

**SAINATH SURYANARAYANAN**

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Environmental Sociology  
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**PERSONAL INFORMATION**

Nationality	Indian
Immigration Status	U.S. Permanent Residency

**EDUCATION**

Graduate	University of Wisconsin-Madison, Madison, WI Degree: Ph.D., August 2009 Major: Zoology Minor(s): <b>Science &amp; Technology Studies</b> ; Entomology Thesis: Vibrational Behaviors in the Eusocial Wasps  Degree: Master of Science, December 2002 Field: Molecular & Cellular Pharmacology Thesis: DNA Damage Induced Cellular Signal Transduction
Undergraduate	St. Andrews Presbyterian College, Laurinburg, NC Degree: Bachelor of Science, May 2000 Majors: Biology (Honors), Chemistry

**EMPLOYMENT**

***Research***

September 2014-	<b>Assistant Scientist</b> Department of Community & Environmental Sociology University of Wisconsin-Madison, Madison, WI
June-August 2013 June-August 2014	<b>Carson Fellow</b> Rachel Carson Center for Environment & Society Ludwig Maximilian University, München, Germany
September 2009-	<b>National Science Foundation Postdoctoral Scholar</b>

August 2014 Department of Community & Environmental Sociology  
University of Wisconsin-Madison, Madison, WI

February 2010-2011 **US Department of Agriculture Postdoctoral Scientist**  
Department of Entomology  
University of Minnesota, St. Paul, MN

July 2000-  
December 2002 **Research Assistant**  
Department of Pharmacology  
University of Wisconsin-Madison, Madison, WI

### ***Teaching***

January-May 2013  
January-May 2014 **Lecturer**  
'Environment, Natural Resources & Society'  
Department of Community & Environmental Sociology  
University of Wisconsin-Madison

January-May 2009 **Associate Lecturer**  
'Where Science Meets Society'  
Holtz Center for Science & Technology Studies  
University of Wisconsin-Madison

August-December 2008 **Teaching Assistant**  
'Extinction of Species'  
Department of Wildlife Ecology  
University of Wisconsin-Madison

January 2004-  
May 2008 **Teaching Assistant**  
'Animal Biology Laboratory'  
Department of Zoology  
University of Wisconsin-Madison

January-June 2003 **Project Assistant**  
'Transforming Teaching Through Technology'  
Division of Informational Technology  
University of Wisconsin-Madison

### **HONORS/AWARDS/FELLOWSHIPS**

#### ***Research***

June-August 2013, 2014 Carson Fellow, Rachel Carson Center for Environment &  
Society, 'Be(e)ing Human: The Socio-historical Dimensions  
of Collapsing Beehives,' \$27,594

September 2013-2015	National Science Foundation, Science, Technology & Society Program, Standard Grant, 'A Transdisciplinary Deliberative Model for Just Research and Policy: Toward Resolving the Crisis of Vanishing Insect Pollinators,' D.L. Kleinman (PI), S. Suryanarayanan (Senior Personnel), \$303,650
September 2009-March 2013	National Science Foundation, Science, Technology & Society Program, Standard Grant, 'Finding Sustainable Solutions to Honey Bee Health,' D.L. Kleinman (PI), S. Suryanarayanan (Senior Personnel), \$215,421
2007-2009	National Science Foundation, Division of Integrative Organismal Biology, Doctoral Dissertation Improvement Grant, R.L. Jeanne (PI), S. Suryanarayanan (Co-PI), \$6,270
2009	Graduate Student Travel Award, Holtz Center for Science & Technology Studies, University of Wisconsin-Madison, \$1,000
2007	John Jefferson Davis Fund for Research and Travel, Department of Zoology, University of Wisconsin-Madison, \$2,350
2007	Vilas Travel Fellowship, Graduate School, University of Wisconsin-Madison, \$600
2003	Tinker-Nave Field Research Grant, Department of Latin American, Caribbean & Iberian Studies, University of Wisconsin-Madison

### **Teaching**

2008	College of Letters & Science Teaching Fellow, University of Wisconsin-Madison, \$1,000
2008	MERLOT Classics Award to team led by Robert Jeanne and Jan Cheetham for developing "exemplary" online learning resource, 'Connecting concepts: Interactive lessons in Biology'

### **BOOK**

- 1) **Suryanarayanan, S.** and Kleinman, D.L. Forthcoming. *Vanishing Bees: The Science and the Politics*, New Jersey: Rutgers University Press.

