

Dr. A. D. PRASAD

Education:

Degree	Specialisation	University	Division
Ph.D	Civil Engineering (Geomatics Engineering)	Indian Institute of Technology Roorkee, India	-
M.Tech	Industrial Pollution Control	National Institute of Technology Karnataka, India	First
B.E	Civil Engineering	Andhra University, India	First

Technical skills:

Programming	C, C++, Visual Basic 6.0, C#, VB.NET, Arc Objects, Map Objects, Python.
Database/Tools:	MySQL, SQL Server 2008.
Operating Systems:	Windows 98/2000/NT/7/8.1/10, MS-DOS, Linux, Android.
GIS Desktop	AutoCAD 3D Civil / Map, Trans CAD, Hydro CAD, Bentley - Micro station, In RAIL, In ROAD, ArcGIS10.8, Quantum GIS, Grass, ArcGIS Explorer, ILWIS, Surfer, HEC-RAS/HMS, WMS, Basins, GIS (R2V), Global Mapper 24.1, Trimble.eCognition.Developer.v10.3 etc.
Remote Sensing:	PCI Geomatica 2014, ENVI 5.6, Erdas Imagine 2014, IDRISI, TerrSet 18.31, SNAP etc.
ERP/ Business Analytics and Business Intelligence Software:	SAP R/3 4.7/6.0 SAP-BW (3.0B), BI (7.0), SAP-SEM (3.1B), (6.0), SAP PP, SAP-APO, SAP-Retail, SAP-SEM includes BPS, CPM, BCS, BIC, SRM, SAP- EH&S, SAS 4.0 etc.
Project control	Primavera P6, Microsoft Project.
Other Software's:	STAAD, 3D-Doctor, MATLAB, NI LabVIEW, MS-Office, SimaPro, Statistica, SigmaPlot 12.3, BlueSky Statistics, Minitab 18, Grapher, Tableau 2020, Statgraphics Centurion 18, etc.

Experience in Industries/Research Organizations/Post-Doc (in Yrs):

- ✓ **Software / IT Industry - 8.5 Years**
- ✓ **Worked as Asst. Environmental Engineer – Zonal Office, Visakhapatnam**

Post Ph.D. Experience:

- ✓ NIT-Raipur – Since Jun-15
- ✓ NIT-Jalandhar – Sep-14 to May-15

Research Interests:

- Geomatics Engineering
- Energy / Renewable Energy
- RS & GIS Applications
- Water Resources Engineering
- Environmental Engineering
- Image Processing / Medical Image Processing
- AI / ML / D, IoT, Big Data, Data Analytics
- UAV Applications

Memberships / Certificates:

- Indian Society of Remote Sensing (ISRS) – Life Member
- The Institution of Engineers (India) (IEI) – Member
- The Institution of Engineers (India) (IEI) – Chartered Engineer
- Indian Society of Geomatics (ISG) – Life Member
- Indian Geotechnical Society (IGS) – Life Member
- Trainers Training Programme on Entrepreneurship – EDII Certificate
- The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) – Member

Ph.D. and PG guidance

- Ph.D. Guidance: 4 – Completed, 8 (7 FT, 1 PT & CSE) – Ongoing,
- PG Guidance: 16 – Completed.

Publications in Journals, Conferences, Book Chapters, Text books, Books etc

SCI/Scopus Journals	Scopus Conferences	Book Chapters	Books	AICTE - Textbooks
32 (Q1 - 5, Q2 - 5, Q3 - 6, Q4 - 16)	29	5	2	1. Construction materials and testing - AICTE (Reviewer) 2. Surveying and Geomatics -AICTE (Translator form English language to Telugu language) {Review Stage}

Patents

- Intelligent 3-D Printing Nozzle With Mixer and Sensors
- Mixed-Mode Solar Dryer with Finned Trays
- Unmanned Aerial Vehicle (UAV) With Hybrid Power and Adaptive Rotor Housings – STATUS: Response submitted (FER generated on 13.11.2025)

