



Innovante Water Solutions

An IIT Alumni Company...

The Business

Business name:	Innovante Water Solutions Pvt. Ltd.
Business structure:	Private Limited
CIN:	U74999UR2019PTC010010
Business location:	Bahadarpur Saini, Patanjali Yog Peeth, Roorkee, Haridwar, Uttarakhand-249405
Date established:	16 th July, 2019
Chief Advisor:	Prof. Dr. Nayan Sharma, Adjunct Professor, IIT Roorkee & Honorary Professor, Nottingham University, UK Prof. Dr. B. R. Gurjar, Professor, CTRANS, IIT Roorkee
Vision statement:	To provide world-class & hi-tech solutions for sustainable water resources development and management.
Goals/Mission:	Innovante's mission is to accelerate India's transition from developing to developed nation with sustainable livelihood development.

About Us:

Innovante Water Solutions Pvt. Ltd., a start-up company by alumni of IITs, is an integrated water resources design, planning and management company. We are introducing the sustainable water resources development through techno-economic approaches. Innovante (***French word for innovative***) thrives on intensive as well as extensive Research & Development to excel in the service sector of water. Innovation at Innovante is backed by strong Hydrological, Hydraulics, Climate Science and River Science expertise and the knowledge bank created over the years.

Hi-tech research lab with physical and mathematical modelling facility supported by well qualified and experienced R&D team, and use of advanced numerical and computational models and technologies is the core of development of new approaches, methodologies and techniques resulting in high quality technological services. The Company's effectiveness lies in its unique offerings of state-of-the-art design and solutions. We are engaged in continuous improvement of design and management parameters to enhance the quality of services and cost competitiveness in order to build value for our customers.

SERVICES

- Multi-satellite Based Precipitation Estimation and Extraction
- Satellite Data Analysis and Management
- Hydrological Modelling for Runoff/Discharge Estimation
- Floodplain Inundation Mapping
- Climate Change modelling
- Hydraulic Modelling to estimate project design parameters
- Bridge Scour study using Mathematical Model
- Sediment Modelling to estimate catchment erosion
- Geomorphological analysis of river
- River Training Structure- Analysis and Design
- Hydraulic design of water resources structure
- Erosion Control structure design
- Lake and storage area hydrodynamics
- Reservoir Scheduling
- Hydropower Planning and Management (including Small Hydropower)
- Power Potential studies
- Irrigation canal capacity improvement
- Canal Automation
- Environmental Impact Assessment
- Transboundary Rivers and Hydro-politics
- River Health Monitoring
- Decision Support Systems for water resources planning
- Socio-economic study of water resources through soft computing techniques
- Physical Modelling of water resources infrastructure and bridges
- Detailed Project Report Preparation

EXPERTS

1. PROF. DR. NAYAN SHARMA (PHD), EXECUTIVE DIRECTOR & CHIEF ADVISOR



Prof. Dr. Nayan Sharma has to his credit 10 years of professional field experience in Assam Govt. Flood Control Dept. and 32 years of academic, research and consulting experience in IIT Roorkee in Water Resources Engineering with a focus on River Engineering, Flood Management, Hydraulic Structures, Irrigation.

Prof. Sharma has undertaken over 100 prime consultancy projects and conducted 10 major national and international research schemes in various disciplines of water resources engineering.

In IIT-Roorkee, Prof. Sharma has been supervisor of 177 Master's dissertations and 21 Ph.D. theses. He has 199 research publications in national & international journals and conference proceedings. Prof. Sharma has been appointed member of more than 61 national and international level tech. committees in different branches of water resources.

Prof. Sharma edited four books on Brahmaputra Basin Water Resources, River System Analysis and Management, Irrigation etc. which are published by Springer / Kluwer.

In collaboration with HYDROCOOP in Paris (France), Prof. Sharma researched on developing a new Piano Key Weir technology to enhance dam safety & providing in-stream storage capacity in river system as adaptation measure to offset climate change impacts.

In India, the new technology Piano Key Weir was designed and model-tested by team of Dr. Nayan Sharma which was implemented by Himachal Pradesh Power Cooperation Ltd. (HPPCL) in its 120 MW Sawra Kuddu Hydro Electric Project.

With research grant of MoWR, Govt. of India, Prof. Sharma innovated and successfully implemented RCC Jack Jetty system in Ganga river during 2009-2010 for channelization and erosion control.

Prof. Nayan Sharma received Indo-Swiss Bilateral Research Award as Visiting Professor in Swiss Federal Institute of Technology Lausanne in Switzerland during 2008. Prof. Sharma is recently appointed Honorary Professor for River Science by The University of Nottingham in The United Kingdom in their School of Geography. In recent years, Prof. Sharma delivered several invited lectures on different aspects of flood and river management, notably in The Imperial College London, University of Southampton in the UK, University of Edinburgh in Scotland, Swiss Federal Institute of Technology Lausanne in Switzerland, University of Iowa in the USA, and the Instituto Superior Técnico Lisbon in Portugal. Prof. Sharma had delivered the prestigious Dr. K. L. Rao Memorial Lecture on "Climate Change and Some Adaptive Technology for Water Resources Sector" in 26th National Convention of Civil Engineers, of Institution of Engineers (India).

