

Kakoli Saha, Ph.D.

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Education

- **Kent State University, Kent, OH, USA (9/2006-12/2010)**
Advisor: Prof. Mandy Munro-Stasiuk
Ph.D. (Geography, Specialization: Applying GIS/Remote Sensing techniques to extract landforms from Digital Elevation Models, GPA: 4.0/4.0).
Link to PhD dissertation:
http://rave.ohiolink.edu/etdc/view?acc_num=kent1289558937
 - **University of Georgia, Athens, GA, USA (9/2005-5/2006)**
PhD Student (Transferred to Kent State University, GPA: 3.8/4.0)
 - **Associateship Examination of the Institute of Town Planners, India (01/07/2024)**
 - **University of Calcutta, Calcutta, India (7/2001-5/2003)**
M.Sc. (Geography)
 - **Presidency University, Calcutta, India (9/1998-6/2001)**
B.Sc. (Honors: Geography, Specialization: Environmental Geography)
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Professional and Teaching Experience

- **Coordinator, Doctoral Programme**
(22/07/2024- present)
(31/10/2016- 12/2017)
School of Planning and Architecture, Bhopal, India.
- **Coordinator, Centre for Geo-informatics, SPA Bhopal**
(28/06/2023- Present)
- **Head, Centre for Geo-informatics, SPA Bhopal**
(18/06/2020- 27/06/2023)
- **Assistant Professor in Urban & Regional Planning**
(14/02/2014- present)
Department of Urban & Regional Planning, School of Planning and Architecture, Bhopal, India.
- **Principal Investigator for DST project under Young Scientist Scheme (Ref: SR/FTP/ES-24/2012)**
(09/2012- 09/2015)
Project title-“Optimization of Photovoltaic Solar Panel Installation using Remote Sensing Techniques”.
- **Visiting Faculty**
(08/2012-09/2012)

Department of Planning, School of Planning and Architecture, Bhopal, India.

- **PhD Instructor – Undergraduate Courses**

2006 Fall Semester – 2009 Fall Semester

Department of Geography, Kent State University, Kent, Ohio, USA

Instructor of Record: Full course responsibility including lecture and exam preparation, project and grade assignment.

- **Lab Assistant – Remote Sensing of the Environment (Graduate level Course)**

Responsibility included set up the lab, help students to complete labs and final projects, grade assignment.

- **Teaching Assistant – Undergraduate Courses**

2005 Fall Semester – 2006 Spring Semester

Department of Geography, University of Georgia, Athens, Georgia, USA.

Responsibility included preparation for the class, grade assignment.

Ph.D. Students mentored

- **Dr. Prajakta Dilip Rahate** (2016DR001)

Title of the Thesis- Evaluating Effectiveness of Green Infrastructure in Mitigating Urban Heat Island -A Case Of Indore, Madhya Pradesh. (Co-advised)

Degree awarded- 27/07/2024

- **Dr. Sonal Tiwari** (2014DR005)

Title of the thesis- Exploring Interrelationship of Traditional Livelihoods and Riparian Landscape of Narmada Basin. (Co-advised)

Degree awarded- 26/09/2022

Administrative Responsibilities

- **Girls Hostel Warden, SPA Bhopal**

(07/06/ 2022 - 06/07/ 2023; 19/01/2015- 08/2017)

Invited Lectures in India & Abroad

- 19th May 2025, delivered an expert talk as a resource person on ‘Terrain analysis using open-source software’ in the One-week Short-Term Course on “Application of Remote Sensing and GIS in Spatial Planning” organised by the Department of Architecture and Planning, NIT Patna held from 17th May to 21st May 2025.
- 11th December, 2024, invited lecture on ‘ Remote Sensing for Smart Cities’ at online Faculty Development Programme titled - "Programmable Cities" organized by Indian Institute of Information Technology Dharwad, Karnataka.
- 6th July, 2024, invited lecture on ‘Application of GIS in Environmental Modelling’ at Certificate Course (online) in Geospatial Techniques for Environmental Modelling (July-August, 2024) organized by Department of Environment Planning and Centre for Geoinformatics, SPA Bhopal.

