

Curriculum Vitae

Name : **D Nagesh Kumar**
Address : Professor, Department of Civil Engineering
Indian Institute of Science, Bangalore – 560 012, India
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Date of Birth : 15 July 1963

Academic

Doctor of Philosophy (Ph D)

in Water Resources Systems on "*Integrated Modelling for Optimal Reservoir Operation for Irrigation*" in Civil Engineering Department, Indian Institute of Science, Bangalore. (1987-1992)

Master of Engineering (M E)

in *Hydrology and Water Resources Engineering* at Centre for Water Resources, Anna University, Madras. First class with Distinction. (1985-1987)

Bachelor of Technology (B Tech)

in *Civil Engineering*, V R Siddhartha Engineering College, Vijayawada, Nagarjuna University, Andhra Pradesh. First class with Distinction. (1980-1984)

Experience

Prof. Satish Dhawan Chair Professor, I.I.Sc., Bangalore (Oct 2018 to Oct 2021)

Chairman, *Centre for Earth Sciences*, I.I.Sc., Bangalore. (Mar 2014 to Jan 2020)

Visiting Professor in *EMSE*, Saint-Etienne, France. (Aug to Dec 2012)

Professor in Dept. of Civil Engg., I.I.Sc., Bangalore. (May 2008 to date)

Associate Professor in *Dept. of Civil Engg.*, I.I.Sc., Bangalore. (May 2002 to May 2008)

Associate Professor in *Dept. of Civil Engg.*, I.I.T., Kharagpur. (Aug 2000 to May 2002)

Visiting Faculty (BOYSCAST Fellow), Utah State Univ., USA. (Jan to July 1999)

Assistant Professor in *Civil Engg. Dept.*, I.I.T., Kharagpur. (Sept 1995 to Aug 2000)

Visiting Lecturer in *Civil Engg. Dept.*, I.I.T., Kharagpur. (Feb 1994 to Aug 1995)

Scientist, National Remote Sensing Agency, Hyderabad, India. (Sept 1992 to Jan 1994)

Awards & Distinctions

- ◆ **Fellow**, Indian Academy of Sciences, Jan 2022
- ◆ **Prof. Satish Dhawan Chair Professor Award**, IISc, 2018-21
- ◆ **IBM Faculty Award - 2012**
- ◆ **Editor-in-Chief**, *Journal of Water and Climate Change*, IWA Publishing, UK
- ◆ **Associate Editor**, *Journal of Hydrologic Engineering*, ASCE.
- ◆ **Reviewer** for more than 80 International journals and many funding agencies.
- ◆ **Expert Member**, for faculty selections in many IITs, NITs and Univs.
- ◆ **Projects Completed/ Ongoing**: Sponsored projects: 14 (~ Rs. 35 Crores); Consultancy projects: 12 (~ Rs. 1 Crore).

International Collaborations (representative):

- ◆ IRI for climate and Society and Columbia Univ., USA through Prof. Upmanu Lall.
- ◆ Dept of Civil Engg., Purdue Univ., USA through Prof G.S. Rao
- ◆ Univ of New South Wales, Sydney, Australia through Prof Ashish Sharma

Publications: 220 (Books: 8; Journals: 131; Book Chapters: 16; In Conf. Proceedings: 63)
(Complete list of publications is available at <http://civil.iisc.ac.in/~nagesh/publications.htm>)

Citations : 4,500; h-index : 38 (Source: SCOPUS; updated in Jan 2022)

Representative Publications:

1. **Impact of Climate Change on Water Resources - With Modeling Techniques and Case Studies**, K.Srinivasa Raju and D. Nagesh Kumar, Springer Climate Series, Springer, ISBN 978-981-10-6110-3, DOI: 10.1007/978-981-10-6110-3, pp. 275, 2017.
2. **Floods in a Changing Climate: Hydrologic Modeling**, P. P. Mujumdar and D. Nagesh Kumar, Cambridge University Press, U.K., ISBN-13: 9781107018761, 2012
3. **Multicriterion Analysis in Engineering and Management**, K. Srinivasa Raju and D. Nagesh Kumar, PHI Learning Pvt. Ltd., New Delhi, India, ISBN 978-81-203-3976-7, 2010, pp.288.
4. *An integrated model for optimal reservoir operation for irrigation of multiple crops*, S.Vedula and D.Nagesh Kumar, **Water Resources Research** of American Geophysical Union, Vol. 32, No. 4, April 1996, pp. 1101-1108.
5. *Ranking multi criterion river basin planning alternatives using Fuzzy numbers*, P.Anand Raj and D.Nagesh Kumar, **Fuzzy Sets and Systems**, Vol. 100, No. 1-3, Nov 1998, pp.89-99.
6. *Optimal irrigation planning - A multilevel approach*, Sabu Paul, S.N. Panda, and D. Nagesh Kumar, **J. Irrigation and Drainage Engg, ASCE**, Vol. 126, No. 3, 2000, pp. 149-156.
7. *Multi-site Disaggregation of Monthly to Daily Streamflow*, D. Nagesh Kumar, U. Lall and M.R. Peterson, **Water Resources Research**, Vol. 36, No. 7, July 2000, pp.1823-1833.
8. *Hydroclimatic teleconnection between global sea surface temperature and rainfall over India at subdivisional monthly scale*, Rajib Maity and D. Nagesh Kumar, **Hydrological Processes**, Wiley InterScience, Vol. 21, No. 14, July 2007, pp. 1802-1813.
9. *Optimal reservoir operation for irrigation of multiple crops using elitist-mutated particle swarm optimization*, M. Janga Reddy, D. Nagesh Kumar, **Hydrological Sciences Journal**, Vol. 52, No. 4, August 2007, pp. 686-701.
10. *Downscaling Precipitation to River Basin in India for IPCC SRES Scenarios Using Support Vector Machine*, Anandhi, A, V.V. Srinivas, R.S. Nanjundiah, D. Nagesh Kumar, **International Journal of Climatology**, Wiley InterScience on behalf of Royal Meteorological Society (RMetS), Vol. 28, No. 3, March 2008, pp. 401-420.
11. *Predictive Uncertainty of Chaotic Daily Streamflow using Ensemble Wavelet Networks Approach*, C.T. Dhanya and D. Nagesh Kumar, **Water Resources Research**, American Geophysical Union, Vol. 47, No. 6. W06507, 28 pp, June 2011.
12. *Review of Trend Detection Methods and their Application to Detect Temperature Changes in India*, Sonali P. and D. Nagesh Kumar, **Journal of Hydrology**, Elsevier, Vol. 476, pp. 212-227, 07 Jan 2013, DOI: 10.1016/j.jhydrol.2012.10.034
13. *Predictability of Nonstationary Time Series using Wavelet and EMD based ARMA Models*, L. Karthikeyan and D. Nagesh Kumar, **Journal of Hydrology**, Elsevier, 2013, Vol. 502, 103-119, 10 October 2013, DOI: 10.1016/j.jhydrol.2013.08.030
14. *A General Geomorphological Recession Flow Model for River Basins*, Basudev Biswal and D. Nagesh Kumar, **Water Resources Research**, American Geophysical Union, Wiley InterScience, Vol. 49, No. 8, pp. 4900-4906, 2013, DOI: 10.1002/wrcr.20379
15. *Four Decades of Microwave Satellite Soil Moisture Observations: Part I. A Review of Retrieval Algorithms*, L. Karthikeyana, Pan Ming, Niko Wanders, D. Nagesh Kumar and Eric F. Wood, **Advances in Water Resources**, Elsevier, Vol. 109, pp. 106-120, November 2017, DOI: 10.1016/j.advwatres.2017.09.006
16. *Simultaneous retrieval of global scale Vegetation Optical Depth, surface roughness, and soil moisture using X-band AMSR-E observations*, Karthikeyan L, Ming Pan, Alexandra G. Konings, Maria Piles, Roberto Fernandez-Moran, D. Nagesh Kumar and Eric F. Wood, **Remote Sensing of Environment**, Elsevier, Vol. 234, 111473, pp. 19, December 2019, DOI: 10.1016/j.rse.2019.111473
17. *Decline in terrestrial water recharge with increasing global temperatures*, Chandan Banerjee, Ashish Sharma and D. Nagesh Kumar, **Science of the Total Environment**, Elsevier, in print, pp. 1-10, 2020, DOI: 10.1016/j.scitotenv.2020.142913