### **ARTICLES**

- 1) Kleinman, D.L. and **Suryanarayanan, S.** Forthcoming. 'Ignorance and Industry: Agrichemicals and honey bee deaths', in *Routledge International Handbook of Ignorance*

*Studies*, eds. M. Gross and L. McGoey, Routledge, 20 manuscript pages.

- 2) **Suryanarayanan, S.** and Beilin, K.O. Forthcoming. 'Still Different?: Biotechnology, Politics and Culture in Spain' In *Debates on Life in Contemporary Spain*, eds. K. Beilin and W. Vistienz, University of Minnesota Press, *Hispanic Issues On Line*, 36 manuscript pages.
- 3) **Suryanarayanan, S.** (2014) 'On an Economic Treadmill of Agriculture; Efforts to Resolve Pollinator Decline', Invited chapter in *Controversies in Science and Technology: From Sustainability to Surveillance*, Volume 4, eds. D.L. Kleinman, K. Cloud-Hansen and J. Handelsman, New York: Oxford University Press, 259-268.
- 4) **Suryanarayanan, S.**, and Kleinman, D.L. (2014) 'Beekeepers' Collective Resistance and the Politics of Pesticide Regulation in France and the United States', Invited Paper, In *Fields of Knowledge: Science, Politics and Publics in the Neoliberal Age*, eds. Scott Frickel, David J. Hess, Emerald Group Publishing Limited, *Political Power and Social Theory* 27: 89-122.
- 5) **Suryanarayanan, S.** (2013) 'Balancing Control and Complexity in Field Studies of Neonicotinoids and Honey Bee Health', *Insects* 4(1): 153-167.
- 6) **Suryanarayanan, S.**, and Kleinman, D.L. (2013) 'B(e)coming Experts: The Controversy Over Insecticides in the Honey Bee Colony Collapse Disorder', *Social Studies of Science* 43(2): 215-240.
- 7) Kleinman, D.L. and **Suryanarayanan, S.** (2013) 'Dying Bees and the Social Production of Ignorance', *Science, Technology & Human Values* 38(4): 492-517.
- 8) **Suryanarayanan, S.**, and Kleinman, D.L. (2011) 'Disappearing Bees and Reluctant Regulators', *Issues in Science and Technology* 27(4): 31-36.
- 9) Jeanne, R.L. and **Suryanarayanan, S.** (2011) 'A New Model for Caste Development in Social Wasps', Invited Review, *Communicative & Integrative Biology* 4(4): 373-377.
- 10) **Suryanarayanan, S.**, Hermanson, J.C., and Jeanne, R.L. (2011) 'A Mechanical Signal Biases Caste Development in a Social Wasp', *Current Biology* 21(3): 231-235.
- 11) **Suryanarayanan, S.**, Hantschel, A.E., Torres, C.G., and Jeanne, R.L. (2011) 'Changes in the Temporal Pattern of Antennal Drumming Behavior Across the *Polistes fuscatus* Colony Cycle (Hymenoptera: Vespidae)', *Insectes Sociaux* 58(1): 97-106.
- 12) **Suryanarayanan, S.**, and Jeanne, R.L. (2008) 'Antennal drumming, Trophallaxis, and Colony Development in the Social Wasp *Polistes fuscatus* (Hymenoptera: Vespidae)', *Ethology* 114: 1201-1209.
- 13) Huang, T.T., Feinberg, S.L., **Suryanarayanan, S.**, and Miyamoto, S. (2002) 'The Zinc Finger

Domain of NEMO is Selectively Required for NF-kappa B Activation by UV Radiation and Topoisomerase Inhibitors', *Molecular Cell Biology* 22(16): 5813-25.