- 1st August, 2024, invited lecture on ‘Terrain analysis using open-source software’ at 5-days’ Short-Term Course on “Application of Remote Sensing and GIS in Regional Planning” organised by the Department of Architecture and Planning, NIT Patna held from 30th July to 03rd August 2024.
- 18-19th June, 2024, invited as resource person for Capacity Building Program on Geospatial Technology for PGT Geography (Master Trainers) under Samagra Siksha Abhiyaan (Secondary Education), Govt. of Madhya Pradesh organized by Regional Institute of Education, Bhopal.
- 21st November, 2023, invited as expert for Development of training material on “Geospatial technology” for Capacity Building Programme for secondary stage geography teachers of Gujarat, Dadra, Nagar Haveli and Daman and Diu” at Regional Institute of Education, Bhopal.
- 14th September, 2023, invited lecture on “GIS to Machine Learning- Application of Emerging Tools in the Domain of Universal Accessibility” at Knowledge Exchange Series, SPA Bhopal.
- 2nd May, 2023, expert lecture on “Demonstration to QGIS- An Alternate Tool for Geospatial Analysis” at Department of Geography and Environmental Studies, California State University, San Bernadino, CA, USA.
- 17th March, 2023, expert lecture on “GIS for Spatial Urban Planning and Design” at Habitat Studies, Manipal School of Architecture and Planning, Manipal, Karnataka.
- 10th March, 2023, expert lecture on “Sustainable Urbanism-Making Indian Cities Accessible” at Weekly Lecture Series (Online) On the Focal Theme Urban & Peri-Urban Growth, Development and Sustainability: Spatial Planning, Management and Livability Concerns organized by Department of Geography, Institute of Science, Banaras Hindu University.
- 16th January, 2023, expert lecture on “QGIS for the Civil Engineering” in National Academic Immersion Programme (NAIP) at Siemens Centre of Excellence (CoE), NITTTR, Bhopal.
- 25th June, 2022, expert lecture on “Basics of QGIS: Hands on Practice” in Short Term Course on Remote Sensing on the theme “Remote Sensing Applications for Skill Development in light of NEP-2020 organized by Centre for Professional Development in Higher Education (CPDHE), UGC-HRDC, University of Delhi.
- 17th Jan to 22nd Jan, 2022, expert lecture on “Application of GIS in Architecture and Urban Planning” in short term training program under AQIS scheme on “Geographic Information System for Architecture and Civil Engineering” organized by Governments Polytechnique College, Bhopal.
- 13th January, 2022, expert lecture on “Improving accessibility of Indian Religious cities using GIS based approach” presented at dept. of urban planning, university teaching dept., Chhattisgarh Swami Vivekanand Technical University, Bhilai.
- 7th Dec.-11th Dec. 2021, expert lecture on “Geospatial approach to enhance accessibility of built environment” presented at FDP workshop on Remote Sensing and GIS application in Spatial Planning and Development organized by AICTE Training and Learning (ATAL) Academy and Department of Architecture and Planning, MANIT Bhopal.
- 5th November, 2020, expert lecture on "Making cities inclusive a GIS approach" at online Professional Development Programme, SPA Vijaywada, Vijaywada.

- 14th October 2020, Expert lecture on "Remote Sensing for Smart Cities" at AICTE sponsored online Faculty Development Programme, Indian Institute of Information Technology, Dharwad, Karnataka.
- 15th May 2018, Guest Speaker via Zoom Geog 390 (Geography of Tourism) Department of Geography, **California State University San Bernardino**, CA, USA: Universal Access Assessment at Religious Tourist Spots of India Using Geospatial Technique.
- 8th February, 2013, Knowledge Exchange Series, **SPA Bhopal**, Bhopal.Seminar on Research
- 13th February, 2012, Department of Geography, **Delhi School of Economics, Delhi University**: Application of geospatial techniques to extract geomorphological features-A case study of Drumlins.
- 10th Sept. 2011, **Presidency University, Kolkata**: An object-oriented approach to automated landform mapping: a case study of drumlins.
- 1st July, 2011, **Indian Institute of Scientific Education and Research (IISER), Pune**: Application of geospatial techniques- visualization to automated mapping.
- 21st June, 2011, Centre for Earth Sciences, **Indian Institute of Science, Bangalore**: Application of geospatial techniques- visualization to automated mapping.

