

## Venkataraman (Venkat) Lakshmi

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### PROFESSIONAL PREPARATION

Princeton University	Ph.D., Civil and Environmental Engineering, 1996
University of Iowa	M. S., Civil and Environmental Engineering, 1989
Indian Institute of Technology, Roorkee	B.E., Civil Engineering (Honors), 1987

### APPOINTMENTS

2019-	Professor, Engineering Systems and Environment, University of Virginia
2017-2018	Program Director, Hydrologic Sciences, National Science Foundation
2015-2016	Cox Visiting Professor, Department of Geophysics, Stanford University
2015	Visiting Professorial Fellow, School of Civil and Environmental Engineering, University of New South Wales, Australia
2006-2018	Professor, Department of Earth and Ocean Sciences University of South Carolina
2008-2011	Chairman Department of Earth and Ocean Sciences University of South Carolina
2006-2007	Cox Visiting Professor, Department of Geophysics, Stanford University
1999-2006	Assistant, Associate and Full Professor, Department of Earth and Ocean Sciences University of South Carolina
1996-1999	NASA Goddard Space Flight Center Research Scientist
1990-1996	Research Assistant, Civil and Environmental Engineering, Princeton University
1987-1990	Research and Teaching Assistant, Civil and Environmental Engineering, University of Iowa

### AWARDS AND HONORS

- (1) Professional Engineer (PE), State of Maryland, Registration # 25394, 2002-present
- (2) Senior Member, Institute of Electrical and Electronic Engineers, 2002-present
- (3) NASA Group Achievement Award for the AQUA Mission 2003
- (4) Cox Visiting Professor, Stanford University, 2006-2007; 2015-2016
- (5) William Mong Visiting Research Fellowship, University of Hong Kong 2010
- (6) Mortar Board Award for Excellence in Teaching, University of South Carolina, 2010-2011
- (7) NASA Group Achievement Award for the SMAP Validation Experiment 2013
- (8) Outstanding Associate Editor, Vadose Zone Journal 2014
- (9) Carolina Trustee Professor, University of South Carolina 2016
- (10) Nanshan Distinguished Lecture on the Environment, Southern University of Science and Technology, May 2017, November 2019
- (11) Fellow, American Society of Civil Engineers, 2018
- (12) Fellow, Geological Society of America, 2020

### EDITORIAL APPOINTMENTS

Editor, EOS, Transactions of American Geophysical Union, 2001-2006; Associate Editor, Water Resources Research, 1997-2001; Associate Editor, Journal of Geophysical Research (Atmospheres), 2001-2003; Associate Editor, Journal of Hydrologic Engineering, 2004-2007; Associate Editor, Journal of Hydrology, 2007-present; Editor, Vadose Zone Journal, 2014-present. Editorial Board, Remote Sensing, Springer Books; Editor-in-Chief Remote Sensing in Earth System Science, Springer

### SERVICE AND PROFESSIONAL ACTIVITIES

- (1) Chair AGU Chapman conference Program (2013-2015), Member AGU Meetings Committee (2013-2015), Chair, Trans-disciplinary Meetings Committee (2014-2016), AGU Hydrology Section, Fall Program Co-Chair, 2006-2008; Chairman, Remote Sensing Technical Committee, AGU 2000-2004; AGU Executive Committee of Geoscience Department Chairs (2009-2011). Over 20 special sessions at AGU Fall and Spring Meetings

