

Faculty Profile

Dr. K. Gajalakshmi is an accomplished academic and researcher with over 17 years of teaching experience in Civil Engineering. Currently serving as an Assistant Professor in the Department of Civil Engineering at R.V. College of Engineering, Bangalore, she specializes in Remote Sensing, Geoinformatics, Surveying, and Environmental Engineering. Dr. Gajalakshmi holds a Ph.D. in Civil Engineering Sciences from VTU, an M.E. in Geoinformatics from Anna University, and a B.E. in Civil Engineering from VIT. She is proficient in key GIS and CAD tools such as ArcGIS, QGIS, AutoCAD, and ERDAS, and has guided research projects in environmental engineering and geospatial technology.

Faculty Photo

Her contributions to the academic and research community include funded projects on urban wastewater quality and autonomous agricultural robotics, a patent for a GPS-integrated mobile alert system for reservoir monitoring, and several peer-reviewed publications and book chapters. A life member of ISTE, Dr. Gajalakshmi has delivered invited lectures and presented papers at national and international platforms. Her research interests lie in GIS-based analysis, remote sensing applications in water resource management, and disaster mitigation planning.

Personal Information

- **Name:** Dr.K.GAJALAKSHMI
- **Designation:** Assistant Professor
- **Department:** Civil Engineering
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<https://orcid.org/0000-0002-3147-612X>

Google Scholar id: lABl59sAAAAJ

Researcher ID: 3244088

AICTE Faculty id: 1-4868820659

Domain of Expertise

Remote Sensing & Geographical Information Systems, Geoinformatics, Disaster Management, Engineering Mechanics, Intelligent Transportation Systems, Surveying – Theory and Lab, Digital Photogrammetry, Engineering Earth Science, Environmental Science.

Research Focus

- **Primary Area:** Drone Technology, Advanced Surveying, Autonomous vehicles for Agriculture

- **Allied Areas:** Automation, Machine Language

Academic Qualifications

- **Ph.D.:** [Engineering Discipline], [University], [Year] (*Thesis Title optional*)
- **M.Sc./M.Tech:** [Specialization], [University], [Year]
- **B.E./B.Tech:** [Discipline], [University], [Year]
- **Postdoctoral Research:** [University/Lab], [Year] (*if applicable*)

Professional Experience

- Working as an Assistant Professor in “R.V. College of Engineering, Bangalore” from August 2014 to till date.
- As an Assistant Professor in “PES Institute of Technology, Bangalore south campus” from February 2012 to August 2014.
- As a Senior lecturer in the Department of Civil Engineering in “The Oxford College of Engineering” Bommanahalli, Bangalore from January 2011 to January 2012.
- As a lecturer in the Department of Civil Engineering in “Dr M.G.R. University” Chennai from June 2008 to May 2009.
- As a lecturer in Department of Civil Engineering in “Sastha Institute of Engineering and Technology” Chennai from June 2004 to May 2006.
- As a trainer in “CSC Computer center “from 2003 to 2004.
- As a valuer in “Rajagopal Associates” Vellore from 2002 to 2003.

Publications & Patents

Journal Publications

K. Gajalakshmi & V. Anantharama (2024) Hobli wise hydrogeomorphological evaluation of the groundwater prospects mapping, International Journal of Sustainable Engineering, 17:1, 100-107, DOI: 10.1080/19397038.2024.2409161 https://doi.org/10.1080/19397038.2024.2409161
Agricultural Land suitability Analysis for Four Major Crops Using Satellite Imagery and GIS Techniques K. Gajalakshmi, Sumithra C V, Bagya, Journal of Computational Analysis and Applications VOL. 33, NO. 5, 2024 Pg. No. 748-754
K.Gajalakshmi, Dr. Anantharama.V (2017) “Hydrogeomorphology Based Land-Use Planning For Sustainable Development Of Hard Rock Terrain Region Of Karnataka” International journal of Civil Engineering & Technology (IJCIET) Volume 8, Issue 10, October 2017, pp. 698-705, ISSN Print:0976-6308 and ISSN Online:0976-6316; Journal Impact Factor(2016):9.7820 ; Thomson Reuters Researcher ID: B-7378-2016.
Dr.K.Gajalakshmi, Sahana B Gangal, S. Sanjana, Asham Husain, “Decentralized Management of Urban Wastewater for Rural Agricultural Utilization” International Journal of recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-8, Issue-2S11, September 2019.