Establishment of Labs and Chapters

Laboratory	Chapter
1. Geomatics Engineering Lab	1. Indian Society of Remote Sensing – Raipur Chapter - Chairman 2. Bureau of Indian Standard – Civil Engineering Students Chapter - Mentor

Workshops/Conferences organised/ MoU's made

STTP's (5-Days)	FDP's (5-Days)	MoU's (International & National)
1. Coordinator - Advance Surveying and their Engineering Applications <u>IIRS-ISRO Outreach Programme</u> 2. Coordinator - Applications of Machine Learning in Urban Studies 3. Coordinator - Geospatial Modeling Driven Urban Hazard and Risk Analysis 4. Coordinator - Overview of free and Open Source Software for Geospatial Technology	1. Coordinator - Application of Machine Learning in Civil Engineering	1. Survey of India , Raipur 2. National Ilan University, Taiwan 3. Changzhou Institute of Technology, Jiangsu, China. 4. Vali-e-Asr University of Rafsanjan, Iran

Distinctions:

- ✓ Received MHRD fellowship during studies.
- ✓ Worked at a capacity of competency head of a multinational organization **with an award** of “**best and brightest**” among all employees around the world.
- ✓ Reviewer for SCI journals of **Elsevier, Springer, MDPI** and **Inderscience** publishers.
- ✓ Editorial Board member of Journal on Computational Imaging and Multimedia Networks
- ✓ Acted as a session chair in 4th World Conference on Applied Sciences, Engineering & Technology, 24-26 October 2015, Kumamoto University, Japan.
- ✓ IIRS – **ISRO Outreach Programme** : Coordinator for Nodal Center
- ✓ Mentor - **Bureau of Indian Standard** – Civil Engineering Students Chapter
- ✓ Has experience in Software / IT industry with abroad work experiences in USA, UK, UAE, Saudi Arabia, Malaysia, Qatar and South Africa.

Books Published

1. KVSG Murali Krishna, A D Prasad (2019), "RECYCLE AND REUSE OF MUNICIPAL AND INDUSTRIAL WASTEWATER", PARAMOUNT PUBLISHING HOUSE, ISBN: 978-93-88808-48-4
2. Vishal Kumar, A V Ahirwar, A D Prasad (2021), "Noise Pollution Monitoring, Mapping and Health Impact", B P International, ISBN: 978-93-5547-261-8.

Book Chapters Published

1. M Narayana Rao, A D Prasad, KVSG Murali Krishna (2023), "Chapter 7 - Do's and don'ts of wastewater treatment, their reuse, and future directions", Academic Press, <https://doi.org/10.1016/B978-0-323-96124-0.00004-0>.

International Journal papers: -

1. Prasad, A.D., Sahu, T., Saket, B., Deep Learning-Based Comparison of Performance of Different Object Detection Models for Images Obtained at Various Elevations Using UAV, Recent Advances in Machines, Mechanisms, Materials and Design, 2024, (pp 519–528)
2. Prasad, A. D., Hina Kurrey, Padma Ganasala, Impact of El-Nino and La-Nina on Hydrology and Rice Crop Yield of Kharun Watershed, India : Application of Soil and Water Assessment Tool, Water and Energy International, vol 67r,2024, (pp 11-18)
3. Purnam, K. K., Prasad, A. D., & Ganasala, P. (2024). Water indices for surface water extraction using geospatial techniques: A brief review. Sustainable Water Resources Management, 10(2), (2024), (pp.70).
4. Verma, S., Prasad, A. D., & Verma, M. K., Optimal operation of the multi-reservoir system: a comparative study of robust metaheuristic algorithms. International Journal of Hydrology Science and Technology, 17(3), 2024, (pp. 239-266).
5. Lambey, V., & Prasad, A. D. (2023). Sensor based real time air pollutants monitoring for an urban industrial area. Journal of Air Pollution and Health, 8(2), 157-164.(SCOPUS)
6. Verma, S., Verma, M. K., Prasad, A. D., Mehta, D. J., & Islam, M. N. (2023). Modeling of uncertainty in the estimation of hydrograph components in conjunction with the SUFI-2 optimization algorithm by using multiple objective functions. Modeling Earth Systems and Environment, 1-19.
7. Prasad, A. D. (2023). Identification of pumped storage hydropower site by considering existing structures for better natural resources management. Water and Energy International, 66(2), 22-28.
8. Verma, s., R t sahu, A D prasad, and mk verma. "Reservoir operation optimization using ant colony optimization a case study of mahanadi reservoir project complex chhattisgarh-india." Iarhyss journal p-issn 1112-3680/e-issn 2521-9782 53 (2023): 73-93.
9. Kumar, V., Ahiwar, A. V., & Prasad, A. D. (2023). Exploring the Influence of Prime Festivals on Noise Pollution in Raipur, Chhattisgarh. Journal of Environmental Informatics Letters 9(2) 108-116. doi:10.3808/jeil.202300107.
10. Verma, S., Verma, M. K., Prasad, A. D., Mehta, D., Azamathulla, H. M., Muttil, N., &

