

# **8<sup>th</sup> International Conference on Big Data Analytics (BDA2020)**

**December 15 – 18, 2020**

**Venue: Ashoka University,**

**Sonipat, India**

**Web site: <http://bda2020.org/>**

## Program Schedule of Workshops

**December 15, 2020 (Tuesday)**

### Program schedule for workshop on Data Challenges in Understanding The *Urban*

<b>December 15, 2020 (Tuesday)</b>	
	<a href="#">Zoom Link</a>
09.15-09.30	Welcome and Introduction - Prof. Girish Agrawal (Jindal School of Art & Architecture)
09.30-10.30	Big Data for Urban Resilience - Dr. Bandana Kar (Oak Ridge National Laboratory)
10.30-11.30	Open Data Resources for Energy, Emissions; Air Pollution Analysis in India - Dr. Sarath Guttikunda (Urban Emissions)
11.30- 12.30	Smart Cities, Big Data and Confusion - Prof. Dinesh Mohan (Indian Institute of Technology, Delhi)
12.30-13.30	What Does the Pandemic Tell Us About Data? - Dr. Anant Maringanti (Hyderabad Urban Lab)
12.30-13.30	Discussion and Closing Remarks - Prof. Prasad Pathak (FLAME University)

### Program schedule for workshop on workshop on Public and Political Data

<b>December 15, 2020 (Tuesday)</b>	
	<a href="#">Zoom Link</a>
9.30 am – 10.10 am	Electoral Cycles in Food Prices: Evidence from India - Aaditya Dar (Indian School of Business), Pranav Gupta and Rahul Verma
10.10 am – 10.50 am	A Methodology and Application of Pixel-level Land Cover Classification in India over Three Satellite Systems - Chahat Bansal (IIT Delhi)
10.50 am – 11.30 am	Facebooking for Political Likes: Preliminary Analysis of Trends in Paid Advertising on Facebook and Election Outcomes during the Bihar 2020 Assembly Elections - Neelesh Agrawal, Mohit Kumar and Basim-U-Nissa (TCPD, Ashoka University)
11.30 am – 12.10 noon	What can the Question Hour tell us about Representation in India? - Saloni Bhogale (University of Wisconsin, Madison)

# 8th International Conference on Big Data Analytics (BDA2020)

## Main Conference Program (Venue: Online on Zoom)

(5 keynote talks, 5 invited talks, 3 tutorials, 14 peer-reviewed research papers and a panel discussion)

<b>December 16, 2020 (Wednesday)</b>		
	Room 1 ( <a href="#">Zoom Link</a> )	Room 2 ( <a href="#">Zoom Link</a> )
	<b>Main Conference</b>	<b>DSANRM Workshop</b>
08.30-09.00	Inauguration & Welcome address by Prof. Malabika Sarkar, VC Ashoka University	
09.00-10.00	Keynote 1 by Prof. Ouri Wolfson, University of Illinois at Chicago, USA	<a href="#">Link</a> to Workshop Program Schedule (9am - 6pm)  Workshop on “Data Science for Agriculture and Natural Resource Management’ DSANRM2020)”
10.00-11.00	BREAK	
11.00-12.00	Research Session 1	
12.00-13.30	LUNCH BREAK	
13.30-15.00	Invited Talk 1 by Prof. Marcin Papzycki, Systems Research Institute, Polish Academy of Sciences, Poland AND Research Session 2	
15.00-15.30	BREAK	
15.30-17.00	Tutorial 1 by Dr. Tanmoy Chakraborty and Hridoy Sankar Dutta, IIIT Delhi, India	
17.00-18.30		
<b>December 17, 2020 (Thursday)</b>		
	Room 1 ( <a href="#">Zoom Link</a> )	Room 2 ( <a href="#">Zoom Link</a> )
08.30-09.30	Keynote 2 by Prof. H. V. Jagadish, University of Michigan, USA	
09.30-10.30	Keynote 3 by Prof. Masaru Kitsuregawa, University of Tokyo & Director General, National Institute of Informatics, Japan	
10.30 -12.00	Panel Discussion on “Two Sides of a Pandemic: Vaccine and Vaccination - What Role Can Computer Scientists play for Covid19? Moderated by Prof. Sharma Chakravarthy, UT Arlington, USA	
12.00-13.30	LUNCH BREAK	
13.30-15.00	Invited Talk 3 by Dr. Rajeev Gupta, Microsoft AND Research Session 4	Tutorial 3 by Prof. Asoke K Talukder, SRIT India Ltd, Bangalore, India
15.00-15.30	BREAK	
15.30-16.10	Research Session 3	
16.10-16.30	BREAK	
16.30-17.15		
<b>December 18, 2020 (Friday)</b>		