## OTHER PUBLICATIONS

- 1) Kleinman, D.L. and **Suryanarayanan, S.** (2013) 'Honey Bees Under Threat: A Political Pollinator Crisis', Invited, *The Guardian* (UK), 8 May. Available at: <http://www.guardian.co.uk/science/political-science/2013/may/08/honey-bees-threat-political-pollinator-crisis>

## SELECTED PRESENTATIONS AND DELIVERED PAPERS

- 1) "Still Different?: Biotechnology, Politics and Culture in Spain", with Katarzyna Beilin at the Mid-America Conference on Hispanic Literature, Panel on 'Debates on Ethics of Life in Contemporary Spain', University of Wisconsin-Madison. October 2014.
- 2) "Vanishing Bees in Social Space: The Politics of Apiary Knowledge", **Invited** Panelist with Jake Kosek, UC-Berkley; Sarah Watson, University of Kentucky; Chloe Silverman, Drexel University; Jennie Durant, UC-Berkley, Annual Meeting of the Association of American Geographers, Tampa, Florida. April 2014.
- 3) "Vanishing Bees and Climate Change", Guest Lecture, Environmental Studies: The Social Perspective, Nelson Institute for Environmental Studies, University of Wisconsin-Madison. April 2014.
- 4) "The Controversy Over Systemic Insecticides and Vanishing Honey Bees", Guest Lecture, Pollination Biology course, Department of Entomology, University of Wisconsin-Madison. February 2014.
- 5) "No Trespassing! Going Trans- in a Still-Disciplinary World", **Invited**, Center for 21st Century Studies, Transdisciplinary Challenge Grant Program Seminar, University of Wisconsin-Milwaukee. November 2013.
- 6) "Incorporating STS into careers in a variety of fields", Panel discussion, **Invited**, Holtz Center for Science & Technology Studies Brown Bag Series, University of Wisconsin-Madison, WI. October 2013.
- 7) "Be(e)ing Human: A Social History of Collapsing Beehives in the United States", **Invited**, Rachel Carson Center for Environment & Society's Lunchtime Colloquium, Ludwig-Maximilian University, Munich, Germany. July 2013.
- 8) "Beekeepers' Collective Resistance and the Politics of Pesticide Regulation in France and the United States", **Invited** with Daniel Lee Kleinman at the Political Sociology of Science Workshop, University of Wisconsin-Madison. June 2012.

- 9) “Finding Sustainable Solutions to Honey Bee and Pollinator Health”, **Invited**, Entomology Seminar Series, Department of Entomology, University of Wisconsin-Madison. April 2012.
- 10) Panel Debate on Primates in Biomedical Research, **Invited**, Undergraduate course in Human/Animal Relationships. Department of Zoology, University of Wisconsin-Madison. April 2012.
- 11) Animal Studies Panel Discussion of the film “Divine Pig”, **Invited**, ‘Tales from Planet Earth’ Film Festival. Center for Culture, History and Environment, University of Wisconsin-Madison. March 2012.
- 12) “The Human Dimensions of Honey Bee Health”, **Invited**, Winter Conference of the Dane County Beekeepers’ Association, Madison, WI. February 2012.
- 13) “Bioscientific Fields and Human/Animal Boundaries”, **Invited**, ‘Disciplines of Animal Studies’ Colloquium, University of Wisconsin-Madison, WI. November 2011.
- 14) “B(e)ing Experts: Science, Beekeeping and the Politics of Expertise”, Annual Meeting of the Society for the Social Studies of Science, Cleveland, OH. November 2011.
- 15) “B(e)coming Experts: The Controversy Over Insecticides in the Honey Bee Colony Collapse Disorder”, **Invited**, Holtz Center for Science & Technology Studies Brown Bag Series, University of Wisconsin-Madison, WI. October 2011.
- 16) “Vanishing Bees: Colony Collapse Disorder and the Social Production of Ignorance”, **Invited** with Daniel Lee Kleinman, Center for Humanities, University of Wisconsin-Madison, WI. February 2011.
- 17) “Assessment of Risk to Honey Bees: Pesticides and Floral Landscapes”, Co-presented with Vera Krischik. Minnesota Honey Producers Association Annual Meeting, Mankato, MN. July 2010.
- 18) “Honey Bees and Colony Collapse Disorder” Guest Lecture, Sociology of Science course, Department of Sociology, University of Wisconsin-Madison, WI. February 2010.
- 19) “Finding Sustainable Solutions to Honey Bee Health”, with Daniel Lee Kleinman, Annual Meeting of the Society for the Social Studies of Science, Washington DC. October/November 2009
- 20) “Finding Sustainable Solutions to Honey Bee Health”, 4th International Conference on Interdisciplinary Social Sciences, Athens, Greece. July 2009.
- 21) “The Human/Animal Divide”, **Invited** with Mario Ortiz-Robles. ‘What is Human?’ Friday Lunch Series, Center for Humanities, University of Wisconsin-Madison. March 2009.

