BIOLOGICAL SCIENCES SEMINAR

MONDAY, FEBRUARY 15, 2021, 12:00-1:00 PM ZOOM MEETING ID: 925 8285 0027 MEETING PASSWORD: BIO21



PURDUE

Department of Biological Sciences

Hosted by Stephanie Gardner (sgardne@purdue.edu)

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MAA Leader and Chair of the Committee for Minority Participation in Mathematics

Interdisciplinary education through data science

Data science opens avenues of interdisciplinary exploration, both in teaching and in research. In this talk, I discuss two such collaborations. In the first, I will discuss interdisciplinary curriculum building efforts in creating an introductory data science course centered on ethics, information, and truth. This "Calling Bull with R" was a course featured in the Washington Post, which also highlighted a student research project. In the second part, I use a theoretical lens and analysis toolbox for ecologically mutualistic bipartite networks to understand relationships between mathematical and marine biology concepts. I connect these techniques and visualizations to insights about assessing, improving, and evaluating teaching practice and curriculum development. Lastly, I'll discuss resources for the support of interdisciplinary quantitative teaching, including QUBES (qubeshub.org).