JANANI L.

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ACADEMIC CREDENTIALS

Course	College	Year	Aggregate
PhD-Transportation Engineering	National Institute of Technology Tiruchirappalli	2021	8.58 (C.G.P.A)
M.TECH (Geoinformatics)	College of Engineering Trivandrum (University of Kerala)	2016	9.21 (C.G.P.A)
B.TECH (Civil Engineering)	Rajadhani Institute of Engineering and Technology (University of Kerala)	2013	74.4%
Higher Secondary School Examination	Carmel Girls' Higher Secondary School (Board of higher secondary examination)	2009	80%
Secondary school Examination	Carmel Girls' Higher Secondary School (Board of public examination Kerala)	2007	95%

CAREER SUMMARY

NIT Srinagar **Assistant Professor** **22nd August 2022 - Present**	**Duties** Academics and Research
IIT Bombay **Post Doctoral Fellow** **15th March 2022- 19th August 2022**	**Duties** Academics and Research
IIT Bombay **Project Research Scientist** **10th June 2021 – 1st December 2021**	**Duties** ▪ **Project Title:** A microscopic traffic simulator integrated 3D driving simulator for conditional behavioral studies and testing ITS applications in disordered and heterogeneous traffic systems ▪ Works related to ongoing project objectives and deliverables
Tresreis Technologies Pvt. Ltd. **GIS Analyst** **1st August 2016 – 16th January 2017** **2nd November 2020- 31st March 2021**	**Duties** ▪ AR/VR Development of Water Utility Networks ▪ Preparation of Data ▪ Creating 3D object features in ArcGIS Pro ▪ Scene Layer Package creation ▪ ArcGIS Online Hosting of 3D object scene layers ▪ 3D Feature Service Creation ▪ Exporting ArcGIS Pro data to Unity ▪ Exporting data to City Engine Software
Artech Realtors Pvt. Ltd **Site Engineer** **26th June 2013-5th October 2013**	**Duties** ▪ Analyzing reports, maps, drawings, blueprints and geologic data through survey to plan projects ▪ Execution of Site work ▪ Surveying and establish reference points and elevations to guide construction

- Overseeing the work of junior staff, assisting when needed
- Organizing, drafting, and documenting the technical documents
- Maintaining the daily and monthly reports of working

ACADEMIC SEMINARS

M.Tech Seminar 1	▪ Geologic remote sensing for geothermal exploration
M.Tech Seminar 2	▪ Assessing pavement condition using remote sensing methodologies
B.Tech Seminar	▪ Light transmitting concrete

ACADEMIC PROJECTS

PhD	▪ Application of smartphone sensors in pavement functional condition assessment
M.tech	▪ A Geoinformatic Approach in Pavement Condition Assessment
B.Tech	▪ Comparison of mono sand filter and dual sand-anthracite filter for water purification

PUBLICATIONS

National Conferences

1. **Janani L., Sabu P**., "Pavement condition assessment using Image Processing", *National Conference on Geospatial Technology*, LBS Institute of Technology for Women, Kerala, 12th January 2017
2. **Janani L., Sabu P.,** "Condition Assessment of Pavements using Smartphones", *National Conference on advances in Engineering, Science and Technology*, Trivandrum, 16th October 2016

3. **Janani L., Sabu P.**, "Smartphone based Pavement Condition Assessment", *National Conference on Emerging Trends in Engineering and Technology*, Lourdes Matha College of Science and Technology, Trivandrum,l 9th October 2016
4. **Janani L., Sabu P.,** "Pavement Condition Assessment using Smartphones", *17th National Conference on Technological Trends*, 19th August 2016