Research Interest and Areas of Expertise

- Application of GIS and Remote Sensing techniques in spatial planning
 - Use of Global Positioning System to locate meso-scale landforms.
 - Quantitative methods in Planning
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Software Skills

- Worked extensively with software like Definiens Developer/eCognition, PCI Geomatica, ArcMap, ArcGIS Tools, ENVI, ERDAS Imagine, Internet GIS (ArcIMS), River Tools, Corel Draw, Adobe Photoshop.
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Research Projects:

- **Atal Mission for Rejuvenation and Urban Transformation Centre of Urban Planning for Capacity Building 2.0 (15th May to Present)**

Designation: Principal Investigator

Project title- Geospatial Approach to Assess Inclusive Mobility in Heritage City of Ujjain.

Institute: SPA Bhopal, Bhopal, MP, India

- **Atal Mission for Rejuvenation and Urban Transformation Centre of Urban Planning for Capacity Building 2.0(15th March to Present)**

Designation: Co-Principal Investigator

Project title- Investigating on the scope for short term and long term rental housing provision for Ujjain city.

Institute: SPA Bhopal, Bhopal, MP, India

- **International Society for Photogrammetry and Remote Sensing (ISPRS) Scientific Initiative 2025. (January 2025 – December 2025).**

Designation: Principal Investigator

Project title- ‘Developing food insecurity index and vulnerability information system (FIVIMS) for a tribal district - a case of Alirajpur District, Madhya Pradesh, India.’

Institute: SPA Bhopal, Bhopal, MP, India.’

- **Impactful Policy Research in Social Science (IMPRESS) Research Project under the Indian Council of Social Science Research (ICSSR). (March 2019- present).**

Designation: Co-Project Director

Project title- ‘Revisiting the Frameworks for Performance Assessment of Service Delivery for Urban Sanitation in India.’

Institute: SPA Bhopal, Bhopal, MP, India

- **Design Innovation Centre funded by MOE, Government of India (2016-present)**

Designation: Member of the core team

Project title- “Universal Design Innovation for Heritage Sites”

Institute: SPA Bhopal, Bhopal, MP, India

- **DST Fast Track project under Young Scientist Scheme (09/2012-09/2015).**

Designation: Principal Investigator

Project title- “Optimization of Photovoltaic Solar Panel Installation using Remote Sensing Techniques”

Institute: SPA Bhopal, Bhopal, MP, India

Consultancy Research Projects:

- **Shyama Prasad Mukherji National Rurban Mission funded by Ministry of Rural Development, Government of India. (10/2016-02/2017).**

Designation: Cluster Coordinator of Ratibad Cluster

Project title- “Preparation of Integrated Cluster Action Plan for Ratibad Cluster, Madhya Pradesh, India”

Institute: SPA Bhopal, Bhopal, MP, India

Consultancy Projects:

- **Ministry of Panchayati Raj (MOPR), Madhya Pradesh, India. (07/2024 to present)**

Designation: Team Member

Project title- ‘Enhanced Gram Panchayat Spatial Development Plan (GPSDP) for Bilkisganj and Murwas Gram Panchayat.’

Institute: SPA Bhopal, Bhopal, MP, India

- **Preparation of Development Plan for Saugor Cantonment, Saugor, Madhya Pradesh, India. (02/2019).**

Designation: Team Member

Project title – “Preparation of Development Plan for Saugor Cantonment”

Institute: SPA Bhopal, Bhopal, MP, India

Training and Workshops Conducted:

- **Executive Development Programme (EDP) on “Assessing Inclusivity in the Heritage City of Ujjain” (14th – 15th July, 205).**

Designation:Coordinator

Venue: MPT Shipra Residency, Ujjain.

Sponsoring Agency: Ministry of Housing and Urban Affairs (MoHUA), GoI.

