and publishing
- Cloud/Grid/Stream Computing architectures
- Distributed and parallel/high performance processing
- Data warehouses
- Open platforms for analytics
- Big data architectures and platforms

#### Security, governance and privacy

- Governance
- Intrusion, anomaly and threat detection
- Data integrity
- Data security and risk
- Trust and trust management
- Privacy preserving techniques and anonymisation
- Privacy protection standards and policies
- Legal aspects of analytics and big data

#### Social and economic aspects

- Ethical considerations in the era of analytics and big data
- New business models
- Sociological aspects of analytics and big data
- Analytics and big data for sustainable development
- Analytics and big data for supporting the Sustainable Development Goals (SDGs)
- Analytics and big data for the social good

#### Applications

- Scientific applications of analytics and big data
- Internet of Things
- Internet of Persons
- Smart Cities and Transport
- Business and Finance Analytics
- Healthcare analytics and decision support
- Decision making and support systems
- Analytics and big data for policy making and the public sector
- Social networks and applications
- Industrial applications of analytics and big data
- Analytics for telecommunications and networks applications

## IMPORTANT DATES

Paper Submission deadline: 23rd July 2017

Notification of acceptance: 20th August 2017

Camera-ready Manuscript: 1st September 2017

Registration deadline: (for accepted papers): 10th September 2017

For more information please visit the FADS webpage: <http://www.fads.org.uk>

## CONFERENCE ORGANISATION

### General Chairs

- Prof Maria Fasli, UNESCO Chair in Analytics and Data Science, University of Essex
- Prof Peng Jinye, Dean of School of Information Science and Technology, Northwest University

### Program Chairs

- Prof Hangzai Luo, Northwest University, China
- Prof Frank Wang, University of Kent, UK
- Prof Mohammad Essaaidi, ENSYAS, Morocco
- Prof Bruce Bassett, University of Cape Town; AIMS, South Africa

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