International Conferences

1. **Janani L., Sunitha V.,** and **Samson Mathew**, "Critical Comparison of Methods to Estimate Pavement Roughness using Smartphone Sensors", *Innovative Methods and Practical Applications for Cognizant Transportation Systems, IMPACTS 2023*, CET, NIT Calicut and NATPAC, Kerala, March 20-22, 2023 **(Best Paper Award)**
2. **Janani L., and Sunitha V.,** "Pavement Condition Assessment using Smartphone Accelerometers*", International Conference on Advancements and Recent Trends in Civil Engineering, ICART-2021,* Mangalam College of Engineering, Kottayam, May 27-282021
3. **Janani L., V. Sunitha and S. Mathew "**Smartphone Sensor Based Pavement Roughness Estimation." *7th Conference on Transportation Systems Engineering and Management*, KSCSTE-NATPAC & CET, Kerala, India, 2020
4. **Janani L., Dixit, K., R., Sunitha V., Mathew S.,** "Development of a Relation Between Structural and Functional Characteristics of Pavement", *International Conference on Infrastructure Development : Issues Innovations, and the Way Forward*, MBCET, Kerala, 23rd June 2018 **(Best Paper Award)**
5. **Sunitha V., Bhanu Prakash K., Janani L.,** "Sustainable use of Copper Slag as a Replacement of Fine Aggregate in Sub-base layer", *International Conference on Desalination*, NITT, 21st April 2018
6. **Janani L., Sabu P.,** "A Geoinformatic Approach to Pavement Condition Assessment", *4th Conference of Transportation Research Group of India*, IIT Bombay, 20th December 2017

International Journals

1. **Arjun Sivarathan, Sunitha V.,** and **Janani L.,** "Evaluation of Structural and Functional Performance of Interlocking Concrete Block Pavement and Flexible Pavement", *Journal of*

Testing and Evaluation, American Society for Testing and Materials, March, 2023 **(Abstracted and Indexed in SCIE)**

2. **Janani L., Sunitha V.,** and **Mathew, Samson**, "Dynamic Segmentation of Smartphone Sensor Based Pavement Functional Condition", *Canadian Journal of Civil Engineering* (**Abstracted and Indexed in SCIE**), February 2023
3. **Rejani V. U., Janani L., Kanchupati Venkateswaralu, Sunitha V., Samson Mathew,** "Strategic Pavement M&R Analysis of Urban Road Network using HDM-4", *International Journal of Pavement Research & Technology*, **(Abstracted and Indexed in Scopus)**
4. **Janani L., Doley R. Sunitha V., Mathew S.,** "Precision Enhancement of Smartphone Sensor- Based Pavement Roughness Estimation by Standardizing the Host Vehicle Speed", *Canadian Journal of Civil Engineering* **(Abstracted and Indexed in SCIE)**
5. **Arjun Sivarathan, Sunitha V., Murshida, Janani L., Anusudha V.,** "Laboratory and Numerical Evaluation on the Parameters Influencing the Rutting and Shear stress Behaviour of Interlocking Concrete Paver Block-Bedding sand Interface Using Large Scale Direct Shear Test", *Journal of Materials in Civil Engineering*, ASCE **(Abstracted and Indexed in SCIE)**
6. **Janani L., Sunitha V., Mathew S**., "Effect of Combining Algorithms in Smartphone based Pothole Detection", *International Journal of Pavement Research and Technology*, Springer, 10th June 2020 **(Abstracted and Indexed in Scopus)**
7. **Janani L., Samuel, N. M., Sunitha V. and Mathew S.**, "Vibration vs. Vision: Best Approach for Automated Pavement Distress Detection", *International Journal of Pavement Research and Technology*, Springer, 19th March 2020 **(Abstracted and Indexed in Scopus)**
8. **Janani L., Sunitha V., Mathew S.,** "Influence of Surface Distresses on Smartphone-Based Pavement Roughness Evaluation", *International Journal of Pavement Engineering*, Taylor & Francis., 26th January 2020 **(Abstracted and Indexed in SCIE)**
9. **Janani L., Dixit, K., R., Sunitha V., Mathew S**., "Prioritisation of Pavement Maintenance Sections Deploying Functional Characteristics of Pavements", *International Journal of Pavement Engineering*, Taylor & Francis., 24th January 2019 **(Abstracted and Indexed in SCIE)**