- 22) “Rethinking Nature: Implications for the Environmental Sciences” **Guest** Lecture, ‘Extinction of Species’ course, Department of Wildlife Ecology, University of Wisconsin-Madison. December 2008.
- 23) “Triage of Humans, Animals and Insects”, Panelist with Mario Ortiz-Robles and Hans Adler, ‘What is Human?’ Symposium, Center for Humanities, University of Wisconsin-Madison. March 2008.
- 24) “Violence On the Human and Non-human Other in Modern Technoscientific Cultures”, **Invited**, Technology and Governance Conference, Indian Institute of Management, Bangalore, India. December 2007.
- 25) “Vibrational signals influence development in *Polistes* wasps”, **Invited** with Robert L. Jeanne, Symposium for ‘Honoring Hölldobler and Wilson by Celebrating the Social Insects’, Annual Meeting of the Entomological Society of America, Indianapolis, IN. December 2009.
- 26) “A Novel Role for Vibrational Signaling in a Social Insect”, **Invited** with Robert L. Jeanne, Evolutionary Seminar Series, University of Wisconsin-Madison. March 2009.
- 27) “Learning in Insects”, Guest Lecture, Insect Behavior course, Department of Entomology, University of Wisconsin-Madison. February 2009.
- 28) “A Primer Model for the Onset of Antennal Drumming in *Polistes*”, Annual Entomological Society of America meeting, San Diego, CA. December 2007.
- 29) UW Teaching Academy Winter Retreat, **Invited**, University of Wisconsin-Madison. January 2009.
- 30) “Acclimating International TAs”, College of Letters & Science Teaching Assistant Workshops, University of Wisconsin-Madison. August 2008.

## **MEDIA COVERAGE OF RESEARCH**

### ***Postdoctoral research***

1. Stentz, Molly. 2013. “The Mystery of Dying Bees: Madison Beekeepers, UW Researchers Look For Answers”, *Isthmus* (Cover Story), June 13.  
<http://www.thedailypage.com/daily/article.php?article=40154>
2. Sakai, Jill. 2013. “Protecting Our Pollinators”, *Grow: Wisconsin’s Magazine for the Life Sciences* (Featured Article), 6(3): 16-21.
3. WORT 89.9FM. ‘8 O’Clock Buzz: Bees and Agrichemicals, the Food Supply, Politics, Sociology and International Law,’ May 13, 2013. [www.wortfm.org/bees-and-agrichemicals-the-food-supply-politics-sociology-and-international-law/](http://www.wortfm.org/bees-and-agrichemicals-the-food-supply-politics-sociology-and-international-law/)
4. WISC-TV. “Live at Five: UW Researchers Study Honey Bee Deaths”, May 13, 2013.  
<http://video.channel3000.com/watch.php?id=49808>

## ***Doctoral research***

1. Research Highlights. 2011. “Drummed Into Submission”, *Nature* 470 (February 3): 9.
2. Sakai, Jill. 2011. “Marching to the Music”, *Grow*, Summer Issue.
3. Frail, T.A. et al. 2011. “Drum Beat”, *Smithsonian Magazine*, April.
4. “Drumming Wasps”, *Science Update: The Science Radio News Feature of the AAAS*, February 17, 2011. [www.scienceupdate.com/2011/02/drumming-wasps/](http://www.scienceupdate.com/2011/02/drumming-wasps/)
5. University of Wisconsin News, “Rhythmic Vibrations Guide Caste Development in Social Wasps”, January 24, 2011. [www.news.wisc.edu/18877](http://www.news.wisc.edu/18877)

