

# 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
- Youngest to execute high profile remote operations on exploratory well; upheld record of zero failures
- 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](#)