10. **Janani L., Sabu P.,** "Condition assessment of pavements using smartphone", *International Journal of Engineering Research in Mechanical and Civil Engineering*, October 2016
11. **Janani L., Sabu P.,** "Smartphone based pavement condition assessment*", International Advanced Research Journal in Science Engineering and Technology*, 3rd August 2016, Vol. 3, Special Issue 3

SEMINARS AND WORKSHOPS ATTENDED

- Completed a course on "Build a Face Recognition App using Python" organized by GUVI Tech on 24-04-2021
- Attended a webinar on "Smart *Cities GOI: Multidisciplinary Aspects of Civil Engineering*", organized by Jaypee University of Engineering and Technology, Madhya Pradesh on 27-03-2021
- Attended a webinar on "*Infrastructure development Challenges in India - Role of Transportation Engineers and Planners*" organized by the Department of Civil Engineering- NIT Warangal on 11-11-2020
- Attended an International Webinar on "*Impact of COVID-19 on the Mental Health of the Elderly*" jointly organized by IQAC & the Department of Psychology S. M. D. College on 19th July, 2020
- Attended an International Webinar on "RAGeo-RP" organized by IIT Patna in association with Indian Geotechnical Society and Center for Earthquake Engineering Research during July 1-10 2020
- Attended a webinar on "*ASCE Infrastructure Report Card*" organized by American Society of Civil Engineers – ISWR on 25th June 2020
- Participated in a webinar on "*Concrete: Past, Present and Future*" organized by the Department of Civil Engineering, Jyothi Engineering College on 24th June 2020
- Completed the online quiz program in "*Design of RCC structures*" conducted by the Department of Civil Engineering, K. S. Rangasamy College of Technology on 24th June 2020

- Participated in a webinar on "Concrete mix design and its significance" organized by the Department of Civil Engineering, AWH Engineering College on 22-06-2020

- Participated in a three days online short term training program on "*State of the Art Practices in Transportation Engineering*" conducted by the Department of Civil Engineering, Jyothi Engineering College, in association with Indian Society of Technical Education (ISTE) during 10th June 2020 to 12th June 2020

- Attended a web seminar on "*Data-Driven Road Safety Management*" conducted by KSCSTE-NATPAC on 28th May 2020

- Attended a workshop on "*Geotextile Reinforced Sustainable Pavements*", organized by CETransE, A Centre of Excellence funded by MHRD, Department of Civil Engineering, NITT on 12th July 2019

- Attended a two day workshop on "*Recent Trends in Geotechnical Engineering*", organized by the Department of Civil Engineering, NIT Tiruchirappalli on 7th and 8th June 2019

- Participated in a seminar on "*Women in Science and Technology – Breaking the Glass Ceiling*", organized by TEQIP-3, NIT Tiruchirappalli during 18th to 23rd March 2019

- Attended a three day workshop on "*Data Analysis using SPSS and R*" organized by Department of Management Studies, NIT Tiruchirappalli during 21st to 23rd April 2017

- Attended a workshop on "*Energy Conservation and Energy Efficiency*" conducted by Energy Management Centre, Thiruvananthapuram on 16th June 2016

- Completed a course on "Geospatial Technologies for Urban Planning" offered by Indian Institute of Remote Sensing" during 11th February 2016 to 15th March 2016

- Participated and presented a technical paper in the three day training programme on "*Geographical Information System and its Application in Pavement Maintenance Management*" organized by Transportation Engineering Research Center, College of Engineering Trivandrum in association with Geotech Geospatial Pvt. Ltd. (Intergraph) on 12th, 13th and 14th January 2015

- Participated in a District Level Seminar organized by National Service Scheme on 21st January 2012

PATENTS

- **Indian Patent**

  Title- Automated Distress Detection using Low-Cost Ultrasonic Sensors

  Inventors- Dr. Sunitha V., Mr. P. Sarath Chandra, Dr. Janani L.

