

Workshop Session on Big Data Analytics in Air Quality Management in Smart Cities

Co-located with

Seventh Workshop on Big Data Benchmarking

<http://clds.ucsd.edu/wbdb2015.in>

December 14-15, 2015, India Habitat Centre, New Delhi, India

About the Seventh Workshop on Big Data Benchmarking (7th WBDB)

WBDB is a leading international forum for discussing and disseminating the latest trends, challenges, and ideas around Big Data benchmarking and related applications scenarios, in industry, academia and the government.

About the Workshop Session on 'Big Data Analytics for Air Quality Management in Smart Cities'

Why Big Data Analysis in Air Quality Management? There is a worldwide trend towards urbanization leading to the growth of megacities in the developing world. Providing civic services and managing the quality of life in the present and future smart cities are a major challenge. Poor air quality in cities mainly due to emissions from vehicles and industrial activities, and prolonged exposure is known to harm human health. Air pollution is one of the contributing factors in the rise of cardiovascular and lung diseases. The management of good air quality is therefore an issue of high priority, common to most cities around the world.

In the recent years, citizen-centric novel personal and mobile monitors are being used to measure personal exposure to particulates and gases pollutants in the urban environment. The fine resolution temporal and spatial air quality data have been used by the computer models to simulate health impacts. Therefore, big data analytics and applications are gaining importance in urban air quality research. This special technical session aims to provide platform to share, discuss and deliberate on topics broadly covering big data analytics and applications in air quality management.

The workshop invites original research papers in areas related to ‘Big Data in Air Quality Management in Smart Cities’ as listed below. Preference will be given to the papers focusing on Big Data benchmark issues related to Air Quality, including identifying reference data sets, reference workloads, performance challenges, and opportunities for application level benchmarks. Topics include but are not limited to:

- Air Quality Monitoring Sensor Network
- Air Quality Modelling for Real Time Environmental Assessment
- Real Time Air Quality Data Analytics and Visualization
- Data Annotations to Customize Urban Air Quality
- Cloud Computing for Air Quality Data Analysis
- Uncertainty in Air Quality Data Analysis
- Air Quality and Human Exposure Assessment
- Big Data Analytics for Smart City Air Quality Management

Paper Submission and Publication

Prospective authors are invited to submit original research papers (not being considered for publication elsewhere) from 4 to 6 pages in length. Papers must be submitted through the CMT system. Papers should be formatted using the [Springer LNCS Proceedings](#) format. Unformatted papers and papers beyond the page limit will not be reviewed. At least one author of each accepted paper is required to register at the workshop and present the paper. All submitted papers will be peer-reviewed by at least three program committee members. Accepted and presented papers will appear in the online workshop proceedings. Extended versions of selected original research papers may be invited for potential publication in a special issue of a journal. A summary of the workshop session – including a summarization of relevant papers and workshop discussion related to benchmark issues in ‘Big Data Analytics for Air Quality Management in Smart Cities’ will be published as a separate paper in the Proceedings of Seventh Workshop on Big Data Benchmarking, by Springer Verlag in their Lecture Notes in Computer Science (LNCS) series. Selected papers from prior workshops on Big Data Benchmarking have been published in *Specifying Big Data Benchmarks*, ISBN 978-3-642-53973-2, and *Advancing Big Data Benchmarks*, ISBN: 978-3-319-10595-6.

Important Dates and Deadlines

Paper Submission	September 28 , 2015
Paper acceptance notification	October 30, 2015
Final extended version submission	December 31, 2015
Workshop Date	December 15, 2015

Session Program Outline (Half-Day)

Welcome and Introduction	10 minutes
Invited talk	30 minutes
Selected paper presentations	80 minutes
Work-in-progress / Panel Discussion (common to all co-located sessions)	60 minutes

Invited Speakers

To be announced.

Workshop Co-Chairs

- **Prof. Mukesh Khare**, Department of Civil Engineering, Indian Institute of Technology Delhi, New Delhi, India (mukeshk@civil.iitd.ac.in)
- **Dr. S.M. Shiva Nagendra**, Department of Civil Engineering, Indian Institute of Technology Madras, Chennai, India (snagendra@iitm.ac.in)
- **Prof. Prateek Sharma**, Faculty of Applied Sciences, TERI University, New Delhi, India (prateeks@teri.res.in)

Technical Program Committee

- **Prof. Virendra Sethi**, Indian Institute of Technology Bombay, Mumbai, India
- **Prof. Bhola R Gurjar**, Indian Institute of Technology Roorkee, Roorkee, India
- **Prof. Ashok Despande**, Visiting Professor, Indian Institute of Technology Mumbai, Mumbai, India
- **Sri. Nanda Kumar**, CEO, Karnataka State Pollution Control Board, Bangalore, India
- **Dr. Prashant Gargava**, Senior Environmental Engineer, Central Pollution Control Board, New Delhi, India
- **Dr.M. Madhusudanan**, Scientist 'E' (Additional Director) at Central Pollution Control Board, New Delhi, India
- **Dr. K. Ranganathan**, Director (Laboratories), Tamil Nadu Pollution Control Board, Chennai, India