- **One Day (Online)National Level Professional Development Program on ‘Emerging Geo-Spatial Applications’ (14/12/2023).**

Designation:Coordinator

Venue: Centre for Geo-Informatics, School of Planning and Architecture, Bhopal.

Sponsoring Agency: Self Sponsored.

- **Awareness workshop on ‘GIS and Universal Accessibility.’(9-12th January, 2019).**

Designation:Coordinator

Venue: School of Planning and Architecture, Bhopal.

Sponsoring Agency: Grants approved by Awareness Generation & Publicity Scheme, Department of Empowerment of Persons with Disabilities.

- **Short Term Training Program on ‘Geo-Spatial Applications.’ (01/07/2019-12/07/2019).**

Designation: Co-coordinator

Venue: School of Planning and Architecture, Bhopal.

- **Short Term Training Program on ‘Basic Application of GIS and Remote Sensing in Planning and Architecture.’ (02/07/2018-06/07/2018).**

Designation: Co-coordinator

Venue: School of Planning and Architecture, Bhopal.

- **One Day Workshop on ‘Redevelopment and Retrofitting Proposal Using Geospatial Analysis.’ Held on 27/01/2017**

Designation: Coordinator

Venue: School of Planning and Architecture, Bhopal.

- **IV GIAN (Global Initiative of Academic Network) course on ‘Institutions, Economic Development and Industrial Upgrading.’ (14/12/2016-18/12/2016).**

Designation: Coordinator

Venue: School of Planning and Architecture, Bhopal.

Authored Book:

Saha, K., & Frøyen, Y. K. (2021). *Learning GIS Using Open Source Software: An Applied Guide for Geo-spatial Analysis*. Published by Routledge India, p. 240. ISBN 9781032307282 (302 copies sold globally till 31st December, 2024).

Patent:

Title: System And Method For Accessing Heritage Sites Information For Persons With Disability

Patent No.: 548568

Sponsoring agency – Design Innovation Centre funded by MOE, Government of India

Research Articles:

1. Raisinghani, A., & **Saha, K.** (2025). Developing an Early Detection Model for improving Vector-Borne Disease Surveillance. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, X-G-2025, 689–695, <https://doi.org/10.5194/isprs-annals-X-G-2025-689-2025>, 2025.
2. Rhate, P., Pandey, R.U., **Saha, K.** 2023. Adapting Remote Sensing Technique to study the changes in the spatial cover and the urban temperatures- A case study of Indore city, Madhya Pradesh. *Nagarlok* 55 (3), p.54-64. DOI: <https://doi.org/10.32381/NL.2023.55.03.4>. ISSN-0027-7584.
3. **Saha, K.**, Ghatak, D., S. Muralee, N.S. 2022. Impact of Plantation Induced Forest Degradation on the Outbreak of Emerging Infectious Diseases—Wayanad District, Kerala, India. *Int. J. Environ. Res. Public Health*, Vol-19 (12), 7036. doi: 10.3390/ijerph19127036. ISSN: 1660-4601. Impact Factor 4.6. p.1-14, IF:4.6
4. **Saha, K.**, & Van Landeghem, K. 2021. Evaluating an automated object-oriented method to delineate drumlins from both terrestrial and submarine digital elevation models. In *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, V.3, pp. 29-35. ISSN : 2194-9042. IF:0.96
5. **Saha, K.**, Kalra, R. & Khare, R. 2020. A geospatial approach to enhance religious tourism in India—A case of Ujjain city, Madhya Pradesh. *GeoJournal*. 87, 1793–1810. ISSN: 0343-2521. doi.org/10.1007/s10708-020-10334-w. IF:2.0
6. Garg, A., **Saha, K.** 2019. Resilient Agricultural Practices: A Case Study of Ujjain District, Madhya Pradesh, India. *Indian Journal of Spatial Science*, Vol-10 No. 2, Autumn Issue pp. 52-58. ISSN: 2249 - 3921.
7. **Saha, K** & Mandal, N. R. 2018. Mobility Planning for an Indian Pilgrimage City- A Case of Ujjain City, Madhya Pradesh, India (Poster paper). In *Proceedings of 12th World Congress of the Regional Science Association International (RSAI) 2018*, Goa, India, May 29- June 1, pp. 15-20. ISBN 978-989-54216-0-2.
8. Mandal, N. R. & **Saha, K.** 2018. A Pathway To Deliver Healthy Cities In India- A Case Of Ujjain City, Madhya Pradesh, India. In *Proceedings of 12th World Congress of the Regional Science Association International (RSAI) 2018*, Goa, India, May 29- June 1, pp. 377-384. ISBN 978-989-54216-0-2.
9. Tiwari, S., Mandal, N. R., **Saha, K.** 2018. Monitoring Impact Of Land Use & Land Cover Change In Livelihood Zones Along The Narmada River Riparian Buffer Zone, Madhya Pradesh, India. In *Proceedings of 12th World Congress of the Regional Science Association International (RSAI) 2018*, Goa, India, May 29- June 1, pp. 964-973. ISBN 978-989-54216-0-2.
10. **Saha, K.** 2017. "Smart Solutions" for a Smart City: a GIS Approach. In *Proceedings of the 10th International Conference on Theory and Practice of Electronic Governance (ICEGOV '17)*, Rehema Baguma, Rahul De', and Tomasz Janowski

