**Dr. SUMAM S. B.**
**B.E, M.E, Ph.D.(Water Resources Engineering)**
**12 years of Academic Experience**
**sumam@tjohngroup.com**

## Areas of expertise (Subjects handled):

- Fluid Mechanics
- Introduction to Civil Engineering
- Engineering Mechanics
- Applied Hydraulics
- Irrigation and Hydraulic Structures: Design and Drawing
- Hydrology and Irrigation Engineering
- Ground Water Hydraulics
- GIS and Remote Sensing
- Environmental Protection and Management

## FDP & Conferences attended:

- Attended National Workshop on "BHUVAN- ISRO Geoportal" conducted by NRSC (National Remote Sensing Centre), ISRO (Indian Space Research Organization) on 17th March 2012 at Bangalore University.
- Attended National Workshop on "Water Resources and Environmental Engineering" conducted under TEQIP-II from 3rd to 7th February 2014 at Nitte Meenakshi Institute of Technology, Bangalore.
- Attended Faculty Development Program on "Irrigation Design and Drawing" on 12th April 2014 at Acharya Institute of Technology, Bangalore
- Attended Faculty Development Program on "Application of Statistical Tools in Management Research using SPSS" on 7th March 2014 at Sambhram Institute of Technology, Bangalore.
- Attended Faculty Development Program in Entrepreneurship from 14th to 18th July 2015 at Sai Vidya Institute of Technology, Bangalore.

- Attended five days workshop on "Significance of Hydrology in Civil Engineering practice" from 25th to 29th July 2016 at M.S.Ramaiah Institute of Technology, Bangalore.
- Attended a two-day Faculty Refresher Program on Contemporary Classroom Management Techniques held during 30th and 31st Jan 2017 by Sai Vidya Institute of Technology, Bangalore.
- Coordinated and attended one week of National Level Workshop on Topical Transcends in Civil Engineering (TTCE-2017) held at Sai Vidya Institute of Technology, Bangalore.
- Attended a Five-day FDP on "Digital Agriculture- High Throughput Plant Phenotyping" conducted by the Centre for Advanced Data Science, from July 24th to 28th 2023 at Vellore Institute of Technology, Chennai.
- Attended two days Technical Workshop on "Advancement in Civil Engineering Practices" organized by the Department of Civil Engineering in association with ACCE, Bangalore on 4th and 5th January 2024.
- Completed ATAL FDP on Navigating Climate Variability and Impacts for Effective Water Management, Disaster Preparedness, resilience, and Mitigation at Bharati Vidyapeeth's College of Engineering for Women from 28/01/2025 to 03/02/2025.
- Completed ATAL FDP on GIS and Remote Sensing Application in Civil Engineering for Sustainable Energy and Climate Management at Buddha Institute of Technology from 20/01/2025 to 25/01/2025.

## **Publications:**

- Presented a technical paper entitled "Regional Frequency Analysis of Rainfall Data Using L- Moments" in ICE-WWISH 2013, a TEQIP-II-sponsored International Conference and exhibition held at the University Visweswaraya College of Engineering from 25th to 27th July 2013.
- Presented a paper at a two-day National Conference on "Recent Advances in Civil Engineering" held on the 21st and 22nd of April 2016 at S.J.C. Institute of Technology, Chikballapur.
- Presented a paper entitled "Runoff Estimation for Somvarpet Taluk by using GIS and SCS-CN Method" at the National Conference on "Recent Advances in Civil Engineering" held on 10th May 2018 at S.J.C. Institute of Technology, Chikballapur.
- Presented paper entitled "A case study to locate and analyze conflict points and

deficiencies in KR Puram Junction and street involving in traffic congestion and accidents, audit on remedial measures to increase the serviceability" at an International Conference on Topical Transcends in Science, Technology, and Management held at Sai Vidya Institute of Technology on 17th and 18th August 2018.

- Presented a paper on "Flood Frequency Analysis of Bengaluru Urban Region using L Moments" in the International Conference on latest advancements and future trends in Engineering, Science and Management held on 3rd- 4th May 2019 at Sambhram Institute of Technology.
- Presented and published a paper on "A Systematic Review on Labyrinth Weir" in "Advances in Sustainable Materials, Modelling, and Infrastructure" an International Conference organized by the Department of Civil Engineering on February 17-19, 2025, BITS, Pilani, Rajasthan.
- Presented and published a paper on " The Role of Artificial Intelligence in Sustainable Building Construction and Water Efficiency Optimization" at the International Conference on Intelligent Thinking in Technology, Science and Management (iThink 2025)"- jointly organized by the Department of Computer Science Engineering, AMC Engineering College,Bangalore, India, RSP Research Hub, Coimbatore, Tamil Nadu, India on 30.08.2025 and 31.08.2025.
- Presented and published a paper on "Strategic Cloud Selection: Aligning workload requirements with the core competencies of AWS, Azure, GCP, IBM and OCI" at the 6th International Conference on IoT based control networks and Intelligent Systems held in T. John Institute of Technology on 15th -17th December 2025.
- Sumam, S. B., Gautam, S., & Arulraj, P. (2025). Microplastic Contamination in a Semi-Arid Region: A case Study of Hiriyur Taluk, Karnataka. International Conference on Microplastics Chronicles: Emerging Contaminants of Soil, Water, Sediments and Nutrition (ICMSWSN-2025).
- Presentation: Sumam, S. B., Gautam, S., & Arulraj, P. (2026). Study on soil and hydrological characteristics, influencing groundwater recharge dynamics using GIS in Hiriyur Taluk, Karnataka. International Conference on Science and Technology for Sustainable Future (ICSTSF -2025) - Health, Energy and Environment. Acharya Institute of Technology, Bangalore.
- Publication: Sumam, S. B., Gautam, S., & Arulraj, P. (2025). Understanding Microplastic Pollution in Groundwater: Pathways, Health Implications and Solutions. Water Environment

Research, 97(7), e70132. https://doi.org/10.1002/wer.70132 (Q2 Journal: IF- 1.9)

- Publication: Sumam, S. B., Gautam, S., & Arulraj, P. (2025). Soil–Hydrology Controls on Groundwater Microplastic Contamination. Physics and Chemistry of the Earth, Parts A/B/C, 104225. https://doi.org/10.1016/j.pce.2025.104225 (Q1 Journal: IF- 4.1)

## Patent:

- Published a patent on "AI- Based Structural Crack Progression Predictor Using Drone- Captured Imagery and Deep Learning Segmentation" with application Number 202541106002 dated 02/11/2025.

## Certifications:

- NPTEL Certification in "Concrete Technology" from IIT, Madras from July to Oct 2016.
- Course on "Basics of Remote Sensing, Geographical Information System & Global Navigation Satellite System" conducted by Indian Institute of Remote Sensing, ISRO from August 22$^{nd}$ to November 18$^{th,}$ 2016.
- Course on "Basics of Remote Sensing, Geographical Information System & Global Navigation Satellite System" conducted by Indian Institute of Remote Sensing, ISRO from August 21$^{st}$ to December 04$^{th,}$ 2017.
- NPTEL Certification in "Introduction to Fluid Mechanics" from IIT, Kharagpur from Jan to April 2017.
- Various ISRO certifications under GIS and Remote Sensing and its Applications from IIRS (Indian Institute of Remote Sensing).
- Distance Learning Course on Irrigation Planning and Management Aspects of Water Resources project conducted by National Water Academy, Pune from 27$^{th}$ April – 30$^{th}$ April 2026.