Technical Programme of Virtual Workshop on

'Data Science for Agriculture and Natural Resource Management (DSANRM2020)'

On December 16, 2020

(Being organized as a part 8ᵗʰ International Conference on Big Data Analytics (BDA– 2020))

Time	Title	Speaker
09.00-10.00	**Inaugural Session**	
09:00-09:05	Welcome the Guests	**Dr. G.P. Obi Reddy** Workshop Chair
09:05-09.10	Welcome Remarks	**Prof. Sanjay Chaudhary** Interim Dean and Professor, School of Engineering and Applied Science; Dean of Students, Ahmedabad University, Ahmedabad, India
09:10-09:30	Future Plans of Big data Analytics in Agriculture	**Prof. P. Krishna Reddy** Professor, International Institute of Information Technology, Hyderabad, India
09:30-10:00	**Inaugural Address**	**Dr. Suresh Kumar Chaudhari** Deputy Director General (NRM), Indian Council of Agricultural Research, New Delhi, India
10:00-12:30	**Technical Session I: Data Science for Agriculture (Invited Speakers)** **Session Chair: Prof. J. Adinarayana** Institute Chair Professor, CSRE, IIT Bombay, India	
10:00-10:30	A cyber physical systems approach to agricultural sustainability	**Prof. Soumik Sarkar** Associate Professor, Department of Mechanical Engineering and Department of Computer Science Iowa State University, USA
10.30-11.00	A paradigm-shift in global cropland maps and products for food and water security in the twenty-first Century: Petabyte scale satellite big-data analytics, Machine learning, and cloud computing	**Dr. Prasad S. Thenkabail** Supervisory Research Geographer-15, US Geological Survey, Flagstaff, Arizona, USA
11:00-11:30	An emerging domain, phenomics for the next generation plant and agricultural sciences	**Prof Seishi Ninomiya** Graduate School of Agricultural and Life Sciences, University of Tokyo, Japan

11:30-12:00	'Disruptive innovations in precision agriculture - towards BD analytics for better GeoFarmatics	**Prof. J. Adinarayana** Institute Chair Professor & Head, CSRE, Indian Institute of Technology, Bombay (IITB), Mumbai, India
12:00-12:30	Crop Yield Prediction using Machine Learning	**Prof. Pabitra Mitra,** Professor, Computer Science & Engineering, Indian Institute of Technology, Kharagpur, India
12.30-16.30	**Technical Session II: Data Science Applications in Natural Resource Management (Invited Speakers)** **Session Chair: Dr. S.P. Wani**, Former, Research Program Director – Asia and Director, ICRISAT Development Center, Hyderabad, India	
12:30-13:00	Integrating UAV and field sensor data for better decision making in broad acre cropping systems	**Dr. Leisa Armstrong**, School of Science, Edith Cowan University, Australia
13:00-13:30	Big-data and agro-eco region driven agriculture for transformation	**Dr. S.P. Wani**, Former, Research Program Director – Asia and Director, ICRISAT Development Center, Hyderabad, India
13.30-14:30	**Lunch break**	
14:30-15:00	Big Data Analytics for Climate Resilient Supply Chains: Opportunities and Way Forward	**Dr. Navin Kumar C. Twarakavi** IBM Research Lab, India
15:00-15:30	Mapping croplands using Machine learning algorithms and spectral matching techniques	**Dr. Murali Krishna Gumma** Head of Remote Sensing/Geographic Information System unit, ICRISAT, Hyderabad, India
15:30-16:00	Computer vision for disease detection and severity estimation	**Dr. Mehul S. Raval,** Professor, School of Engineering and Applied Science, Ahmedabad University, Ahmedabad, India
16:00-16:30	Innovative Geoportal Platforms for Sustainable Management of Natural Resources	**Dr. G.P. Obi Reddy** Principal Scientist, Division of Remote Sensing Applications, ICAR-NBSS&LUP, Nagpur, India
16.30-17.30	**Technical Session III: Data Science Applications in Agriculture and Natural Resource Management (Voluntary Papers)** **Session Chair: Prof. Pabitra Mitra,** Professor, Computer Science & Engineering, IIT, Kharagpur, India	
17:30-17:50	Concluding Remarks	**Prof. V.C. Patil** Director, KIAAR, India
17.50-18.00	Vote of Thanks	**Dr. Mehul S. Raval,** Workshop Chair