- Rathnayake, U. (2023). Simulating the Hydrological Processes under Multiple Land Use/Land Cover and Climate Change Scenarios in the Mahanadi Reservoir Complex, Chhattisgarh, India. *Water*, 15(17), 3068.
11. Prasad, A. D. (2023). Knowledge Based Pumped Storage Hydro Potential Site Selection using Geomatics Techniques. *Water and Energy International*, 66(4), 30-41.
 12. Kumar, V., Ahirwar, A. V., & Prasad, A. D. (2023). Assessment of Noise Pollution and Health Impacts of the Exposed Population in an Urban Area of Chhattisgarh, India. *Nature Environment & Pollution Technology*, 22(03), 1139-1153.
 13. Kumar, V., Ahirwar, A. V., & Prasad, A. D. (2023). Monitoring and mapping noise levels of university campus in central part of India. *Journal of Air Pollution and Health*, 8(1), 1-12.
 14. Prasad, A. D., Singh, N., Ganasala, P., & Shekhar, S. (2023). Morphometric Analysis of Natural Landscapes of Northern Maharashtra using Geomatics Techniques, Western Ghats, India. *Water and Energy International*, 65(10), 11-24.
 15. Lambey, V., & Prasad, A. D. (2022). Spatio-temporal analysis of sensor based air pollutants in Raipur city, India. *Journal of Air Pollution and Health*, 7(4), 323-340.
 16. Sahu, I., Prasad, A. D., & Ahmad, I. (2022). Comparison of GIS-Based Intrinsic Groundwater Vulnerability Assessment Methods: DRASTIC and SINTACS. *Nature Environment & Pollution Technology*, 21.
 17. Verma, S. K., Prasad, A. D., & Verma, M. K. (2022). An Assessment of Ongoing Developments in Water Resources Management Incorporating SWAT Model: Overview and Perspectives. *Nature Environment & Pollution Technology*, 21(4).
 18. Hernández-Guzmán, R., Ruiz-Luna, A., & Prasad, A. D. (2022). Quantifying the ecosystem service value dynamics in response to land use and land cover changes in Michoacán, Mexico. *Journal of Applied Remote Sensing*, 16(3), 034503-034503.
 19. Prasad, A.D., Ganasala, P., Hernández-Guzmán, R. (2022). Remote sensing satellite data and spectral indices: an initial evaluation for the sustainable development of an urban area. *Sustain. Water Resour. Manag.* 8, 19. <https://doi.org/10.1007/s40899-022-00607-2>
 20. Lambey, V., & Prasad, A. D. (2021). A Review on Air Quality Measurement Using an Unmanned Aerial Vehicle. *Water, Air, & Soil Pollution*, 232(3), 1-32. <https://doi.org/10.1007/s11270-020-04973-5>
 21. P. Ganasala and A. D. Prasad (2020), Contrast Enhanced Multi Sensor Image Fusion

