

Brief Resume (Membership No LM-20126 for Director (Awards) ISAE Election 2018-21)



First Name:	A R J A M A D U T T A
Last Name:	S A R A N G I
Office Address:	Residence Address:
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Significant contributions (100 words): Developed and validated hydrological models and soft computing tools for prediction of surface runoff and sediment yield from watersheds. Protocols were standardized for spatio-temporal variability mapping of ground water and rainfall depths, phosphorous load besides ground water quality and soil salinity parameters. ArcGIS interfaces were developed for generation of geomorphological parameters, watershed delineation and runoff estimation for integrated watershed management. Agricultural drought index was developed and validated for pearl millet and ground nut. Developed Decision Support Systems (DSSs) for soil and water conservation measures in watersheds, land reclamation through bio-drainage, enhancing productivity from irrigated saline environments and enhancing water productivity of rice-wheat cropping systems. Calibrated and validated AquaCrop, SWAP, and DSSAT crop models for simulation grain and biomass yield of different crops and HYDRUS for root zone soil moisture dynamics. Developed an integrated modelling system for prediction of maize yield under changing climatic scenarios. Standardized the foliar potassium fertilization technology for enhancing productivity of wheat under irrigated saline environment. Supervised fourteen Ph.D and six M. Tech students of ICAR-IARI, New Delhi, India. (**H-Index – 18 and i₁₀ index-30; source: Google Scholar**)

Education:

Born in Bhubaneswar, Odisha, India. Educated at *Biswambhar Bidyapeeth* High School, Puri, Odisha 1979-1984; SCS College, Puri, Odisha, 1984-1986; College of Agricultural Engineering, Orissa University of Agriculture and technology, Bhubaneswar, 1986-1992; B. Tech. (Agricultural Engineering) 1990, M. Tech (Agricultural Engineering) 1992, ICAR-Indian Agricultural Research Institute (IARI) New Delhi-12, 1994-1998; Ph.D. 1998. Post-Doctoral Fellow, Bioresources Engineering, McDonald Campus, McGill University, Canada (2002-2004)

Present Position(s):

Principal Scientist, Water Technology Centre (WTC), ICAR-IARI, New Delhi – 110 012

Past Position(s): Junior Agril. Engineer, CADA, Govt. of Odisha, Scientist & Sr. Scientist at WTC, ICAR-IARI
(22 years work Experience)

Awards and Honours (National and International):

- Bharat Ratna Dr. C. Subramaniam Award for Outstanding Teachers-2016 by ICAR
- Fellow of National Academy of Agricultural Sciences (NAAS), New Delhi, India
- Jawaharlal Nehru award for significant research accomplishments in Agricultural Engineering (1999)
- Best Teacher Award at Indian Agricultural Research Institute (IARI), ICAR-IARI, New Delhi (2015)
- Selected Associate of National Academy of Agricultural Sciences (NAAS) 2009;
- Shankar Memorial Award by ISAE (2012)
- Fellow of the Institution of Engineers (IEI), India: F-122229
- Award by International Commission on Irrigation and Drainage(ICID) (2003)
- IWMI-TATA young scientist Award (2005)
- Orissa Engineering Congress Award for best paper (2003)
- Award of BOYSCAST fellowship (2001) by DST, GoI and Post-Doctoral Fellowship in Sustainable Agriculture by McGill University, Montreal, Canada (2002-2004)
- Best paper Award by ISAE (twice during 2011 and 2013);
- Gold medal for securing first position during B.Tech and M. Tech programme (1990 and 1992).
- Served as Director (E-Services of ISAE) from 2011-2015
- Major Awards by students with whom I served as Chairman/Supervisor: Jawaharlal Nehru Award-2016 (Dr P. Kumar) and IARI- Merit Medal-2015 (Ms Ajita Gupta)

Specialization and Research Areas:

Hydrologic modelling in watershed systems; Use of geospatial tools and models in integrated water resources management; Ground water modelling and recharge structures; Spatio-temporal variability mapping and calibration of soil moisture sensors and use of water measuring devices under precision agriculture; Calibration and validation of crop models; Decision Support Systems for enhancing water productivity; Impact of climate change on availability and variability of surface and ground water resources; Crop water demand based irrigation schedules in canal command; Surface irrigation hydraulics, water budgeting studies and development of irrigation schedules and agricultural water management protocols for different crops.