

# Nikunj Goel

## Curriculum Vitae

Dept. of Ecology and Evolutionary Biology  
Yale university, New Haven, 06511, USA  
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### Research Interest

I am broadly interested in understanding distribution patterns of organisms across space and time, and the ecological and evolutionary processes that generate those patterns. At Yale, I am working towards understanding how spatial processes, such as dispersal, affects distribution patterns and resilience of savanna and forest at continental scales, using a combination of theoretical and empirical approaches.

### Education

- 2018 **MS in Ecology and Evolutionary Biology**, Yale University, New Haven, CT, 06511, USA.
- 2015 **BSc in Physics (major) and Environmental Sciences (minor)**, Indian Institute of Science, Bangalore, 560012, India.

### Publications

- In prep. **Goel, N.**, Vleck, E. V & Staver, A. C. Paleo evidence and spatial model do not support the island-wide forest claim in Madagascar.
- In review at AmNat. **Goel, N.**, Guttal, V., Levin, S. A, & Staver, A. C. Dispersal increases the resilience of tropical savanna and forest distributions
- 2016 Guttal, V.\*, Raghavendra, S.\*, **Goel, N.\***, & Hoarau, Q. Lack of critical slowing down suggests that financial meltdowns are not critical transitions, yet rising variability could signal systemic risk. PloS one, 11(1), e0144198.  
\* All these authors contributed equally to the work. This article was covered by *Nature India* and *Deccan Herald*.

### Awards and honors

- 2016 Ton Damman Award (\$500)  
Vegetation section, Ecological Society of America
- 2016 Volterra Award (\$150)  
Theory Section, Ecological Society of America
- 2016 & 2017 Poster presentation award  
Annual Graduate Student Symposium at EEB, Yale University
- 2013 Awarded 1<sup>st</sup> prize in *Mathematics of Planet Earth* (MPE) competition, aimed at promoting mathematical research on various natural processes (\$300).  
TIFR Centre For Applicable Mathematics, Bangalore
- 2011-2015 Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship (\$5,200)  
National Science Fellowship, Department of Science and Technology, Government of India

### Grants and Funding

- 2018 Grant to attend Complex Systems Summer School at Santa Fe Institute (\$5000)  
Yale Institute for Biospheric Studies, Yale University

- 2017 RMSC Travel fund (\$300)  
Department of Mathematics and Statistics, University of North Carolina at Greensboro
- 2016 AISC Travel fund (\$300)  
Department of Mathematics and Statistics, University of North Carolina at Greensboro
- 2016 Department Chair's Fund (\$1,000)  
Department of Ecology and Evolutionary Biology, Yale University

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## Technical skills

- Mathematics Ordinary/Partial Differential Equations | Linear Algebra | Calculus | Fourier Analysis | Numerical Methods
- Programming R | Shiny | Matlab | C

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## Teaching

- Spring 2018 TA for Plant Ecology (EEB 305), EEB, Yale University
- Spring 2017 TA for Introduction to Statistics: Life Sciences (EEB 210), EEB, Yale University
- Spring 2016 TA for Ecology and Evolutionary Biology (BIOL 104), EEB, Yale University

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## Presentations

- Nov 2018 Biophysics group at Department of Physics, Boston University.
- Nov 2017 Annual Regional Mathematics and Statistics Conference, UNCG.
- May 2017 Ecology and Evolutionary Biology, Annual Graduate Student Symposium, Yale **First Place**
- Jan 2017 Undergraduate Department, Indian Institute of Science
- Jan 2017 Center for Ecological Sciences, In-House Symposium, Indian Institute of Science
- Sep 2016 International Conference on Advances in Interdisciplinary Statistics and Combinatorics, UNCG
- Aug 2016 Ecological Society of America Annual Meeting, Florida. **Volterra and Ton Damman Award**
- May 2016 Ecology and Evolutionary Biology, Annual Graduate Student Symposium, Yale **Second Place**

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## References

**Dr. Alvaro Sanchez**, Department of Ecology and Evolutionary Biology, Yale University, New Haven, Connecticut, 06511, USA. Email: [alvaro.sanchez@yale.edu](mailto:alvaro.sanchez@yale.edu)

**Dr. Vishwesh Guttal**, Centre for Ecological Sciences, Indian Institute of Science, Bangalore, Karnataka, 560012, India. Email: [guttal@ces.iisc.ernet.in](mailto:guttal@ces.iisc.ernet.in)

**Dr. David Vasseur**, Department of Ecology and Evolutionary Biology, Yale University, New Haven, Connecticut, 06511, USA. Email: [david.vasseur@yale.edu](mailto:david.vasseur@yale.edu)