Dr. Sujay Raghavendra Naganna

CONTACT INFORMATION

Residence: #25, 1st Main Road, 5th Cross, 1st Phase, BEML Layout 5th Stage, Rajarajeshwarinagar, Bengaluru 560 098, Karnataka, India

Office: Department of Civil Engineering, Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal 574 115, Udupi, Karnataka, INDIA

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RESEARCH AREAS

Fluvial Hydrology; Groundwater Hydraulics; Machine Learning; Computational Statistics; Hydroinformatics; Concrete Technology

EDUCATION

National Institute of Technology Karnataka, Surathkal, India

Ph.D., Water Resources Engineering & Management, October 2019
- Thesis Title: Assessment of Spatio-temporal Variability of Streambed Hydraulic Conductivity: A Case Study in the Pavanje River, India
- Advisor: Prof. Paresh Chandra Deka, Ph.D

M.Tech., Water Resources Engineering & Management, July 2014
- Dissertation Title: Forecasting Monthly Groundwater Table Fluctuations in Coastal Aquifers using Hybrid Wavelet Packet - Support Vector Regression
- Advisor: Prof. Paresh Chandra Deka, Ph.D

Visvesvaraya Technological University, Belgaum, India

B.E., Civil Engineering @ (Bangalore Institute of Technology), June 2011

EXPERIENCE

Associate Professor   Aug 2018 to present
Department of Civil Engineering,
Shri Madhwa Vadiraja Institute of Technology & Management.

Research Scholar   July 2014 to July 2018
Department of Applied Mechanics & Hydraulics,
National Institute of Technology Karnataka

SPONSORED RESEARCH PROJECTS

Title: Coastal Hazards of Saltwater Intrusion: Detection and Delineation along the Coastal Aquifers of Udupi Shoreline.
Funding Agency: Vision Group on Science and Technology, Department of IT, BT and S&T, Government of Karnataka.
Research Grant: ₹ 5 Lakhs
Time Period: 2019-2021

REFEREED JOURNAL PUBLICATIONS

- Yaseen, Z. M., Naganna, S. R., Sa'adi, Z., Samui, P., Ghorbani, M. A., Salih, S. Q., Shahid, S. (2020). Hourly river flow forecasting: Application of Emotional Neural Network versus Multiple machine learning paradigms. *Water Resources Management*, Published Online. DOI:10.1007/s11269-020-02484-w

- Kashani, M. H., Ghorbani, M. A., Shahabi, M., Naganna, S. R., Diop, L. (2020). Multiple AI model integration strategy - Application to saturated hydraulic conductivity prediction from easily available soil properties. *Soil & Tillage Research*, 196, 104449. DOI:10.1016/j.still.2019.104449

- Rezaie-balf, M., Naganna, S. R., Kisi, O., El-Shafie, A. (2019). Enhancing Streamflow Forecasting using the Augmenting Ensemble Procedure coupled Machine Learning Models: Case Study of Aswan High Dam. *Hydrological Sciences Journal*, 64(13), 1629-1646. DOI: 10.1080/02626667.2019.1661417

- Naganna, S. R., Deka, P. C., Ghorbani, M. A., Biazar, S. M., Al-Ansari, N., Yaseen, Z. M. (2019). Dew Point Temperature Estimation: Application of Artificial Intelligence Model Integrated with Nature-Inspired Optimization Algorithms. *Water*, 11(4), 742. DOI: 10.3390/w11040742.

- Naganna, S. R., Deka, P. C. (2019). Artificial Intelligence Approaches for Spatial Modeling of Streambed Hydraulic Conductivity. *Acta Geophysica*, 67(3), 891-903. DOI: 10.1007/s11600-019-00283-5.

- Naganna, S. R., Deka, P. C. (2018). Variability of Streambed Hydraulic Conductivity in an intermittent stream reach regulated by Vented Dams: A case study. *Journal of Hydrology*, 562: 477–491. DOI: 10.1016/j.jhydrol.2018.05.006.

- Deka, P. C., Patil, A. P., Kumar P. Y, Naganna, S. R. (2018). Estimation of Dew Point Temperature using SVM and ELM for Humid & Semi-Arid Regions of India. *ISH Journal of Hydraulic Engineering*, 24(2): 190–197. DOI: 10.1080/09715010.2017.1408037.

- Naganna, S. R., Deka, P. C., Sudheer Ch., Hansen, W. F. (2017). Factors Influencing Stream bed Hydraulic Conductivity & their implications on Stream-aquifer Interaction: A Conceptual review. *Environmental Science & Pollution Research*, 24(32): 24765–24789. DOI: 10.1007/s11356-017-0393-4.

- Rezaie-balf, M., Naganna, S. R., Ghaemi, A., Deka, P. C. (2017). Wavelet coupled MARS and M5 model tree approaches for groundwater level forecasting. *Journal of Hydrology*, 553: 356–373. DOI: 10.1016/j.jhydrol.2017.08.006.

- Javali, S., Chandrashekar, A. R., Naganna, S. R., Manu, D. S., Hiremath, P., Preethi, H. G., Vinod Kumar, N. (2017). Eco-Concrete for Sustainability: Utilizing Al Dross and Iron Slag as partial replacement materials. *Clean Technologies & Environmental Policy*, 19(9): 2291–2304. DOI: 10.1007/s10098-017-1419-9.