2. DR. DHEERAJ KUMAR (Ph.D), Managing Director & CEO



Dr. Dheeraj Kumar is the founding member, Managing Director and CEO of Innovante Water Solutions Pvt. Ltd. He is deeply involved in research and development in the area of water resources Management. He has completed his B.Tech. in Agricultural Engineering from Allahabad Agricultural Institute Deemed University, Allahabad (UP) in 2006 and M. Tech from the Department of Soil and Water Engineering, Indira Gandhi Agricultural University in 2008. He received his PhD in Water Resource Engineering from Indian Institute of Technology Roorkee in 2016. He has to his credit more than 20 research papers/ book chapters in national and international journals, conferences and Publishers. He has completed more than 50 consultancy projects. His expertise is in water resources planning & management, Watershed Management, river morphology, hydrology, soil and water conservation, command area development, Catchment Area Treatment, etc.

3. MS. SHABANA KHAN



Ms. Khan is an executive director of Innovante Water Solutions Pvt. Ltd. possess more than 12 years of extensive experience in Civil & Geotechnical Engineering. She has completed her MBA in Finance from Indian School of Business and M-Tech in Geotechnical Engineering from IIT Bombay and graduated in Civil Engineering from Mumbai University.

Her expertise lies in managing the Technical and Commercial side of business. She holds an experience in managing the business for land slide mitigation and River training works from technical, commercial and execution side; Her area of interest in providing solutions for Slope Stabilization, Landslide Mitigation, Ground Improvement and River Training with advanced technical products and systems.

Skilled in working with Geo-structures such as Foundation Design, Retaining Wall Design, Slope Stabilization, Ground Improvement, Soil Analysis, Diaphragm Wall Design, and so on. Recommended and attended technical committee meetings for formulation and modification of Indian Codes. Coordinated for revision of IRC-34–2011 and associated with team for formulating the guidelines for Rockfall Protection System.

4. ER. PARVEEN KUMAR SANGHI



Er. Sanghi possesses more than thirty-three years of experience in planning, detailed engineering designs and construction supervision of various Water and hydro-electric projects involving dams (small, medium and high), spillways, Head race tunnels, Surge shafts, Pressure shafts and power houses (both underground and surface) etc. Hydraulic and structural designs

(including review) for surface/ underground works comprising Barrage , Dam , Desander Basin, HRT, Surge shaft, pressure shaft/penstock and powerhouse conforming to various international standards and publications (ACI, ANSI/AWS, ASTM, USBR, USACE and BIS etc.) Has experience of leading the project team and coordination of projects. Involved in contract management, planning, preparation of pre-qualification documents, technical specifications and bid documents, evaluation of pre-qualification documents and bidding documents. Coordinated various topographical surveys, material investigations and geo-technical investigations for various projects. Carried out Technical due diligence, quarterly monitoring, time and cost overrun of various hydroelectric projects.

5. DR. SHAKTI SURYAVANSHI (Ph.D)



Dr. Suryavanshi is an Assistant Professor in the department of Civil Engineering, Sam Higginbottom University of Agriculture Technology and Sciences, Allahabad. He has completed his B.Tech in Agricultural Engineering from Allahabad Agricultural Institute Deemed University, Allahabad (UP) in 2006 and M. Tech in Agricultural Engineering (Soil and Water Conservation Engg) from Allahabad Agricultural Institute Deemed University, Allahabad (UP) in 2008. He received his PhD in Water Resources Development and Management from Indian Institute of Technology Roorkee in 2013. His area of research is Hydrological Modelling, Water resources Development and Management, Remote Sensing and GIS applications in agriculture. He has published more than 16 research papers in international journals, 02 book/chapter and presented 08 conference papers. He also contributed himself as Editorial Board Member, Journal of Natural Resources Conservation and Research, USA and reviewer of more than 10 reputed journals. Dr. Suryavanshi is also a Co-Project Investigator in UPCAR sponsored project ‘Farming system-based water budgeting for Samrakalwana village at Allahabad’ during 2014-17 and DST sponsored project ‘Ensuring Food and Livelihood Security through Farming System Based Water Budgeting in Water Challenged and Backward Socio-Economic Clusters in Trans Yamuna areas at Allahabad’, 2018-2020. Dr. Suryavanshi is a recipient of ‘Young Scientist Award-2015’ in National conference ‘Rural Livelihood Security through Innovative Agri-entrepreneurship’ at CPRI, ICAR Patna and Scientist of the Year Award 2017, by Science & Tech Society for Integrated Rural Development, Telangana.

6. ER. NEERAJ KUMAR (WATER RESOURCE ENGINEER)



Er. Neeraj Kumar is a Civil/Water Resource Engineer having expertise on employing various geospatial tools and techniques in the fields of Civil Engineering, Hydrology, Agriculture and other related areas. Mr. Kumar have more than four years of experience in both teaching and research. His area of expertise includes but not limited to Hydrology & Hydraulics, River Engineering, Groundwater Modelling, Highway & Bridge Engineering, Soil Health Monitoring, design of WTP and STP, etc. He has to his credit more than 13 research papers/ book chapters in national and international journals, conferences and Publishers. He has numerous patents which are widely used for flood disasters mitigation and two more are in the review process. At present, he is working as water resource engineer at Innovante Water Solution and developing state-of-the-art tool for modelling crop water use and crop growth using artificial intelligence and satellite imagery.

Innovante Water Solutions Pvt. Ltd.

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