



BIG DATA COMPUTATIONAL SOLUTIONS NEEDED IN MARINE BIOACOUSTICS

Simone Baumann-Pickering, Ph.D.

Simone Baumann-Pickering is an Associate Professor at Scripps Institution of Oceanography. Her research covers phenological patterns and spatial ecology of cetaceans, interactions of cetaceans and their prey, and adaptations of these animals to changes in their environment. She has carried out ecological research using advanced acoustical and environmental sampling technologies with indirect and direct applications to protected species management. Over the past decade, the broader Scripps marine bioacoustics community has amassed more than 300 cumulative years of high frequency acoustic recordings. While efficient computational solutions have been developed to extract some signals of interest, much development is still needed in this field.



SYSTEMS BIOLOGY RESEARCH INTO CLIMATE CHANGE LINKED STRESS SIGNALING AND DROUGHT TOLERANCE IN PLANTS

Julian Schroeder, Ph.D.

Julian Schroeder is a Distinguished Professor in the section of Cell and Developmental Biology in the Department of Biological Sciences. His laboratory's interdisciplinary research is directed at the signal transduction mechanisms and pathways that mediate resistance to environmental ("abiotic") stresses in plants, in particular, responses to elevated CO2, drought, salinity stress, and heavy metal stress. These abiotic stresses have substantial negative impacts and reduce global plant growth and biomass production and are also relevant in reference to climate change.