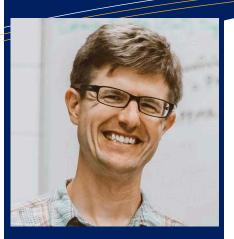


QUANTITATIVE AND SYSTEMS BIOLOGY COLLOQUIUM:

Rapid evolution in an age of global change



<u>Date:</u> 9/5/2024

<u>Time:</u> 10:30 AM - 11:45 AM

Location: SSM 116

Malin Pinsky UC Santa Cruz

About the Speaker:

Malin Pinsky, Associate Professor at the University of California Santa Cruz, is a biologist with expertise in the adaptation of ocean life to climate change, including ocean conservation. His more than 100 publications have appeared in Science, Nature, and other journals. He is a Fellow of the American Association for the Advancement of Science, an Earth Leadership Fellow, and was named one of Science News' ten scientists to watch in 2019. Pinsky serves on an advisory board for the Beijer Institute of the Royal Swedish Academy of Sciences. He has a Ph.D. in Biology from Stanford University and an A.B. in Biology and Environmental Studies from Williams College. He grew up exploring tidepools and mountains in Maine.



Abstract:

Rapid evolution in response to environment change is common in viruses, bacteria, and other species with short generation times, but can it also rescue long-lived organisms like fishes? This talk will start by presenting population genomic evidence in favor of recent disease-induced evolution of little brown bats and recent fisheries-induced evolution in Atlantic cod across two continents. The signals of adaptive evolution are subtle, and detection in Atlantic cod requires newly available polygenic methods. I will then present evidence from a century of genomic change across multiple Philippines coastal fishes, revealing dramatic loss of genetic diversity during the intensification of human development in this archipelago. These examples highlight the rapid evolutionary change occurring right now, the power of using historical samples as baselines, and the potential for novel conservation and adaptation strategies focused on evolutionary rescue.