  Status- Published
- **South African Patent**

  Title- An automatic system to detect and alert dangerous driving areas and the method thereof

  Inventors- Dr. Janani L., Dr. Sandeep Samantaray, Dr. Vivek

  Status: Granted

INVITED TALKS

- "*Application of GIS and Remote Sensing in Modern Transport Systems*", ASCE Student Chapter, Amrita School of Engineering, September 2022
- "*Application of GIS and Remote Sensing in Modern Transport Systems*", Mar Athanasius College of Engineering Kothamangalam, March 2022
- *"Engineering, What to Expect?",* Rajadhani Institute of Engineering and Technology, 12th February 2022
- *"Road Construction Projects",* Elamannoor Vocational Higher Secondary School, Government of Kerala, 20th January 2022
- "*Applications of Remote Sensing & GIS in Civil Engineering*", Mangalam College of Engineering, 16th October 2020

MEMBERSHIP IN PROFESSIONAL BODIES

- IEEE Professional Member – 99377818

ADDITIONAL TECHNICAL SKILLS

- Studied the following subjects as part of PhD course work:

  (i) Pavement Construction and Management

  (ii) Advanced Highway Materials

  (iii) Pavement Materials and Design

  (iv) Numerical Methods and Applied Statistics

(v) Research Techniques in Mechanical Sciences

- Secured a CADD Centre Master Diploma in building Design which includes courses on:
  (i) AutoCAD
  (ii) ArchiCAD
  (iii) STAAD.Pro
  (iv) Primavera Project Management
- Completed a course in **Office Automation** by Keltron IT Education
- Completed a course in **Vastushastra and Feng Shui** by Bharathiya Jyothisha Padana Kendram
- Completed a course in "**Geospatial Technologies for urban planning**" organized by ISRO, Indian Institute of Remote Sensing, Dehradun
- Knowledge in GIS software: ArcGIS 10.1, ERDAS Imagine, ArcGIS Pro, City Engine
- Knowledge in cloud: ArcGIS Online, ArcGIS Portal
- Knowledge in Concepts and Processes: Agile (Trello Agile Sprint Board)
- Knowledge in other software: ArchiCAD, Primavera, STAAD Pro, AutoCAD, SPSS
- Programming languages known: C/C++, MATLAB

ACADEMIC ACHIEVEMENTS

- **Budding Researcher Award**, NIT Tiruchirappalli (2020)
- Reviewer of **PLOS ONE Journal (SCI)**
- Reviewer of **International Journal of Pavement Research and Technology, Springer Nature (Scopus)**
- Reviewer of **IEEE Access, IEEE**
- Reviewer of **Journal of Transportation Engineering: Part B, Pavements, ASCE**
- Reviewer of **International Journal of Pavement Engineering, Taylor & Francis (SCIE)**
- Admitted for PhD Programme (2016) at **Indian Institute of Space Science and Technology**

- Fifth Position in M.Tech Degree Examination
- Secured first prize for working model titled “Space Eye”, in the technical exhibition and open house Conducted by College of Engineering Trivandrum
- Qualified for TANCET Examination (2014)
- Secured an All India Rank of 8039 for GATE 2013 examination
- Presented a seminar in a National Level Technical fest, Crossroads 2013 conducted by Mar Baselios College of Engineering and Technology
- Represented School for District level Mathematics Fair
- Secured first position in SSLC examination

EXTRA-CURRICULAR ACTIVITIES

- Secured first prize for Best Entertainer of 2012 and 2013 in the arts festival of Rajadhani Institute of Engineering and Technology
- Participated in a District Level National Service Scheme Seminar
- Secured second prize in a chess competition conducted by Rajadhani Institute of Engineering and Technology

PERSONAL PROFILE

Date of Birth	6th April 1992
Nationality	Indian
Blood group	B+ve
Religion	Hindu
Languages known	Malayalam, English, Tamil and Indian Sign Language Basics
Hobbies	Reading, listening to music, swimming
Address for communicatior	Dr. Janani L., Assistant Professor, Department of Civil Engineering, NIT Srinagar