## **UNDERGRADUATE MENTORING: STUDENT RESEARCH**

Gbemisola Famule (2014, Community & Environmental Sociology); Noah C. Pearce (2011, Sociology); Carlos Torres (2007-2008, Psychology and The McNair Scholars Program for low-income, first-generation, and underrepresented undergraduate students); Amy Hantschel (2007-2008, Zoology); Theresa Cira (2008, Entomology); Scott Bramwell (2007, Zoology); Gerald Elliott (2007, Zoology); Alex Heeren (2007, Zoology); Julia Hoeh (2007, Zoology); Carl Kaiser (2007, Zoology); Victoria Konicek (2007, Zoology); Nicholas Propson (2007, Zoology); Matthew Ruebl (2007, Zoology); Adam Stone (2007, Zoology); Lindsay Traeger (2007, Zoology); Jeremy Tupper (2007, Zoology); Megan Wanzek (2007, Zoology); Jessica Bartlett (2006, Zoology); Vanessa Machen (2006, Zoology); Jeff Rolling (2006, Zoology); Shail Shah (2006, Zoology); and Wa Vang (2006, Zoology).

## **SUPERVISION OF EMPLOYEES**

### ***Teaching***

Course Title: Environment, Natural Resources & Society

Employee Position: Grader

Yifei Li (2013, Graduate student, Community & Environmental Sociology, UW-Madison), Caitlin Henning (2014, Graduate student, Agro-ecology Program, UW-Madison)

### ***Research***

Employee Position: Bee Research Assistant

Mark Evans (2014, Beekeeper), Kirsten King (2014, Badger Rock Elementary School teacher), Krysta Koralesky (2014, Graduate student, Environmental Studies, UW-Madison), Heather Swan (2014, Graduate student, English, UW-Madison)

Employee position: Field Note-taker

Heather Swan (2014, Graduate student, English, UW-Madison)

## **SYNERGISTIC ACTIVITIES**

- “Representing Animals: Philosophy, History and Film”, Mellon Faculty Development Seminar led by Professor Mario Ortiz-Robles, Center for Humanities, University of Wisconsin-Madison, Fall 2014.



- “Environmental Studies in the Time of the Anthropocene”, Mellon Faculty Development Seminar led by Dr. Robert Nixon, Rachel Carson and Elizabeth Ritzmann Professor of English, Center for Humanities, University of Wisconsin-Madison, September-December 2013.
- Associate Staff, Center for Integrative Agricultural Systems, University of Wisconsin-Madison, January 2013-Present.
- Honorary Associate, Nelson Institute for Environmental Studies, University of Wisconsin-Madison, January 2013-Present.
- Collaborator with Dr. Russell Groves (Department of Entomology, UW-Madison) on a US Department of Agriculture Small Business Innovation Research Sub-Award from Orbital Technologies Corporation (Middleton, WI) to the University of Wisconsin-Madison, “Support for Orbitec’s LEDs for Managing Pest Insects in Greenhouses-Phase 2”
- Animal Studies, Mellon Faculty Seminar, Center for Humanities, University of Wisconsin-Madison, 2011-2012.
- Consultant, “Taking Animals Apart: Exploring Interspecies Enmeshment in a Biotechnological Era”, Graduate Student Workshop proposal funded by Holtz Center for Science & Technology Studies, University of Wisconsin-Madison, 2012.
- Invited Referee for: *Environmental Sociology*, *Controversies in Science & Technology*, *Insectes Sociaux*, *Naturwissenschaften*, *Journal of Insect Science*, *SpringerPlus*.
- Consultant, “Epigenetic, Transcriptomic, and Behavioral Impacts of a Maternal Signal During Wasp Caste Development”, National Science Foundation grant, PIs: Robert L. Jeanne (Emeritus Professor, Zoology, UW-Madison) and Amy Toth (Assistant Professor, Evolution, Ecology & Behavior, Iowa State University), April 2012-Present.

## **MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS**

- Society for the Social Studies of Science
- Association of American Geographers
- Entomological Society of America
- Wisconsin Honey Producers Association
- International Union for the Study of Social Insects