Dr. Anantharama.V, K.Gajalakshmi, Dr.Lokeshwari.M (2018) “Spatial and Temporal Drought Analysis in Sitanadi Basin, Udupi District Karnataka, Using SPI” International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-8 Issue-9S3, July 2019.

Conference Papers

K.Gajalakshmi(2015), Morphometric analysis using GIS techniques – A case study on Southpennar watershed, Karnataka, India, in an International conference on Sustainable Energy and Build Environment, organized by Department of Civil Engineering, VIT, Vellore, Tamil Nadu.

K.Gajalakshmi, Gurusangamesh Y.Bagewadi “Identifying the location for Water Harvesting Structures - Using GIS techniques” National Conference on Recent Advances in Civil Engineering and Architecture for Sustainable Development Jointly Organized by Department of Civil /CTM/ARCH –18th & 19th February, 2016

K.Gajalakshmi, Dr. Anantharama.V “Comparative analysis of drainage maps extracted from conventional approaches and Open Source DEMs: A case study in Southpenna watershed” National Conference on Geospatial Information and Technologies Advancement (GITA-2K15), held at Shri Madhwa Vadiraja Institute of Technology & Management, Bantakal, Udupi, India, ISBN: 978-93-5254-003-7, pp 7 – 10, October, 2015

K.Gajalakshmi, Dr. Anantharama.V (2017) “Hydrogeomorphology Based Land-Use Planning For Sustainable Development Of Hard Rock Terrain Region Of Karnataka” 4th International conference on Earth science engineering by Andalas University, Padang Indonesia – 29th to 31st August.

Dr. Anantharama.V, K.Gajalakshmi, Dr.Lokeshwari.M (2018) “Spatial and Temporal Drought Analysis in Sitanadi Basin, Udupi District Karnataka, Using SPI” 2nd International conference on “Emerging trends in Engineering, Science & Management” held at R.G.M College of Engineering & Technology, Nandyal, Kurnool District, Andhra Pradesh, December 2018.

K.Gajalakshmi, Dr. Anantharama.V (2016) “Geospatial approach for Landuse plan in Southpenna Watershed” International conference on Geospatial Technologies for Urban, Forest & Climate change – Pathway to Sustainable Development organized by UGIT, Bangalore University – 28th and 29th November.

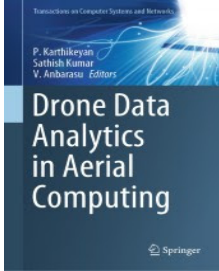
Dr.K.Gajalakshmi, Sahana B Gangal, S. Sanjana, Asham Husain, “Decentralized Management of Urban Wastewater for Rural Agricultural Utilization” Intrenational Conference On “Recent Engineering And Technology – 2019” May 05th 2019. Organizer By Organaization Of Science And Innovative Engineering & Technology (OSIET) Chennai,India www.ijsiet.org In Association with New Horizon College Of Engineering Ring Road, Near Marathalli, Bengaluru – 560 103, INDIA

K.Gajalakshmi (2008), Developing a software module for automatic generation of DEM from aerial photographs, in the National conference on frontline areas of civil engineering, Organized by Dept., of Civil Engineering, VLBJCET Kovaipudur, Coimbatore.

Dr.K.Gajalakshmi “ Decentralised water treatment and augmented solution using GIS techniques” in the Three Days International conference on “Sustainable Technologies for River Erosion Alleviation and Management (STREAM-2022)” organized by IIT Guwahati and Brahmaputra water Board on 14th, 15th & 16th December 2022.

