

SCHOOL OF BIOLOGICAL SCIENCES SEMINAR

Dr. Hiroshi Shiozaki

Stowers Institute

“Neural circuit evolution and the origins of behavioral diversity”

Behavioral diversity is one of the most striking features of the natural world, yet how evolutionary changes in nervous systems generate new behaviors remains poorly understood. Using courtship song in closely related *Drosophila* species as a model, my research integrates comparative connectomics, genetics, physiology, and quantitative behavior to uncover the principles of neural circuit evolution. By developing cell-type-specific genetic tools and a synaptic-resolution connectome in the non-model species *Drosophila yakuba*, we directly compare homologous neural circuits across species. Our findings show that species-specific behaviors arise through selective rewiring of key circuit nodes, providing a mechanistic link between evolutionary changes in synaptic connectivity and the diversification of behavior.

Hosted by

Ian Keesey and Sebastian Kyllmann

**Thursday, October 1st, 2026 at 3:30 p.m.
Hamilton Hall 112**

Zoom Link: <https://unl.zoom.us/j/94081044933>

Password: sbsseminar



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