

# Nikunj Goel

## Curriculum Vitae

Department of Statistics and Data Sciences  
The University of Texas at Austin  
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### Professional Positions

2023-present **Postdoctoral Researcher** at Department of Statistics and Data Sciences, The University of Texas at Austin  
PI: Mevin B. Hooten

### Education

2019-2023 **PhD** in Ecology, Evolution, and Behaviour, The University of Texas at Austin  
Advisor: Timothy H. Keitt  
2015-18 **MS** in Ecology and Evolutionary Biology, Yale University  
Advisor: Stephen C. Stearns  
2011-15 **BSc** in Physics (major) and Environmental Sciences (minor), Indian Institute of Science  
Advisor: Vishwesha Guttal

### Publications

- In prep **Goel N.**, Liebhold A. M., Bertelsmeier C., Korolev K. S., Hooten M. B., & Keitt T. H. A predictive theory of human-mediated biological invasions.
- In prep **Goel N.\***, Comerford M\*, Bernat A., Egan S.P., Juenger T. E., & Keitt T. H. Non-random recolonization after a hurricane yields rapid evolution by spatial sorting. \* Equal contributors
- In prep **Goel N.** An axiomatic approach to build evolutionary theory of spatial sorting. *bioRxiv*
- 6) **Goel N.** & Keitt T. H. (2022) The mismatch between range and niche limits due to source-sink dynamics can be greater than species mean dispersal distance. *The American Naturalist*, 200(3), 448-455.
  - 5) Grainger T.N., Senthilnathan A., Ke P., Barbour M.A., Jones N.T., DeLong J.P., Otto S.P., O'Connor M.I., Coblentz K.E., **Goel N.**, Sakarchi J., Szojka M.C., Levine J.M. & Germain R.M. (2022) An empiricist's guide to using ecological theory. *The American Naturalist*, 199(1), 1-20.
  - 4) Liebhold A., Keitt T. H., **Goel N.**, & Bertelsmeier C. (2020) Scale Invariance in the Spatial-Dynamics of Biological Invasions. *NeoBiota* 62:269-277
  - 3) **Goel N.**, Vleck E. S. V., Aleman J. C. & Staver A. C. (2020) Dispersal limitation and fire feedbacks maintain mesic savannas in Madagascar. *Ecology* 101(12):e03177
  - 2) **Goel N.**, Guttal V., Levin S. A., & Staver A. C. (2020). Dispersal increases the resilience of tropical savanna and forest distributions. *The American Naturalist*, 195(5), 833-850.
  - 1) Guttal V.\*, Raghavendra S.\*, **Goel N.\***, & Hoarau Q. (2016). 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. \* Equal contributors

### Awards

- 2023 W.D. Hamilton Award finalist, Society for the Study of Evolution  
2023 Trailblazing Ecology Publication Award by Student Section, Ecological Society of America  
2021 Outstanding Paper award by Theory Section, Ecological Society of America

- 2021 Robert P. McIntosh award for best paper by Vegetation Section, Ecological Society of America
- 2019 Edward S. Deevey award for best talk by Paleoecology Section, Ecological Society of America
- 2016 Volterra award for best talk by Theory Section, Ecological Society of America
- 2016 Ton Damman award for best talk by Vegetation Section, Ecological Society of America
- 2013 Mathematics of Planet Earth (MPE) award by TIFR CAM, Bangalore

## Grants and Fellowships

- 2023 Student Travel Award by the Southeast Chapter of the Ecological Society of America (\$500)
- 2022 C.P. "Pete" Oliver fellowship, University of Texas at Austin (\$1.1k)
- 2022-23 University Graduate Continuing Fellowship, University of Texas at Austin (\$34k)
- 2021-23 Research award by the Dept. of Integrative Biology, University of Texas at Austin (\$6k)
- 2021-22 Stengl-Wyer Graduate Fellowship by University of Texas at Austin (\$34k+\$2k)
- 2020 & 2021 College of Natural Sciences Summer Fellowship by University of Texas at Austin (\$15k)
- 2019 Policy Travel award by Policy Section, Ecological Society of America (\$700)
- 2018-19 Charles A. and June R. P. Ross Fellowship by Yale University (\$32k)
- 2018 Dissertation improvement grant by Yale Institute for Biospheric Studies (\$5k)
- 2017-18 Bunker Fellowship by Yale University (\$32k)
- 2017 RMSC Travel award by Department of Mathematics and Statistics, UNCG (\$300)
- 2016 AISC Travel award by Department of Mathematics and Statistics, UNCG (\$300)
- 2016 Department Chair's Fund by EEB, Yale University (\$1k)
- 2011-2015 Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship by DST, Gov. of India (₹344k)