	Room 1 ( <a href="#">Zoom Link</a> )	Room 2 ( <a href="#">Zoom Link</a> )
09.00 - 10.00	Keynote 4 by Prof. Amit Sheth, University of South Carolina, USA	
10.00 -11.00	Keynote 5 by Prof. Divyakant Agrawal, University of California at Santa Barbara, USA	
11.00-11.30	BREAK	
11.30-13.00	Research Session 5	Tutorial 2 by Prof. Mayuri Mehta, Sarvajanik College of Engineering and Technology, Gujarat, India
13.00-14.00	LUNCH BREAK	
14.00-15.30	Invited Talk 4 by Prof. Carlos Ordonez, University of Houston, USA Invited Talk 2 by Prof. Praveen Rao, University of Missouri - Columbia, USA	Invited Talk 5 by Prof. Srikanta Bedathur and Prof. Raghava Mutharaju, IIT Delhi, India
15.30-16.00	Closing Ceremony	

<b>KEYNOTES</b>	
Keynote 1	“Data Mining for the Relationship Among Consciousness, AI, and Coordination”, by Prof. Ouri Wolfson, University of Illinois at Chicago, USA
Keynote 2	“Data Equity Systems” by Prof. H. V. Jagadish, University of Michigan, USA
Keynote 3	“OoODE: Out of Order Execution of Database Operations” by Prof. Masaru Kitsuregawa, University of Tokyo, Japan
Keynote 4	“Knowledge-infused Learning: strategies for using knowledge with deep learning and NLP”, with some applications” by Prof. Amit Sheth, University of South Carolina, USA
Keynote 5	“Taming of the Big Data: Probabilistic Counting, Frequency Estimation, and Approximate Quantiles”, by Prof. Divyakant Agrawal, University of California at Santa Barbara, USA
<b>INVITED TALKS</b>	
Invited Talk 1	“Applying machine learning to anomaly detection in car insurance sales” by Prof. Marcin Papzycki, Systems Research Institute, Polish Academy of Sciences, Poland
Invited Talk 2	“Large-scale Image Retrieval on Everyday Scenes with Common Objects” by Prof. Praveen Rao, University of Missouri - Columbia, USA
Invited Talk 3	“Generic Key Value Extractions from Emails”, by Dr. Rajeev Gupta, Principal Applied Researcher, Microsoft
Invited Talk 4	“A Comparison of Data Science Systems” by Prof. Carlos Ordonez, University of Houston, USA
Invited Talk 5	“Knowledge Graphs: Representation, Management and Applications” by Prof. Srikanta Bedathur and Prof. Raghava Mutharaju, IIT Delhi, India
<b>TUTORIALS</b>	
Tutorial 1	“Adversarial Collusion on the Web: State-of-the-art and Future Directions” by Dr. Tanmoy Chakraborty and Hridoy Sankar Dutta, IIIT Delhi, India

Tutorial 2	“Growing Role of Big Data and AI in Transforming Healthcare Industry” by Prof. Mayuri Mehta, Sarvajanic College of Engineering and Technology, Gujarat, India
Tutorial 3	“Next Generation Web: Technology and Services” by Prof. Asoke K Talukder, Chief Science & Technology Officer SRIT Health, SRIT India Ltd, Bangalore, India

### **Panel Discussion: Two Sides of a Pandemic: Vaccine and Vaccination - What Role Can Computer Scientists play for Covid19?**

Panel Chair and Moderator: Prof. Sharma Chakravarthy, UT Arlington

If Covid-19, as a pandemic, is to be controlled there has to be symbiotic effort between the creation of vaccines as well as vaccination of the populace. This requires management of not only the spread of the pandemic, but also effective distribution of vaccines. Computer science and specifically data analytics is critical for the management of the pandemic (data collection and analysis, visualization, and tracking/tracing) and supply chain management for distribution and logistics.