Dr.K.Gajalakshmi “HOBILI WISE HYDRO GEOMORPHOLOGICAL EVALUATION OF THE GROUNDWATER PROSPECTS MAPPING” In International conference on Advances in Science Engineering and Technology (ICASET – 2021) organised by Karpagam Institute of Technology with Institute for Engineering Research and publication (IFERP) held on 29th and 30th December 2021 at Pondicherry.

Books/Book Chapters

Chapter titled “Village Mapping for Micro-level Planning Using UAV Technology” published in book “Drone Data Analytics in Aerial Computing” by Springer publisher, eBook ISBN 978-981-99-5056-0 Print ISBN 978-981-99-5055-3 October 2023. 	Article Published: Title “ChatGPT Unravelling the power of a revolutionary Language Model” in “The Avenue” 8th edition December 2023 published by ASCE Student chapter RV College of Engineering. 
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Patents **[Filed]**

1. Patent was filled on Title of Invention “An Intelligent Mobile Alert System for Reservoir water level and flow indication integrated with GPS for farmers”. Application number 202041032052. Dated 27/07/2020 00:00:00 under section 11A(2) of the Act.

R & Grants & Consultancy Projects

Ongoing & Completed Research Projects

1. Principal Investigator in project titled “Quantifying spatial variability and Removal of heavy metals in urban waste water by phytoremediation through constructed wetlands” funded by VGST under RGS/F for the year 2022-23.
2. Principal Investigator in project titled “Design and Development of Autonomous AgriBot” funded by an Agricultural Consortium in the year 2024.

Professional Memberships

- **Life member in “INDIAN SOCIETY FOR TECHNICAL EDUCATION” from 2017. Membership No: LM120173**

- **Life member in “INDIAN INSTITUTE OF REMOTE SENSING” (IIRS) from 2016**
- **Active member in “INDIAN SOCIETY OF REMOTE SENSING”**
- **Active member in “INDIAN YOGA ASSOCIATION”**

Awards & Recognitions

- **Patent was filled on Title of Invention “An Intelligent Mobile Alert System for Reservoir water level and flow indication integrated with GPS for farmers”. Application number 202041032052. Dated 27/07/2020 00:00:00 under section 11A(2) of the Act.**
- **Received BEST PAPER Award for “Hydrogeomorphology Based Land-Use Planning For Sustainable Development Of Hard Rock Terrain Region Of Karnataka” from ANDALAS UNIVERSITY, Padang INDONESIA.**
- **Dr.K.Gajalakshmi attended Networking Session with UK Delegation on Urban Systems 09:30 AM – 3:00 PM on 07-03-2025 in IISc Campus (CeNSE Seminar Hall), Bengaluru organized by Bengaluru Science and Technology Cluster initiated by Office of the Principal scientific advisor to the Govt. of India.**
- **Organised 3 days National level conference on “Research and Advancements in Civil Engineering and Architecture” from 28th – to 30th July 2022**
- **Organiser of one week workshop on “ Trends and opportunities in E-Vehicles” under the Centre of Excellence - E-Mobility from May 2nd to 7th 2022 in association with Greeves cotton Company.**
- **Organiser of Online Five days Faculty Development Programme on “Applications of Geoinformatics in Environmental Engineering – AGEe-2020” in the Department of Civil Engineering from 14th to 18th July 2020, 50 faculties participated in the event.**
- **A one day workshop on “Advanced Surveying” was organized in the Department of Civil Engineering on 19-09-2019 for B.E Civil Engineering students. 150 students and five faculties participated in the event.**
- **Organised a Proficiency course on “GIS TRAINING PROGRAMME” during the period of July 24th to 29th 2017 in the Department of Civil Engineering, R.V College of Engineering.**
- **Successfully completed the online course Programming for Everybody (Getting started with Python) and awarded certificate from UNIVERSITY OF MICHIGAN through courser in May 2020.**
- **Successfully completed the online course on The Data Scientist’s Toolbox’ and got awarded certificate from JOHNS HOPKINS UNIVERSITY through courser in June 2020.**
- **Successfully completed NPTEL course on “Digital land surveying and mapping” and got awarded certificate from MHRD.**
- **Conducted 3 Days training programme on “Modern survey techniques” for PWD Engineers held between 17th - 19th September 2018.**
- **Presented on a topic “Ground water Prospectus Mapping” in Academia Interaction Meet under K-GIS Mission held on 18th December, 2017 in Karnataka State Remote Sensing Application Centre (KSRSAC), Dooru Samvedi Bhavana, Major Sandeep Unnikrishnan Road, Bengaluru.**
- **Produced cent percent result in Remote Sensing, Environmental Science and Fluid Mechanics.**
- **Undertook additional responsibilities as class in-charge, timetable officer.**
- **Conducted internal viva-voice sessions for final year projects.**
- **Organizer of book publishing committee in national level symposium held at Sastha Institute of Engineering and Technology.**
- **Organizer of a 2-day seminar on earth quake resisting structures at Vellore Institute of Technology.**

