

Krishna Rao

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EDUCATION

- Ph.D. in Earth System Science, Stanford University, USA *Mar, 2018 -*
 - GPA: 3.91/4.00 — Microwave remote sensing for forest health monitoring
- Master of Science in Civil and Environmental Engineering, Stanford University, USA *Sep, 2016- Mar, 2018*
 - GPA: 3.78/4.00 — Specialization in Environmental Fluid Mechanics and Hydrology
- Bachelor of Technology with Honors in Civil Engineering, IIT Madras, India *Aug, 2010- Jul, 2014*
 - GPA: 9.02/10.00 — Ranked 1 among 100 students in Department. 1 among 7 students to receive Honors

PUBLICATIONS

3. **Rao, K.**, Williams, A.P., Fortin Flefil, J., & Konings, A.G. (in revision). SAR-Assisted Mapping of Live Fuel Moisture Content. *Remote Sens. Environ.*
2. **Rao, K.**, Anderegg, W.R.L., Sala, A., Martinez-Vilalta, J. & Konings, A.G. (2019). Satellite-based vegetation optical depth as an indicator of drought-driven tree mortality. *Remote Sens. Environ.*, 227, 125136.
1. Konings, A.G., **Rao, K.** & Steele-Dunne, S.C. (2019). Macro to Micro: Microwave Remote Sensing of Plant Water Content for Physiology and Ecology. *New Phytol.*, nph.15808.

NON-PEER-REVIEWED PAPERS

5. Galbally, E., **Rao, K.** & Pacalin, Z. (2018). LeafNet: A Deep Learning Solution to Tree Species. *Deep Learning Course Project.* [Link](#)
4. **Rao, K.** (2018). The Sardar Sarovar Project- A failure of two bottom lines, uncertainty looms over the third. *Sustainable Water Resources Development Course Project.* [Link](#)
3. Zhen, S. & **Rao, K.** (2017). Fire Prediction in Southeast Asia. *Machine Learning Course Project.* [Link](#)
2. **Rao, K.** (2017). Can We Infer Seasons by Looking at Nature? *Ecophysiology and Land Surface Processes Course Project.* [Link](#)
1. Narasimhan, B. & **Rao, K.** (2014). Modelling storm-water with low resolution field data. *B.Tech., Honours, Thesis.* [Link](#)

PRESENTATIONS

9. American Geophysical Union Annual Fall Meeting, San Francisco, USA *2019*
8. Geo for Good Summit, Google, California, USA *2019*
7. IEEE International Geoscience and Remote Sensing Symposium, Yokohama, Japan *2019*
6. Hydrology Seminar, Stanford University *2019*
5. American Geophysical Union Annual Fall Meeting, Washington DC, USA [Poster only] *2018*
4. Hydrology Seminar, Stanford University *2018*
3. American Geophysical Union Annual Fall Meeting, New Orleans, USA [Poster only] *2017*
2. Honors defense, Indian Institute of Technology Madras, India *2014*
1. Campus Expansion Committee, Indian Institute of Technology Madras, India *2014*

HONORS AND AWARDS

- Awarded sustainability and Google Cloud project at TreeHacks- Stanford's biggest hackathon 2020
- Shell Foundation Award for monetary support to attend conferences 2020
- The Highly Inquisitive Award, Geo for Good Summit for Post-Wildfire Remote Damage Assessment 2019
- Community Impact Award for contributions to student-led public speaking programming at Stanford 2018
- Awarded travel grant for IEEE Geoscience and Remote Sensing Society annual conference 2019
- Awarded NASA Earth and Space Sciences Fellowship, among 56 chosen out of 423 applicant 2018
- Awarded K.C. Mahindra Scholarship for M.S. studies, among 40 chosen out of 1600 applicants 2016
- Awarded J.N. Tata Scholarship for M.S. studies, among 20 chosen out of 400 applicants 2016
- Awarded IIT Madras Institute Blues Silver, highest prize for all-round performance in University 2014
- Conferred L&T ECC Prize in recognition of securing 1st rank in Civil Engineering Department 2014
- Conferred K. M. Ramamurthy Prize for excelling in academics and extracurricular activities 2014

MENTORING & TEACHING

- Teaching Assistant for Remote Sensing of Hydrology, Stanford University 2019
- Mentored an undergraduate student in measuring tree water dynamics using microwave radar 2018 - 2019
- Mentored two Junior Field Engineers in performing safe operations at rig sites, Schlumberger, India 2016

PROFESSIONAL EXPERIENCE

Engineering Intern, Valor Water Analytics Location: San Francisco, USA Jun-Sep, 2017

- Improved precision of water meter rightsizing by 12% using machine learning and pattern-recognition
- Designed and built Storm Water Rate Simulator from scratch; currently in use by New York City DEP

Field Engineer, Schlumberger Ltd. Locations: UAE & India 2014-2016

- Facilitated improvement of average well-output for clients' complex geometry and aged boreholes
- Delivered 8 reservoir characterization projects, worth \$90k-\$100k each, with a clean safety record
- Declared *Best Team Player* out of 18 fellow engineers in recognition of efforts to build camaraderie

LEADERSHIP

- **Chair, Talk of the Farm Speaking Club, Stanford University** 2020-
 - Created new opportunities for students, staff and faculty for improving communication skills
- **Core Team Member, Centre for Innovation, IIT Madras** 2011-2014
Student run Innovation Lab with 8 technical clubs [HomePage](#)
 - Spearheaded exponential growth in footfall from 230 to 500 students and raised annual budget of \$40k
 - Project leader for fastest robots at nationals of ABU Robocon (largest Asia Pacific Contest) [Video](#)
- **Institute Swimming Captain, IIT Madras** 2012-2013
 - Won 33 medals including 9 golds in swimming and water polo at national and collegiate championship
 - Led first ever institute team to secure double gold in senior state and Inter-IIT National Championships

COMMUNITY

- Published educational resources and bicycle travel journeys for top publications [Blog](#)