- (Eds.). ACM, New York, NY, USA, 534-535. DOI: <https://doi.org/10.1145/3047273.3047395>. ISBN: 978-1-4503-4825-6
11. **Saha, K.** 2017. A Remote Sensing Approach to Smart City Development in India: Case of Bhopal City, Madhya Pradesh. In *Proceedings of the Special Collection on eGovernment Innovations in India* (ICEGOV '17), Rehema Baguma, Rahul De, Tomasz Janowski, and Morten Meyerhoff Nielsen (Eds.). ACM, New York, NY, USA, 70-75. DOI: <https://doi.org/10.1145/3055219.3055232>. ISBN: 978-1-4503-4825-6
 12. **Saha, K.** Nanda, G. 2017. Incorporating GIS in Architectural Pedagogy. In *Proceedings of 17th Esri India User Conference 2017*, New Delhi, India, January 19-20, pp.1-10.
 13. **Saha, K.** 2016. An object-oriented approach to quantify available roof area for solar PV installation: Case of Bhopal City, Madhya Pradesh, India. *Journal of Geomatics*, Vol-10, No. 2 pp 133- 139. ISSN:0976–1330.
 14. **Saha, K.** & Mandal, N. R. 2016. Estimating Solar PV Potential for Sustainable Energy Planning in Tier-II Cities of India: Case of Bhopal City. *Current Urban Studies*, 4, 356-375. DOI:10.4236/cus.2016.43024. SSN Print: 2328-4900; ISSN Online: 2328-4919
 15. **Saha, K.** 2015. Review of Article “Hotspots of Solar Potential in India” by T.V. Ramachandra, Rishabh Jain, Gautham Krishnada in Renewable and Sustainable Energy Reviews 15 (2011)3178-3186. *Spandrel*, Issue 9 pp.99. ISSN:2231-4601
 16. **Saha, K.** 2014. DSM extraction and evaluation from Cartosat-1 stereo data for Bhopal city, Madhya Pradesh. *International Journal of Scientific and Research Publication*, Vol-4, Issue 5 pp. 1-5. ISSN 2250-3153
 17. **Saha, K.** 2014. Generation of DSMs and Orthoimages from CARTOSAT- 1 Stereo Imagery- a case study of Bhopal, India. *Indian Journal of Spatial Science*, Vol-5 No. 1, Summer Issue pp. 56-61. ISSN 2249 - 3921
 18. **Saha, K.** Munro-Stasiuk, M. 2013. Automated mapping of drumlin orientation using object-oriented approach. *Indian Journal of Spatial Science*, Vol - 4, No. - 2, Winter Issue, pp 1 – 12. ISSN 2249 - 3921
 19. **Saha, K.** 2012. Testing an Object-Oriented method to map mid-scale glaciated landform like drumlins. *eTraverse*. Vol. III, No.1, 1-6. ISSN 2249 - 3921
 20. **Saha, K.,** Wells, N. A. and Munro-Stasiuk, M. 2011. An object-oriented approach to automated landform mapping: a case study of drumlins. *Computer and Geosciences* 37, 1324-1336. doi.org/10.1016/j.cageo.2011.04.001
 21. **Saha, K.,** Munro-Stasiuk, M. 2009. Automated extraction of drumlins from Digital Elevation Models through object-oriented classification. In *Proceedings of the American Society for Photogrammetry and Remote Sensing Annual Conference (ASPRS'09)* (pp. 1-10).
 22. **Saha, K.** 2009. Semi-automated to automated – refined method for mid-scale glacial landform mapping. In *Proceedings of the Applied Geography Conferences*. Vol 32: 362-371.
 23. **Saha, K.,** Munro-Stasiuk, M. 2008. Object-oriented image analysis of the Chautauqua drumlin field. In *Proceedings of the Applied Geography Conferences*. Vol 31: 43-51.