- Based on Guided Image Filter and NSST, IEEE Sensors Journal, vol. 20, no. 2, pp. 939-946.
22. Ganasala, P, Prasad, AD (2019), Medical image fusion based on laws of texture energy measures in stationary wavelet transform domain, Int J Imaging Syst Technol.
 23. A. D. Prasad (2016), Scope of Integrated Farming Systems with Organic Agriculture and Geomatics Techniques in India. IJEE, Vol 6-N0-1, pp. 41-43
 24. Padma Ganasala, Vinod Kumar, and A. D. Prasad (2016), Performance Evaluation of Color Models in the Fusion of Functional and Anatomical Images, J Med Syst 40: 122
 25. Fathian, F., Prasad, A.D., Dehghan, Z. and Eslamian, S. (2015), Influence of land use/land cover change on land surface temperature using RS and GIS techniques, Int. J. Hydrology Science and Technology, Vol. 5, No. 3, pp.195–207
 26. A. D. Prasad, Jain K, Gairola A and R. Hernandez-Guzman (2013), Ranking of Pumped storage hydropower site for preliminary studies, IJEE, Vol 6-N0-1, pp. 136-142
 27. A. D. Prasad, Jain K and Gairola A (2013), Surface Temperature Estimation using Landsat Data for part of the Godavari and Tapi Basins, India: A Case Study, IJEAT, Volume-2, Issue-3, pp. 320-322
 28. A. D. Prasad, Jain K and Gairola A (2013), Mapping of lineaments and knowledge base preparation using geomatics techniques for part of the Godavari and Tapi Basins, India: A case study; IJCA, Volume 70– No.9, pp. 39-47
 29. A. D. Prasad, Jain K and Gairola A (2013), Pumped Storage Hydropower Plants Environmental Impacts using Geomatics Techniques: An Overview , International Journal of Computer Applications 81(14), pp. 41-48
 30. A. D. Prasad, Jain K and Gairola (2012), A GIS for rural health in India, IJEE, Vol 5-N0 5(2), pp. 1432- 1437.

International Conference papers: -

1. Prasad, A. D., & Ganasala, P, MRI and SPECT image fusion based on adaptive fusion rule in transform domain. In Intelligent Computing Techniques in Biomedical Imaging. Chapter-20,(2025) (pp. 281-293).
2. Prasad, A. D., Ahirwar, A. V., & Ganasala, P. (2024, March). Assessment of Life Cycle Energy and Green House Gas of a Two-Storied Residential Building in Central India Using Open-Source Data. In International Conference on Civil Engineering, vol 539,

2024, (pp. 337-354).

3. Prasad, A. D., Ahirwar, A. V., Kumar, V., & Ali, S. Noise Monitoring During Ganesh Chaturthi, Dussehra, and Diwali Festival for Raipur City, India. In International Conference on Civil Engineering, vol 539, 2024, (pp. 371-382).
4. Sahu, I., Prasad, A. D., & Ahmad, Groundwater Vulnerability Assessment Using SINTACS-AHP Model and GIS in Raipur City. In Sustainable Management of Land, Water and Pollution of Built-up Area ,(2024) (pp. 135-155).
5. B. Himajwala, Prasad A.D.(2023), GIS and RS Based Soil Erosion and sediment yield modeling in Manikpur, Chhattisgarh, India. Development and application of Geomatics: Select Proceedings of DEVA 2022.
6. Verma, S., Prasad, A. D., & Verma, M. K. (2022). Optimizing Multi-reservoir Systems with the Aid of Genetic Algorithm: Mahanadi Reservoir Project Complex, Chhattisgarh. In Applied Geography and Geoinformatics for Sustainable Development: Proceedings of ICGGS 2022 (pp. 35-49). Cham: Springer International Publishing.
7. Kumar, V., Ahirwar, A. V., & Prasad, A. D. (2022). Noise Mapping of Different Zones in an Urban Area During Deepawali Festival. In Applied Geography and Geoinformatics for Sustainable Development: Proceedings of ICGGS 2022 (pp. 113-120). Cham: Springer International Publishing.
8. Lambey, V., & Prasad, A. D. (2022). Measurement of PM10, PM2. 5, NO2, and SO2 Using Sensors. In Applied Geography and Geoinformatics for Sustainable Development: Proceedings of ICGGS 2022 (pp. 89-99). Cham: Springer International Publishing.
9. Verma, S., Prasad, A. D., & Verma, M. K. (2022). Time Series Modelling and Forecasting of Mean Annual Rainfall Over MRP Complex Region Chhattisgarh Associated with Climate Variability. In Recent Advances in Sustainable Environment: Select Proceedings of RAiSE 2022 (pp. 51-67). Singapore: Springer Nature Singapore.
10. Lambey, V., & Prasad, A. D. (2022). An Automatic Integrated Tool for Deriving Morphometric Parameters. In River and Coastal Engineering: Hydraulics, Water Resources and Coastal Engineering (pp. 41-53). Cham: Springer International Publishing.
11. Sahu, I., Prasad, A. D., & Ahmad, I. (2022). Integrated Tool for Morphometric Analysis Using QGIS. In River and Coastal Engineering: Hydraulics, Water Resources and Coastal Engineering (pp. 103-113). Cham: Springer International Publishing.

