

# Abhay Gupta

msf5fk@virginia.edu | abhaygupta15.github.io

University of Virginia Department of Biology  
485 McCormick Road, Charlottesville, VA 22904

## Education

<b>University of Virginia</b> PhD in Biology <i>Advisor: Dr. Nicholas Landry</i>	Charlottesville, VA 2025–Present
<b>Indian Institute of Science Education and Research (IISER) Mohali</b> BS-MS in Biology <i>Thesis: Sex-biased cooperation among immature peers: it matters who helps whom</i>	Mohali, India 2019–2024

## Research Interests

Network epidemiology · Contagion dynamics · Computational biology · Theoretical evolution

## Research Experience

<b>Graduate Research Assistant</b> University of Virginia, Charlottesville, VA, USA <i>Advisor: Dr. Nicholas Landry</i>	2025–Present
<b>Master's Thesis Research</b> Institute of organismic and molecular evolution, University of Mainz, Mainz, Germany <i>Advisor: Dr. Hanna Kokko</i>	2023–2024
<b>Research Assistant</b> IISc Bangalore, Bangalore, India <i>Advisor: Dr. Mohit Kumar Jolly</i>	2022–2022
<b>Research Assistant</b> IISER Mohali, Mohali, India <i>Advisor: Dr. N.G. Prasad</i>	2021–2022

## Publications

### Peer-Reviewed

Abhay Gupta, Carita Lindstedt, Nina Gerber, Raphael Ritter, Hanna Kokko (2025). "Sex-biased cooperation among immature peers: it matters who helps whom." *Proc Biol Sci*, 292 (2025). doi: [rspb.2025.1891](https://doi.org/10.1098/rspb.2025.1891)

Divjoy Singh, Abhay Gupta, Mohit Kumar Jolly, Prakash Kulkarni (2025). "Phenotypic switching in cancer: A systems-level perspective." *Cancer Systems Biology: Translational Mathematical Oncology*, 33. doi: [9780192867636.003.0004](https://doi.org/10.1007/978-0-19-286763-6_003)

### In review

Abhay Gupta, Jessica Taggart, Nicholas W. Landry (In review). "NotD: The network of the day." *Connections*, International Network for Social Network Analysis (INSNA).

## Teaching Experience

<b>Teaching Assistant</b> Networks in Biology (BIOL 4559), University of Virginia	Fall 2025
<ul style="list-style-type: none"><li>Led the weekly lab sections for 26 students.</li><li>Designed the lab worksheets, graded assignments, and held weekly office hours.</li></ul>	

## Skills

---

**Programming:** Python, R, MATLAB, Julia

**Methods:** Stochastic modeling, agent-based simulation, network analysis, statistical inference