Book Chapters:

1. **Saha K.**, Sigdha, A. Khare R. GIS to Machine Learning- Application of Emerging Tools to assess accessible built environment in Indian cities. In Yadav, V., Mishra, M., Gavske, K. (Eds.) *The Built Environment and Public Health in India- Opportunities, Challenges, and Future Pathways*. Springer Nature. (submitted).

2. **Saha, K.**, Kalra, R., Khare, R. (2024). Sustainable Urbanism-Making Indian Religious Cities Accessible. In: Firoz C, M., Dahiya, B., Rajendran, L.P., Dashora, L.K., Chatterjee, U. (eds) *Urban Planning and Design for Megacities in the Global South. Advances in 21st Century Human Settlements*. pp 115–133. Springer, Singapore. https://doi.org/10.1007/978-981-97-8370-0_6.

3. Raut, H., **Saha, K.** 2022. Mechanisms for Brownfield Redevelopment: A Case of Indore City. In Chatterjee, U., Biswas, A., Mukherjee, J., & Majumdar, S. (Eds.) *Advances in Urbanism, Smart Cities, and Sustainability*, pp. 39-57. CRC Press. ISBN 9780367641764. doi.org/10.1201/9781003126195.

4. **Saha K.**, Frøyen Y. 2021. An Automated Approach to Facilitate Rooftop Solar PV Installation in Smart Cities: A Comparative Study Between Bhopal, India and Trondheim, Norway. In: Sharma P. (eds) *Geospatial Technology and Smart Cities*. pp.75-92. The Urban Book Series. Springer, Cham. https://doi.org/10.1007/978-3-030-71945-6_5. ISBN: 978-3-030-71944-9.

5. **Saha K.**, Khare R. 2020. A Geospatial Approach to Conserving Cultural Heritage Tourism at Kumbh Mela Events in India. In: Wise N., Jimura T. (eds) *Tourism, Cultural Heritage and Urban Regeneration*. The Urban Book Series. Springer, Cham., pp. 125-140. doi.org/10.1007/978-3-030-41905-9_9. ISBN: 978-3-030-41904-2.

Book Review:

Saha, K. Review of *Planning and installing photovoltaic system: a guide for installers, architects and engineers*, by Deutsche Gesellschaft für Sonnenenergie (DGS), *International Journal of Environmental Studies*, 11/ 2014; 71(6).pp. 887-898 DOI: 10.1080/00207233.2014.951543. ISSN: 1735-1472.

Project Report

Saha, K., 2017. Optimization of Photovoltaic Solar Panel Installation Using Remote Sensing Techniques. *Spandrel*, Issue 9 pp.130-133.

Technical Report

Mandal, N.R., **Saha, K.**, Manisha, K., 2017. Integrated Cluster Action Plan (ICAP) of Ratibad Cluster, Bhopal District, Madhya Pradesh. School of Planning and Architecture, Bhopal for Dept. of Employment and Rural Development, Government of Madhya Pradesh and Ministry of Rural Development, Government of India. pp. 274.