12. Kumar, V., Ahirwar, A. V., & Prasad, A. D. (2022, June). Noise Mapping during New Year Eve in selected residential zone of Raipur City. In IOP Conference Series: Earth and Environmental Science (Vol. 1032, No. 1, p. 012030). IOP Publishing.
13. Verma, S. K., Sahu, R. T., Singh, H., Prasad, A. D., & Verma, M. K. (2022, June). A study of Environmental and Ecological impacts due to Construction and Operation of Tehri-Polavaram Dam. In IOP Conference Series: Earth and Environmental Science (Vol. 1032, No. 1, p. 012020). IOP Publishing.
14. Shashikant, V., Sahu, R. T., Prasad, A. D., & Verma, M. K. (2022, May). Development of an optimal operating policy of multi-reservoir systems in Mahanadi Reservoir Project Complex, Chhattisgarh. In Journal of Physics: Conference Series (Vol. 2273, No. 1, p. 012020). IOP Publishing.
15. Sahu, I., Prasad, A. D., & Ahmad, I. (2022, March). Groundwater vulnerability assessment using SINTACS model and GIS: A case study in Raipur city. In IOP Conference Series: Earth and Environmental Science (Vol. 982, No. 1, p. 012070). IOP Publishing.
16. Lambey, V., Sahu, I., Prasad, A.D. (2022). Comparison of Morphometric Parameters for Jonk Watershed Derived from Integrated Tool Developed in ArcGIS and QGIS Platform. In: Laishram, B., Tawalare, A. (eds) Recent Advancements in Civil Engineering. Lecture Notes in Civil Engineering, vol 172. Springer, Singapore. https://doi.org/10.1007/978-981-16-4396-5_72
17. Verma, S., Prasad, A.D., Verma, M.K. (2022). Trends of Rainfall and Temperature over Chhattisgarh During 1901–2010. In: Rao, C.M., Patra, K.C., Jhajharia, D., Kumari, S. (eds) Advanced Modelling and Innovations in Water Resources Engineering. Lecture Notes in Civil Engineering, vol 176. Springer, Singapore. https://doi.org/10.1007/978-981-16-4629-4_1
18. Azharuddin, M., Verma, S., Verma, M.K., Prasad, A.D. (2022). A Synoptic-Scale Assessment of Flood Events and ENSO—Streamflow Variability in Sheonath River Basin, India. In: Rao, C.M., Patra, K.C., Jhajharia, D., Kumari, S. (eds) Advanced Modelling and Innovations in Water Resources Engineering. Lecture Notes in Civil Engineering, vol 176. Springer, Singapore. https://doi.org/10.1007/978-981-16-4629-4_8
19. Dhiwar, B.K., Verma, S., Prasad, A.D. (2022). Identification of Flood Vulnerable Area for Kharun River Basin by GIS Techniques. In: Rao, C.M., Patra, K.C., Jhajharia, D.,