In this panel, we will discuss the role of computer science for dealing with Pandemics such as Covid-19. Many of the measures (e.g., frequent hand washing), policies (e.g., lock down, wearing masks), and strategic and tactical decisions (e.g., distribution, beneficial therapies) are based on proper and accurate collection of data, its analysis, and deriving actionable knowledge. We know first-hand that some countries did it well and some did not follow a scientific approach. It is also important to convey seriousness of the situation to the common man through easy-to-understand visualizations of analysis ([itlab.uta.edu/cowiz/](http://itlab.uta.edu/cowiz/))

In this panel, we will specifically discuss four aspects of vaccination:

1. Covid-19 and its Challenges **Prof. Prantar Chakravarti, Haematologist (Medical Doctor)**
- 2.
3. Data collection and analysis **TBD**
4. Tracking/tracing of individuals for mitigation **Prof. Sanjay Madria, Missouri University of Science and Technology**
5. Visualization of pandemic data and its analysis **Prof. Debayan Gupta, Ashoka university**
6. Vaccination: Logistics and distribution **Dr. Ankur Narang**

This panel has experts including a medical doctor in addition to database & data analytics experts and mobile platform researchers, who are well-versed in addressing this problem.

### **Research Session 1: Big Data Analytics for Healthcare**

- Shweta Thakur, Dhaval K. Patel, Brijesh Soni, Mehul Raval and Sanjay Chaudhary. Prediction for the Second Wave of COVID-19 in India
- Anamika Gupta, Anshuman Gupta, Vaishnavi Verma, Aayush Khattar and Devansh Sharma. Texture Feature Extraction: Impact of Variants on Performance of Machine Learning Classifiers: Study on Chest X-ray – Pneumonia Images

- Asoke Talukder, Julio Bonis Sanz and Jahnavi Samajpati. 'Precision Health': Balancing Reactive Care and Proactive Care through the Evidence Based Knowledge Graph Constructed from Real-World Electronic Health Records, Disease Trajectories, Diseasesome, and Patholome

### **Research Session 2: Text Analytics**

- Akanksha Mehndiratta and Krishna Asawa. Spectral Learning of Semantic Units in a Sentence Pair to Evaluate Semantic Textual Similarity
- Jitendra Parmar, Sanskar Soni and Satyendra Singh Chouhan. OWI: Open-world Intent Identification framework for Dialog Based System

### **Research Session 3: Big Data Analytics for Businesses**

- Pooja Gaur, P. Krishna Reddy, M. Kumara Swamy and Anirban Mondal. A Revenue-based Product Placement Framework to Improve Diversity in Retail Businesses
- Jaiteg Singh, Amit Mittal, Ruchi Mittal, Karmjeet Singh and Varun Malik. i-Fence: A Spatio-Temporal Context-Aware Geofencing Framework for Triggering Impulse Decisions

### **Research Session 4: Data Warehousing**

- Dr. Rajendra Kumar Roul and Dr. Jajati Keshari Sahoo. Study and Understanding the Significance of Multilayer ELM Feature Space
- Olaf Herden. Architectural Patterns for Integrating Data Lakes into Data Warehouse Architectures

### **Research Session 5: Machine Learning & Analytics**

- Animesh Kumar, Pramod Pathak and Paul Stynes. A Transfer Learning Approach to Classify the Brain Age from MRI Images
- G. Jignesh Chowdary, Narinder Singh Punn, Sanjay Kumar Sonbhadra and Sonali Agarwal. Face Mask Detection using Transfer Learning of InceptionV3 (short paper)
- Saravjeet Singh and Jaiteg Singh. Analysis of GPS trajectories mapping on shape files using spatial computing approaches (short paper)
- Shubam Yadav, Santosh Singh Rathore and Satyendra Singh Chouhan. Authorship Identification using Stylometry and Document Fingerprinting (short paper)
- Shobhan Kumar and Arun Chauhan. Recommending Question-Answers for enriching Textbooks