## Teaching Experience

- Fall 2020 Teaching Assistant, Evolution, University of Texas at Austin
- Spring 2020 Teaching Assistant, Biostatistics, University of Texas at Austin
- Fall 2019 Teaching Assistant, Scientific Inquiry Across the Disciplines, University of Texas at Austin
- Spring 2018 Teaching Assistant, Plant Ecology, Yale University
- Spring 2017 Teaching Assistant, Introduction to Statistics: Life Sciences, Yale University
- Spring 2016 Teaching Assistant, Ecology and Evolutionary Biology, Yale University
- Fall 2014 Calculus tutorials for graduate students at Center for Ecological Sciences, IISc

## Presentations and Posters

- August 2023 Ecological Society of America Annual Meeting, Portland
- June 2023 Evolution, Albuquerque, New Mexico
- May 2023 Species on The Move, Bonita Springs, Florida
- March 2023 Ecological Integration Symposium, Texas A&M University.
- Jan 2023 The American Society of Naturalist Biennial Meeting, Asilomar.
- July 2021 Departmental Seminar, Center for Ecological Sciences, Indian Institute of Science.
- Oct 2021 EcoLunch, University of Texas at Austin
- Apr 2021 EcoLunch, University of Texas at Austin
- Jan 2021 The American Society of Naturalist Biennial Meeting (virtual).
- Aug 2020 Society for Mathematical Biology Annual Meeting (virtual).
- Aug 2020 Ecological Society of America Annual Meeting (virtual).
- Sep 2019 EcoLunch, University of Texas at Austin

Aug 2019 Ecological Society of America Annual Meeting, Kentucky.  
 May 2019 Cornell, Rutgers, Princeton, Penn, Yale (CRPPY) symposium at Princeton University  
 April 2019 Ecology and Evolutionary Biology, Annual Graduate Student Symposium, Yale.  
 May 2018 Cornell, Rutgers, Princeton, Penn, Yale (CRPPY) symposium at Rutgers University  
 May 2018 Ecology and Evolutionary Biology, Annual Graduate Student Symposium, Yale.  
 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 (Poster).  
 Jan 2017 Center for Ecological Sciences, In-House Symposium, Indian Institute of Science.  
 Sept 2016 Conference on Advances in Interdisciplinary Statistics and Combinatorics, UNCG.  
 Aug 2016 Ecological Society of America Annual Meeting, Florida.  
 May 2016 Ecology and Evolutionary Biology, Annual Graduate Student Symposium, Yale (Poster).

## Outreach

2021-24 Graduate student representative at The American Society of Naturalist Graduate Council.  
 2020-21 Mentored *Mia Salinas* for a year long High School Research Internship Program.

## Professional Training

2019 A semester long workshop on Teaching Assistant Fundamentals  
 2018 Four week summer school on complex systems at Santa Fe Institute

## Services & Activities

Member The American Society of Naturalist (ASN), Ecological Society of America (ESA), Society for Mathematical Biologist (SMB)  
 Reviewer Ecography (1), PNAS (1), Ecology (3) , Ecology Letters (2) , Bulletin of Mathematical Biology (1) , and Epidemics (1)

## Technical skills

Mathematics Ordinary/Partial Differential Equations | Linear Algebra | Fourier Analysis | Numerical Methods | Stochastic Processes  
 Programming R | Stan (Bayesian Statistics) | Shiny | Matlab | C | Julia