- Kumari, S. (eds) Advanced Modelling and Innovations in Water Resources Engineering. Lecture Notes in Civil Engineering, vol 176. Springer, Singapore. https://doi.org/10.1007/978-981-16-4629-4_27
20. Soni, S., Prasad, A.D. (2021). Detection of Flood Hazard Using QGIS. In: Pathak, K.K., Bandara, J.M.S.J., Agrawal, R. (eds) Recent Trends in Civil Engineering. Lecture Notes in Civil Engineering, vol 77. Springer, Singapore. https://doi.org/10.1007/978-981-15-5195-6_65
 21. Verma S., Prasad A.D., Verma M.K. (2021) Trend Analysis and Rainfall Variability of Monthly Rainfall in Sheonath River Basin, Chhattisgarh. In: Pathak K.K., Bandara J.M.S.J., Agrawal R. (eds) Recent Trends in Civil Engineering. Lecture Notes in Civil Engineering, vol 77. Springer, Singapore. https://doi.org/10.1007/978-981-15-5195-6_58.
 22. A. D. Prasad and P. Ganasala, "Preliminary Assessment of Remote Sensing Satellite Data and Spectral Indices for Sustainable Development of a Smart City," 2020 International Conference on Advances in Computing, Communication & Materials (ICACCM), Dehradun, India, 2020, pp. 212-214, doi: 10.1109/ICACCM50413.2020.9212894.
 23. B. P. Kumar and A. D. Prasad, "IoT based equipment for real-time identification of soil properties," 2020 7th International Conference on Smart Structures and Systems (ICSSS), Chennai, India, 2020, pp. 1-6, doi: 10.1109/ICSSS49621.2020.9202279.
 24. P. Ganasala and A. D. Prasad (2020), "Functional and Anatomical Image Fusion based on Texture Energy Measures in NSST Domain," 2020 First International Conference on Power, Control and Computing Technologies (ICPC2T), Raipur, India, 2020, pp. 417-420.
 25. Vasanth D., Prasad A.D. (2019) Ceramic Membrane: Synthesis and Application for Wastewater Treatment—A Review. In: Rathinasamy M., Chandramouli S., Phanindra K., Mahesh U. (eds) Water Resources and Environmental Engineering II. Springer, Singapore
 26. Lambey, V. and Prasad, A. D.: UNMANNED AERIAL VEHICLE APPLICATIONS OF 3D MODELLING, VISUALIZATION AND PARAMETER CALCULATIONS, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLII-5, 649-652, <https://doi.org/10.5194/isprs-archives-XLII-5-649-652>.
 27. Sahu, I. and Prasad, A. D (2018).: ASSESSMENT OF HYDRO POTENTIAL USING

INTEGRATED TOOL IN QGIS, ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci., IV-5, 115-119, <https://doi.org/10.5194/isprs-annals-IV-5-115-2018>

28. Lambey V., Prasad A.D., Chouksey A., Sahu I. (2019) Impact of Water Conservation
29. Structures on Hydrology of a Watershed for Rural Development. In: Rao P., Rao K., Kubo S. (eds) Proceedings of International Conference on Remote Sensing for Disaster Management.
30. Akhilesh Poyam, A D Prasad (2019). "Water Quality Monitoring Using Unmanned Air Vehicle (UAV) And Internet of things (IoT)". In 2019 National Conference on Innovation in Chemistry and Environmental Engineering (ICEE).
31. A.D.Prasad, Padma Ganasala (2017), Feasibility of solar photovoltaic system: A case study, ICEEE , International Conference on Energy,Environment and Economics (ICEEE 2017), 11th -13th December 2017, Heriot-Watt University, Edinburgh, UK
32. Padma Ganasala and A. D. Prasad (2018), 'Medical Image Fusion based on Frei-Chen Masks in NSST Domain, IEEE, 619: 623, 5th International Conference on Signal Processing and Integrated Networks (SPIN), India
33. A D Prasad, Scope of Integrated Farming Systems with Organic Agriculture and Geomatics Techniques in India, 4th World Conference on Applied Sciences, Engineering & Technology, 24-26 October 2015, Kumamoto University, Japan
34. A D Prasad, Jain K and Gairola A, A review on hydropower, storage systems and site selection in the watershed as a part of natural resource management using geomatics techniques , NIRD,Hyderabad– Jan 2012.