- (2) General Chair, AGU Chapman Conference on “Remote Sensing of the Terrestrial Water Cycle”, Kona Hawaii, February 2012
- (3) General Chair, Southeastern Geological Society of America (SEGSA) Meeting, Columbia SC, March-April 2016; Southeastern Geological Sciences Association Management Board Vice-Chair: 2015-2016; Chair-Elect: 2016-2017; Chair 2017-2018
- (4) IEEE Chairman, User Applications Committee, IEEE, 2003-2005
- (5) NSF Member, Board of Directors, Consortium of Universities for Advancement of Hydrological Sciences (CUAHSI), NSF, 2006-2009
- (6) Advisory Board Member, Southeastern Conference (SEC) “Water for Sustainable Ecosystems, Economies and Communities: An Interactive Symposium”, 2015
- (7) Member, Global Hydrology and Water Resources Panel, National Academy Decadal Survey, Earth Science Applications from Space; Chair, Workshop Planning Committee, National Academies, Workshop, Water Science and Technology Board on “Groundwater Recharge and Flow: Approaches and Challenges for Monitoring and Modeling Using Remotely Sensed Data”, October 2018-April 2019; Member, Water Science and Technology Board, National Academy of Sciences, 2020-2023 and member of the Earth Science Advisory Committee for NASA.

#### RECENT JOURNAL PUBLICATIONS (Italics indicates student authors)

- (1) Fang, B., **V. Lakshmi**, R. Bindlish, T. Jackson, M. Cosh and J. Basara, Passive Microwave Soil moisture downscaling using vegetation index and surface temperatures, *Vadose Zone Journal*, doi:10.2136/vzj2013.05.0089, 2013
- (2) Fang, B., **Lakshmi, V.**, Soil Moisture at Watershed Scale: Remote Sensing Techniques (2014), *Journal of Hydrology*, 516 (2014) pp. 258–272
- (3) Billah, M. M., J. Goodall, U. Narayan, J. Reager, **V Lakshmi** and J. Famiglietti, A methodology for evaluating evapotranspiration estimates at the watershed-scale using GRACE, *Journal of Hydrology* (2015), doi: <http://dx.doi.org/10.1016/j.jhydrol.2015.01.06>, Vol. 523, pp. 574-586
- (4) *Libertino, A., A Sharma, V Lakshmi* and P Claps, Ability of TRMM and GPM to characterize timing of extreme precipitation, 11(5):054003. DOI:10.1088/1748-9326/11/5/054003, *Environmental Research Letters*, 2016
- (5) **Lakshmi, V.** Beyond GRACE: Use of satellite for groundwater investigations, Technical Note, *Groundwater*, doi: 10.1111/gwat.12444, 2016

#### BOOKS

- (1) **Lakshmi, V.**, J Schaake and J Albertson, Land Surface Hydrology, Meteorology and Climate: Observations and Modeling, AGU Monograph, Chief Editor, Print ISBN: 9780875903521, 246pp, American Geophysical Union, Washington DC, 2001
- (2) **Lakshmi, V.**, D Alsdorf, M Anderson, S Biancamaria, M Cosh, J Entin, G. Huffman, W Kustas, P van Oevelen, T Painter, J Parajka, M Rodell, C Rüdiger, Remote Sensing of the Terrestrial Water Cycle, Editor-in-Chief, John Wiley Books, 576pp, ISBN: 978-1-118-87203-1, American Geophysical Union, 2015
- (3) **Lakshmi, V.**, Remote Sensing of hydrological extremes, Springer Books, ISBN 978-3-319-43743-9, 255 pages, 2016
- (4) Gemitzi, A., N Koutsias and **V Lakshmi**, Advanced Environmental Monitoring with Remote Sensing Data and R, CRC Press, 2019

#### ADVISORS AND SUPERVISORS

Witold Krajewski (MS) Eric Wood (PhD) Joel Susskind (NASA)

#### Graduated PhD students

Lizbeth Guijarro, John Bolten, Ujjwal Narayan, Sengbum Hong, Iliana Mladenova, Bin Fang, Jessica Sutton, Reyadh AlBarakat, Adil Alshammari, Hyunglok Kim, Manh-Hung Le, Prakrut Kansara

#### Current PhD students

Chelsea Dandridge, Runze Zhang, Gigi Pavur, Robin Kim, Benjamin Goffin, Jessica Besnier, Duc Tran, Sophia Bakar, Daniela Quintero, Avery Walters, Aashutosh Aryal

#### Past and current postdoctoral research associates

Current – Bin Fang; Past – Reyadh AlBarakat, Arun Mondal, Sananda Kundu, Srinivas Chintalapati