Professional Presentations

- Geospatial Technique to make Indian Cities Accessible for persons with disabilities. ISPRS Geospattal Week 2025, 6th to 11th April, 2025, Dubai World Trade Centre, Dubai, UAE (Poster Presentation).
- Developing an Early Detection Model for improving Vector-Borne Disease Surveillance. ISPRS Geospattal Week 2025, 6th to 11th April, 2025, Dubai World Trade Centre, Dubai, UAE (Poster Presentation).
- Application of Emerging Tools in Universal Accessibility. Conference cum workshop on 'Calibrating Urban Livability in the Global South' (27th - 29th March 2024, Department of Architecture and Planning, Maulana Azad National Institute of Technology (MANIT) Bhopal.
- Evaluating an automated object-oriented method to delineate drumlins from both terrestrial and submarine digital elevation models. XXIV ISPRS Congress (2021 edition), 5-9th July, 2021, Nice, France (Paper Presentation).
- A Geospatial Approach to Organize Religious Tourism in India. Virtual Annual Meeting of the American Association of Geographers, 9th April, 2020 (Paper presentation).
- Resilient Agricultural Practices- A case of Ujjain District, Madhya Pradesh, India. 4th World Congress on Disaster Management (WCDM-2019), 29th Jan to 1st Feb., Mumbai, Maharashtra, India (Paper Presentation).
- Safeguarding People with Disability at Kumbh Mela (the festival of the Sacred Pitcher). 4th World Congress on Disaster Management (WCDM-2019), 29th Jan to 1st Feb., Mumbai, Maharashtra, India (Paper Presentation).
- Universal Access Assessment at Religious Tourist Spots of India Using Geospatial Technique. 12th World Congress of RAI, May 29 - June 1, 2018, Goa, India (Paper Presentation).
- Mobility Planning for an Indian Pilgrimage City- A Case of Ujjain City, Madhya Pradesh, India. 12th World Congress of RAI, May 29 - June 1, 2018, Goa, India (Poster Presentation).
- Estimating Roof Top Solar PV Potential of Bhopal City Using Remote Sensing Technique. National Seminar on Climate Change, 22-24th March, 2018, The Environmental Planning & Coordination Organisation (EPCO), Dept. of Environment, Govt. of Madhya Pradesh, Bhopal, India (Paper Presentation).
- An automated object-oriented approach to facilitate core infrastructure of a Smart City: a comparative study between Bhopal, India and Trondheim, Norway. 38th Asian Conference on Remote Sensing (ACRS 2017), 23-27 October, New Delhi, India (Paper Presentation).
- "Smart Solutions" for a Smart City: a GIS Approach. 10th International Conference on Theory and Practice of Electronic Governance (ICEGOV2017), 7th-9th March, New Delhi, India (Poster Presentation).
- Incorporating GIS in Architectural Pedagogy. 17th Esri India User Conference 2017, January 19-20, New Delhi, India (Paper Presentation).
- An object-oriented approach for building a smart city: case study of Bhopal, Madhya Pradesh. 2nd Smart Cities India 2016 expo, exhibition and conference. 11-13 May 2016, Pragati Maidan, New Delhi (Poster Presentation).