- Coordinator of 2-week training program in Environmental awareness at Vellore Institute of Technology.

Student Supervision

- Ph.D. Candidates: 01
- M.Tech/M.Sc. Students: 02
- Undergraduate Research Mentees: 10

Professional Roles

- Editorial Board:
 - Reviewer/referral member of International Journal of Innovative Research in Engineering (IJIRE) Reviewer/referral ID: FDRP-R202406112
 - Reviewer of research papers in Inder science Journals, STM Journals.
 - Co-ordinator for IIRS ISRO Outreach Programme, a training programme for students and employees in the field of Remote sensing, Space science and technology.

Teaching

Core Courses:

- Environmental & Sustainability
- Elements of Civil Engineering and Engineering Mechanics
- Disaster Management

Advanced/Lab Courses:

- Surveying
- Remote sensing and GIS

Responsibilities

- **Academic:** NBA coordinator
- **Administrative:** Alumni coordinator, Surveying Lab In-charge

External Connect

- Dr. K Gajalakshmi of RV College of Engineering imparted a valuable insights to the students, faculty, research scholars and industry experts in the webinar titled “APPLICATIONS OF REMOTE SENSING AND GIS IN CIVIL ENGINEERING” as a part of webinar series organized by the

Department of Civil Engineering, RV College of Engineering in association with ICI and ASCE student chapter on July 10, 2021.

- Dr. K Gajalakshmi of RV College of Engineering delivered a key note lecture title “ Application of Geoinformatics in Civil Engineering” on 24th June to the students, faculty, research scholars and industry experts in three days faculty development programme conducted by SA Engineering college, Chennai on “Recent advances in Civil Engineering” between 22nd to 24th June 2020.
- Dr. K Gajalakshmi of RV College of Engineering delivered a key note lecture title “ Application of Remote sensing and GIS in Civil Engineering” on 25th May to the students, faculty, research scholars and industry experts in three days faculty development programme conducted by St.PETER’S ENGINEERING COLLEGE, Hyderabad on “One week National Level FDP on 24th may to 29th may 2021 “BASICS TO PROFICIENCY LEVEL – A HANDS ON APPROACH ON INNOVATIVE GIS TECHNIQS” between 24nd to 29th May 2021.
- Dr.K.Gajalakshmi, RVCE, presented on the topic GIS data sources in ONE WEEK FACULTY DEVELOPMENT PROGRAM on “Application of Geo-informatics in Environmental Engineering” AGEE 2020 from 14th – 18th July Organized by Department of Civil Engineering RV College of Engineering, Bengaluru.
- Dr. K Gajalakshmi of RV College of Engineering imparted a valuable insights to the students, faculty, research scholars and industry experts in the National level technical webinar titled “APPLICATIONS OF REMOTE SENSING AND GIS IN CIVIL ENGINEERING” organized by the Department of Civil Engineering, St Joseph University Dimapur, on April 10th, 2021.
- Dr.K.Gajalakshmi, RVCE, presented on the topic GIS data sources in ONE WEEK FACULTY DEVELOPMENT PROGRAM on “Application of Geo-informatics in Civil Engineering” on August 5th 2020 Organized by Department of Civil Engineering Vemana Institute of Technology, Bengaluru