

# Neosha Gupta Narayanan

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## Education

<b>Georgia Institute of Technology</b> <i>PhD Candidate in Glacier Geophysics; Advisor: Winnie Chu</i>	<b>Atlanta, GA</b> <i>August 2023-Present</i>
<b>Massachusetts Institute of Technology (MIT)</b> <i>Master of Science in Geophysics and Seismology; Advisor: Brent Minchew</i> <i>Bachelor of Science in Materials Science and Engineering</i>	<b>Cambridge, MA</b> <i>July 2023</i> <i>May 2022</i>
<b>Amherst Regional High School</b> <i>Valedictorian</i>	<b>Amherst, MA</b> <i>June 2018</i>

## Publications

- **Narayanan, N.**, Sommers, A., Chu, W., Steiner, J., Siddique, A.M., Meyer, C., Minchew, B. (in review). Simulating Seasonal Evolution of Subglacial Hydrology at a Surging Glacier in the Karakoram. *Journal of Glaciology*. Preprint: [10.31223/X56X43](https://doi.org/10.31223/X56X43)
- **Narayanan, N.** (2023). *Modeling Subglacial Hydrology in the Himalayas*. Master's thesis, Massachusetts Institute of Technology. <https://hdl.handle.net/1721.1/153347>
- Su, I., **Narayanan, N.**, et al. In-situ spider web construction and mechanics. *Proceedings of the National Academy of Sciences (PNAS)*, August 2021.
- Su, I., Jung, G.S., **Narayanan, N.**, Buehler, M. Perspectives on 3D printing of self-assembling materials and structures. *Current Opinion in Biomedical Engineering*, February 2020.
- Angles 2019 (MIT Writing Journal): "[Homeland](#)", "[Saving our Pollinators](#)"

## Conference Proceedings

- **Narayanan, N.**, Chu, W., Meyer, C., Poinar, K., Sommers, A., Mejia, J., et al. (2024, December). *Radar Measurements of Firn Aquifer at Helheim Glacier, Greenland*. American Geophysical Union Fall Meeting (POSTER).
- Poinar, K., Sommers, A., Mejia, J., Meyer, C., **Narayanan, N.**, et al. (2024, December). *Hydrologic Implications of the Water Feeding Ice Caves at Helheim Glacier, Greenland*. American Geophysical Union Fall Meeting (POSTER).
- Mejia, J., Poinar, K., Meyer, C., Sommers, A., **Narayanan, N.**, Chu, W. (2024, December). *Direct Observations of Mixed-Mode Fracture Opening of a Water-Fed Crevasse on Helheim Glacier, Greenland*. American Geophysical Union Fall Meeting (POSTER).
- **Narayanan, N.**, Sommers, A., Chu, W., Steiner, J., Siddique, A.M., Meyer, C., Minchew, B. (2024, April). *Coupled Ice Dynamics and Subglacial Hydrology Simulations of Glacier Surges in the Himalayas*. European Geosciences Union (POSTER). <https://doi.org/10.5194/egusphere-egu24-11819>
- **Narayanan, N.**, Sommers, A., Steiner, J., Siddique, A.M., Minchew, B. (2023, December). *Modeling Subglacial Hydrology in the Himalayas: Applications to Surges and Glacial Lake Outburst Floods*. American Geophysical Union Fall Meeting. (POSTER)
- **Narayanan, N.**, Millstein, J., & Minchew, B. (2022, December). *Simulation and Analysis of Deformation and Stability in Antarctic Ice Shelves*. American Geophysical Union Fall Meeting. (POSTER)
- **Narayanan, N.**, Millstein, J., & Minchew, B. (2022, April). *Simulation and Analysis of Deformation in Antarctic Ice Shelves*. Northeast Glaciology Meeting. (POSTER)

## Awards and Fellowships

<b>Dartmouth College - Evans Family Fellow</b>	2025
<b>Polar Impact Mentorship Initiative (PIMI) Mentee Cohort 2025-26</b>	2025-26
<b>Georgia Tech Scheller College Graduate Sustainability Fellow</b>	2023-24
<b>MIT - William Asbjornsen Albert Memorial Fellow</b>	2022-23
<b>MIT Priscilla King Gray (PKG) Summer Fellow</b>	2021
<b>MIT Burchard Scholar</b>	2020
<b>Henry David Thoreau Scholar</b>	2018-2022

