# Naomi Shvedov

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## Education

September 2019 - May 2025 | ***Boston University - Ph.D., Neuroscience***

September 2015 - May 2019 | ***Rutgers University - B.S., Cell Biology and Neuroscience***

Honors Thesis: *Exploring the relative contributions of striatal D1 cells in the direct pathway and D2 cells in the indirect pathway during sensory-guided behaviors in mice.*

December 2022 | ***1st International Mini2P Workshop - Moser Group, Kavli Institute***

June 2022 | ***Frontiers in Neurophotonics Summer School - Laval University***

September 2020 - Present | ***NSF NRT - Neurophotonics Trainee Fellow***

## Research

January 2020 – May 2025 | ***Scott Lab, Boston University – Graduate Student***

Performing *in-vivo* multi-photon microscopy to study adult-born neuronal migration in transgenic zebra finches; developing a novel analytical pipeline; mentoring and training students.

June 2018 - August 2019 | ***Margolis Lab, Rutgers University - Research Assistant***

Learned striatal GRIN lens implant surgery and in-vivo 2-photon calcium imaging in mice; trained postdocs and graduate students. Designed and 3D printed head-fixation mechanism to reduce motion during 2-photon imaging. Defended honors thesis.

January 2017 - June 2018 | ***Roepke Lab, Rutgers University - Research Assistant***

Performed RNA extraction, reverse transcription, and qPCR to assess epigenetic influences of maternal diet on offspring energy homeostasis.

## Honors & Awards

May 2022 | ***Recipient of CZI Bioimaging North America Program Professional Development Award***

May 2020 - June 2022 | ***Recipient of NSF NRT: National Science Foundation Neurophotonics Fellowship***

Fall 2015 - Spring 2019 | ***Dean's List awarded 8/8 semesters completed at Rutgers University***

Spring 2017 - May 2019 | ***Rutgers Cell Biology and Neuroscience Honors***

May 2019 | ***Graduated Magna cum laude from Rutgers University***

Fall 2015 - Spring 2017 | ***Rutgers School of Environmental and Biological Sciences Honors***

## Publications

**Shvedov, N.R.,** Sorrells, S.F., (2025) Why Reinvent the Wheel? An Idea to Watch Extending Growth Cones to Migrating Neurons. *BioEssays*. https://doi.org/10.1002/bies.70059

**Shvedov, N.R.**, Castonguay, S.J., Rother, A., Schick, D., Kornfeld, J., Scott, B. (2025) Songbird connectome reveals tunneling of migratory neurons in adult brain (2025) *Biorxiv*

**Shvedov, N.R.,** Analoui, S., Dafalias, T., Bedell, B.L., Gardner, T.J., and Scott, B.B. (2024) In vivo imaging in transgenic songbirds reveals superdiffusive neuron migration in the adult brain. *Cell Reports,* vol. 43, issue 2, https://doi.org/10.1101/2023.07.14.548876

**Shvedov, N.R.,** & Margolis, D.J. (2019). An Optical Exposé of Cortical Function. *Trends in Neurosciences,* vol. 42, no. 8, pp. 511–513., doi:10.1016/j.tins.2019.05.003.

Mamounis, K. J., **Shvedov, N. R.**, Margolies, N., Yasrebi, A., & Roepke, T. A. (2019). The effects of dietary fatty acids in the physiological outcomes of maternal high-fat diet on offspring energy homeostasis in mice. *Journal of Developmental Origins of Health and Disease,* 1–12. doi: 10.1017/s2040174419000540

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## Invited Talks

February 15, 2024 | Neurophotonics Trainee Tech Talk, Boston University

June 9, 2024 | CoNNExINs Symposium, New York University

May 3, 2023 | Neurodevelopment for Experiment-Theory Interaction Workshop, Harvard University

March 13, 2023 | Cosyne Workshop: Neural Development and Evolution, Mont Tremblant, QC, Canada

August 9, 2022 | Gordon Research Conference on Neural Development, Salve Regina University

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## Conference Posters

Shvedov, N.R., Castonguay, S.J., Rother, A., Schick, D., Kornfeld, J., Scott, B. **EM connectomics reveal tunneling of migratory neurons in adult songbird brain**, Janelia Conference for Developmental Specification of Complex Behaviors, October 2024

Shvedov, N.R., Frostig, H., Mertz, J., Scott, B.B. **Deep brain three-photon imaging in transgenic songbirds**, Society for Neuroscience, November 2023

Shvedov, N.R., Gardner, T.J., Scott, B.B. **In vivo imaging in transgenic songbirds reveals superdiffusive neuron migration in the adult brain**, (1) Gordon Research Conference on Neural Development, (2) Gordon Research Conference on Neural Mechanisms of Acoustic Communication, August 2022, (3) Society for Neuroscience, November 2022, (4) UC Irvine CNCM Conference on the Structure, Function and Development of Neural Circuits

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## Service

September 2024 -May 2025 | ***Teaching Fellow for Introduction to MATLAB (NE/PS 212)***

Ran discussion sections and hands-on labs for the course. Taught 4 in- class lectures.

January 2024 - February 2024 | ***Member of Biology Faculty Search Graduate Student Committee***

Served as a graduate student member on a Biology department faculty search committee for Neuroethology focused faculty candidates.

September 2023 - December 2023 | ***Teaching Fellow for Principles of Neuroscience (GMS NE 700)***

Teaching fellow for 1st year PhD Student students.

June 2022 – August 2022 | ***GROW Mentor***

Served as a mentor for a high school student as part of the Greater Boston Area Research Opportunities for Young Women (GROW) program's initiative to provide STEM research opportunities to underrepresented students at a young age.

September 2020 – September 2022 | ***NSF NRT Seminar Planning Committee - Member***

Served on the NSF NRT Neurophotonics Training Program Seminar Planning Committee. Coordinated faculty seminars that highlighted state-of-the-art research in neurophotonics.

September 2020 – Sept 2021 | ***Neuroscience Graduate Student Organization - Recruitment Co-Chair***

Participated in the Neuroscience Graduate Student Organization on the executive board as the Recruitment Co-Chair. Helped plan and execute the adaptive virtual recruitment event of 2021 for the Graduate Program of Neuroscience. Coordinated graduate student volunteers, a poster session, and interactive time with the recruits.

October 2020 | ***SACNAS Conference - Mentor Judge and BU GPN Exhibitor***

Served as a representative for BU's GPN program at the SACNAS conference, which promotes diversity, equality, inclusion, and justice initiatives in STEM. Volunteered as a mentor judge to observe and provide feedback on promising undergraduates' research projects.