- Automated Extraction of rooftop for estimating Photovoltaic Energy Potential: Case of Bhopal City, Madhya Pradesh, India. National Symposium on Geomatics for Digital India, December 16-18, 2015, Jaipur, Rajasthan.
- Using GIS as a tool to develop green infrastructure. Sensitization Programme on Sustainable Urban Habitat, Theme: Green Infrastructure, School of Planning and Architecture, Bhopal, 9-14th March, 2015.
- Optimization of Solar Panel Installation Using Remote Sensing Techniques. Renewable Energy and Sustainable Habitat Conference, School of Planning and Architecture Delhi, 29th January, 2014. (Paper Presentation).
- Assessing Solar Energy Potential for Green City using Geoinformatics. Workshop on Awareness in Green Buildings Responsible Education in Schools (AGBRES 2014), Climate Change Research Institute, India and IIC, Delhi. 31st January, 2014. (Paper Presentation).
- Advantages of automated method for mapping landforms in a larger study area. 26th Annual Graduate Student Colloquium, Kent State University, Kent, OH, 2011. (Poster Presentation).
- Application Definiens Developer for Mid-scale glacial landform extraction, Applied Geography Conference (AGC), Fort Worth, Texas, 2010. (Poster Presentation).
- Geomorphological mapping using object-based analysis. 25th Annual Graduate Student Colloquium, Kent State University, Kent, OH, 2010. (Poster Presentation).
- Semi-automated to automated – refined method for mid-scale glacial landform mapping, Applied Geography Conference (AGC), Baton Rouge, LA, 2009. (Paper Presentation).
- Visualizing and objectifying drumlins of the Chautauqua Drumlin Field, USA, 24th Annual Graduate Student Senate Colloquium, Kent State University, Kent, OH, 2009. (Paper Presentation).
- Morphology and morphometric analysis of drumlins through an object-oriented approach, VII Drumlin Symposium, Westport, Ireland, 2009. (Poster Presentation).
- Automated extraction of drumlins from digital elevation models through object-oriented classification, ASPRS 2009 Annual Conference, Baltimore, MD, 2009. (Paper Presentation).
- Object-oriented image analysis of the Chautauqua drumlin field, Applied Geography Conference (AGC), Wilmington, DE, 2008. (Paper Presentation).
- Comparative Study between drumlins manually extracted from topographic maps and object-oriented classification from DEMs, Annual Meeting of American Association of Geographers (AAG), Boston, MA, 2008. (Paper Presentation).

Honors and Awards

- Award of Erasmus Scholarship to visit Dept. of Urban Design and Planning, NTNU, Norway under the framework of Erasmus Plus Global Mobility Programme, 2016.
- First Prize for Best Paper Presentation under Scientist Category during ISG-ISRS National Symposium on Geomatics for Digital India. 16-18th December, 2015, Jaipur, India.
- Outstanding Academic Achievement Award for 4.0 GPA, Kent State University and Phi Beta Delta, the Honor Society for International Scholars, 2008- 2010.

- First Place Presentation Award for the Geography Awareness Day Poster Competition, Kent State University, 2009.
 - First prize won at the poster competition, Applied Geography Conference, Baton Rouge, 2009.
 - University Fellowship Award, 2009-2010, Kent State University.
 - Beck Research Award for graduate research and paper presentation, Department of Geography, Kent State University, 2009.
 - Award of Excellence for outstanding presentation and content for the Student Poster Presentation and Contest, University Research Council, Kent State University, 2009.
 - Travel Grant from Graduate Student Senate, Kent State University for Annual Meeting of Applied Geography, Delaware, October 2008.
 - First Place Presentation Award for the Geography Awareness Day Poster Competition, Kent State University, 2008.
 - Travel Grant from Graduate Student Senate, Kent State University for Annual Meeting of American Association of Geographers (AAG), Boston, March 2008.
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Professional Societies

- Life member of National Association of Geographers, India.
 - Life member of Indian Society of Remote Sensing.
 - Life member of Indian Society of Geomatics.
 - Life member of International Society of Photogrammetry and Remote Sensing.
 - Member of International Society of City and Regional Planners.
 - Member of Regional Studies Association.
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Service

- Reviewer for the *Current Science Bangalore* (ISSN 113891, Scopus Indexed).
 - Reviewer for *Journal of Indian Society for Remote Sensing* (ISSN0255-660X, Scopus Indexed).
 - Reviewer for *Journal of Accessibility and Design for All* (ISSN 2013-7087).
 - Issue Editor, *Spandrel* –A bi-annual journal published by School of Planning and Architecture Issue 12- Monsoon 2016-17.
 - Reviewer for the *International Journal of Applied Geospatial Research* in 2011.
 - Reviewer for the journal *Papers of Applied Geography Conferences* in 2010.
 - Represented geography department at Graduate Student Senate, Kent State University.
 - Helped to develop and write course book for GEOG 29160: Mapping our World.
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References

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