## Talks

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- “The Cool Science of Glaciers! With Neosha Narayanan” Spectacular Science Podcast with Akshay Jayaraman. October 2024 (INVITED). <https://www.youtube.com/watch?v=VQ9Afvq5NHk>
- “Coupled Ice Dynamics and Subglacial Hydrology Simulations of Surges and GLOFs in the Himalayas.” EAS Graduate Symposium Oral Presentation (April 2024)
- Georgia Tech Geophysics Department Seminar, April 26, 2024 (INVITED)
- Keynote speaker, 2022 Henry David Thoreau Society Annual Meeting (INVITED)
- Invited panelist, MIT South Asian Alumni Association’s International Women’s Day Panel (Spring 2023)
- Student moderator, MIT “Intuitively Obvious” video series
  - Moderated filmed conversations with AAPI students as part of the 2022 “Intuitively Obvious” video series on the manifestations of race and privilege at MIT

## Outreach & Professional Activities

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<b>Vice President, Georgia Tech Graduates in Earth and Atmospheric Sciences (GEAS) Board</b>	<i>2025-26</i>
<b>Fernbank Museum STEM Volunteer</b>	<i>2025-Present</i>
<b>Manuscript reviewer, The Cryosphere (Copernicus Journals)</b>	<i>2025</i>
<b>Georgia Tech EAS Graduate Research Symposium Chair</b>	<i>2025</i>
<b>US Association of Polar Early Career Scientists (USAPECS) Executive Board Member</b>	<i>August 2024-Present</i>
<b>Letters to a Pre-Scientist STEM Professional Volunteer</b>	<i>2023-Present</i>
<b>MIT Admissions Alumni Educational Counselor (EC)</b>	<i>2022-Present</i>
<b>MIT South Asian Association of Students (SAAS) President</b>	<i>2021- 22</i>
<b>MIT Cycling Recruitment Officer</b>	<i>2020-2021</i>

## Field Experience

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- July 2024: “Follow the Water: Hydrology at Helheim Glacier” (funded by the Heising-Simons Foundation) – deployed radar echo-sounders (ApRES) and seismo-electric devices as a collaborative expedition on the Greenland Ice Sheet
- June 2024: Participated in the International Summer School in Glaciology at McCarthy, Alaska hosted by University of Alaska Fairbanks
- June 2023: MIT-EAPS Crosby Trip: Learned about geology and sedimentology during a 10-day field expedition in Sicily, Italy
- July 2022: With IIT Roorkee scientists, conducted a field study on Suraj Tal in Himachal Pradesh, India
- January 2022: MIT-CEE Traveling Research Experience (TREX) - conducted fieldwork on invasive plant species distribution and air quality on the island of Hawaii
- August 2019: MIT-EAPS Yellowstone First-Year Orientation Program Teaching Assistant: taught incoming undergraduate students about geology in Yellowstone National Park

## Teaching and Mentoring

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<b>GT EAS 2600 (Earth Processes) - Laboratory Teaching Assistant</b>	<i>2023</i>
<ul style="list-style-type: none"><li>• Wrote and delivered lectures on introductory earth science topics, guided students through hands-on earth science lab assignments, held office hours to assist with conceptual questions, and graded lab assignments.</li></ul>	
<b>MIT Terrascope: Undergraduate Teaching Fellow (UTF)</b>	<i>2020-2022</i>
<ul style="list-style-type: none"><li>• Mentored students, held office hours, and ran meetings for fall Solving Complex Problems class which focuses on a different sustainability or climate related issue each year</li><li>• Evaluated and provided feedback on student-produced website and presentation drafts prior to final presentation</li><li>• Collaborated with other UTFs to research &amp; develop innovative methods for remote collaborative project work during COVID-19 pandemic</li></ul>	
<b>MIT Associate Advising Program</b>	<i>2019-2022</i>
<ul style="list-style-type: none"><li>• Assisted faculty advisors with advising first-year students at MIT by providing advice on class registration and helping students find resources for academic performance and mental health</li><li>• Mentored 21 total first-year students both in-person and during the pandemic through weekly one-on-one meetings</li></ul>	

## Research Experience

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**Indian Institute of Technology, Roorkee Hydrology Department**  
Guide: Prof. Dhyan Singh Arya

**Roorkee, Uttarakhand, India**  
June-August 2022

**MIT EAPS Glacier Dynamics & Remote Sensing Group***Advisor: Joanna Millstein; PI: Brent Minchew***Cambridge, MA (Remote)***May 2020-May 2021***MIT Laboratory for Atomistic and Molecular Materials***Advisor & PI: Markus Buehler***Cambridge, MA***Jan 2019-June 2020***MIT EAPS Susan Solomon Lab***Undergraduate Researcher***Cambridge, MA***Sep-Dec 2018***Work Experience**

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**Charles River Watershed Association***Data Analysis Intern***Cambridge, MA***June-August 2021***MIT Angles Magazine***Editorial Assistant***Cambridge, MA***June 2020-August 2021***MIT-South Asia Oral History Project***Student Intern, MIT History Department***Cambridge, MA (remote)***January 2020, 2021*