- Mailar, G., Naganna, S. R., Hiremath, P., Sreedhara, B. M., Manu, D. S. (2017). Sustainable utilization of discarded foundry sand & crushed brick masonry aggregate in the production of lightweight concrete. *Engineering Structures & Technologies*, 9(1): 52–61. DOI: 10.3846/2029882X.2017.1279987.

- Mailar, G., Naganna, S. R., Sreedhara, B. M., Manu, D. S., Hiremath, P., Jayakesh, K. (2016). Investigation of concrete produced using recycled aluminium dross for hot weather concreting conditions. *Resource-Efficient Technologies*, 2(2): 68–80. DOI: 10.1016/j.reffit.2016.06.006.

- Naganna, S. R., Deka, P. C. (2015). Forecasting monthly groundwater level fluctuations in coastal aquifers using hybrid Wavelet packet - Support vector regression. *Cogent Engineering*, 2(1), 999414. DOI: 10.1080/23311916.2014.999414.

- Naganna, S. R., Deka, P. C. (2015). Sustainable Development & Management of Groundwater Resources in Mining Affected Areas: A Review. *Procedia Earth and Planetary Science*, 11: 598–604. DOI: 10.1016/j.proeps.2015.06.061.

- Naganna, S. R., Deka, P. C. (2014). Support vector machine applications in the field of hydrology: A Review. *Applied Soft Computing*, 19: 372–386. DOI: 10.1016/j.asoc.2014.02.002.

REFEREED BOOK CHAPTERS

- Hiremath, P. N., Jayakesh, K., Rai, R., Naganna, S. R., Yaragal, S. C. (2019). Experimental Investigation on Utilization of Waste Shredded Rubber Tire as a Replacement to Fine Aggregate in Concrete. In: Sustainable Construction and Building Materials, *Lecture Notes in Civil Engineering*, 25: 561-569. Springer, Singapore. DOI:10.1007/978-981-13-3317-0_49.

- Naganna, S. R., Deka, P. C. (2016). Multistep ahead groundwater level time-series forecasting using gaussian process regression and ANFIS. In. *Advanced Computing and Systems for Security* (pp. 289–302). Springer, India. DOI: 10.1007/978-81-322-2653-6_19.

ACHIEVEMENTS
- Best Paper Award for the article titled 'Forecasting Monthly Groundwater Table Fluctuations in Coastal Aquifers using Support Vector Regression' presented at the International Multi Conference on Innovations in Engineering & Technology (2014), 21st-23rd August 2014 organized by Department of Civil Engineering, Vijaya Vittala Institute of Technology, Bangalore, Karnataka, India.
- Outstanding Reviewer of Journal of Hydrology – 2017 (Elsevier, IF-4.405)
- Nominated for *M.Tech Best Thesis Award (2015)* from the Department of Applied Mechanics and Hydraulics, National Institute of Technology Karnataka.
- MHRD **GATE Scholarship** during PG and Doctoral Study (2012 & 2014)
- Reviewer of Journal of Hydrology, Hydro-Environment Research, Engineering with Computers, Environmental Science and Technology, Hydrology Research, Stochastic Environmental Research and Risk Assessment, Water Resources Management, Environmental Earth Sciences, Water Science and Engineering, Applied Water Science, Environmental Engineering and Management Journal, Clean Technologies & Environmental Policy, International Journal of Information Technology and Decision Making etc.
- Citations: 337 ; h-index: 8 (As on 03/12/2019)
- ORCID: 0000-0002-0482-1936

SKILLS
Programming and Markup Languages
- MATLAB
- LATEX
Software Products
- MS Office
- ArcGIS
- WMS (Watershed Modeling Software)

PERSONAL DETAILS
- DOB: 30/04/1989
- Languages Known: Kannada, English, Hindi
- Place of Birth: Challakere, Chitradurga (Dist.), Karnataka

CONFERENCES & WORKSHOPS ATTENDED
- 21st International Conference on Hydraulics, Water Resources and Coastal Engineering, 8th-10th December 2016, CWPRS Pune.
- Workshop on 'Advanced Technologies for Waste Management', 6th-8th October 2016, NITK Surathkal, Mangalore.
- 20th International Conference on Hydraulics, Water Resources and Coastal Engineering, 17th-19th December 2015, IIT Roorkee.
- International Conference on Water Resources, Coastal and Ocean Engineering, 12th-14th March 2015, NITK Surathkal, Mangalore.
- Workshop on 'Recent trends in System Application as applied to Civil Engineering', 9th January 2015, NITK Surathkal, Mangalore.
- Symposium on 'Outstanding Issues for Hydrological Research in India', 21st October 2013, NITK Surathkal, Mangalore.
- Training program on 'Groundwater Flow & Contaminant Transport Modelling', December 2014 held at NIT Calicut.

Membership

- Member of International Association of Hydrological Sciences (IAHS)
- Member of Soft Computing Research Society (SCRS)
- Member of International Water Resources Association (IWRA)
- Member of Indian Society for Technical Education (ISTE)
- Member of Indian Concrete Institute (ICI)

References

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