SURE: Speakers and Undergraduate Research Engagement
A new, introductory mathematics research program for women, 2019-2020
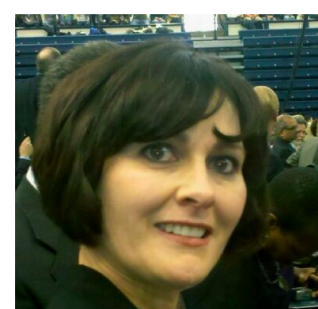
MAA MATHEMATICAL ASSOCIATION OF AMERICA

VirginiaTech Department of Mathematics

Principal Investigators:

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Why would I do this?

- At the end you will have created and presented a small research project, and can build on this experience when approaching faculty to work on larger research projects, or when applying for internships

- Three students will be selected based on financial need and research performance to earn $1000 stipend in spring

- A friendly, supportive environment to find out what math research is by doing it with your peers under guidance from faculty

- Meet female mathematicians at Virginia Tech and from other institutions, and discover a wide variety of possible research areas and career paths in mathematics

- Guidance about planning your degree path, applying to internships or REUs

- 1 hour of graded research credit

What next?

Email Eileen Martin (eileenrmartin@vt.edu) to get on the contact list before the fall so that you can find out about the first meeting and steps to sign up for research credit.

What is this?

This program is intended **for undergraduate students looking for their first taste of math research**. It is a holistic program composed of two parts:

1. a 1 credit-hour course in fall and continuing in spring in which students will work in small teams to address research questions of their choice

2. a speaker series bringing diverse women mathematicians from other institutions to Virginia Tech to give research talks, supplemented by:
   - introductory pre-talks geared towards freshman/sophomore level undergraduates
   - fireside chats for students to interact with the speakers
   - follow-up discussions and summary of research talks in the 1-hr. course
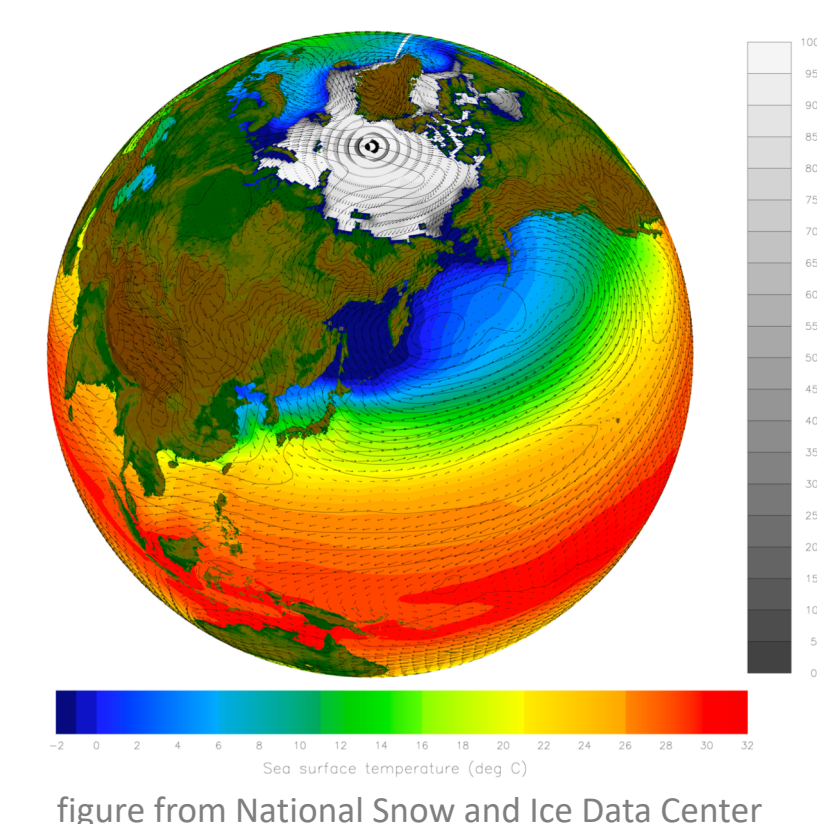
The Research Questions:

figure from National Snow and Ice Data Center

Global CO2 Dynamics

figure from storj.io

We want our data, and we want it now!

students
teachers
non-instructional staff
other

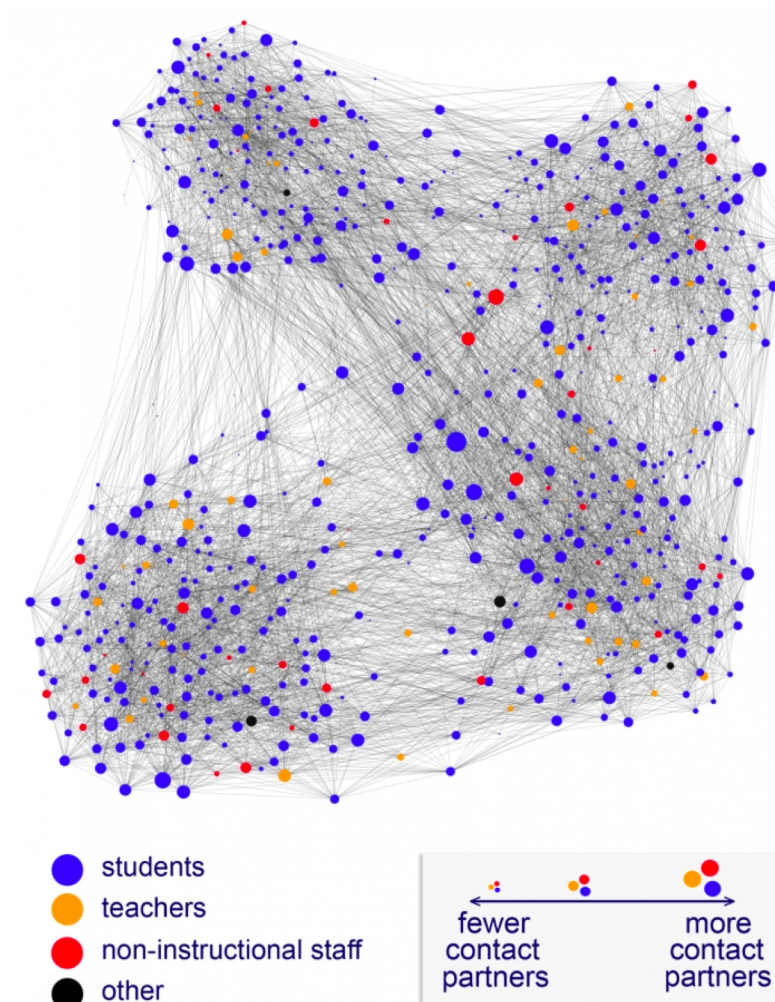fewer contact partners   more contact partners

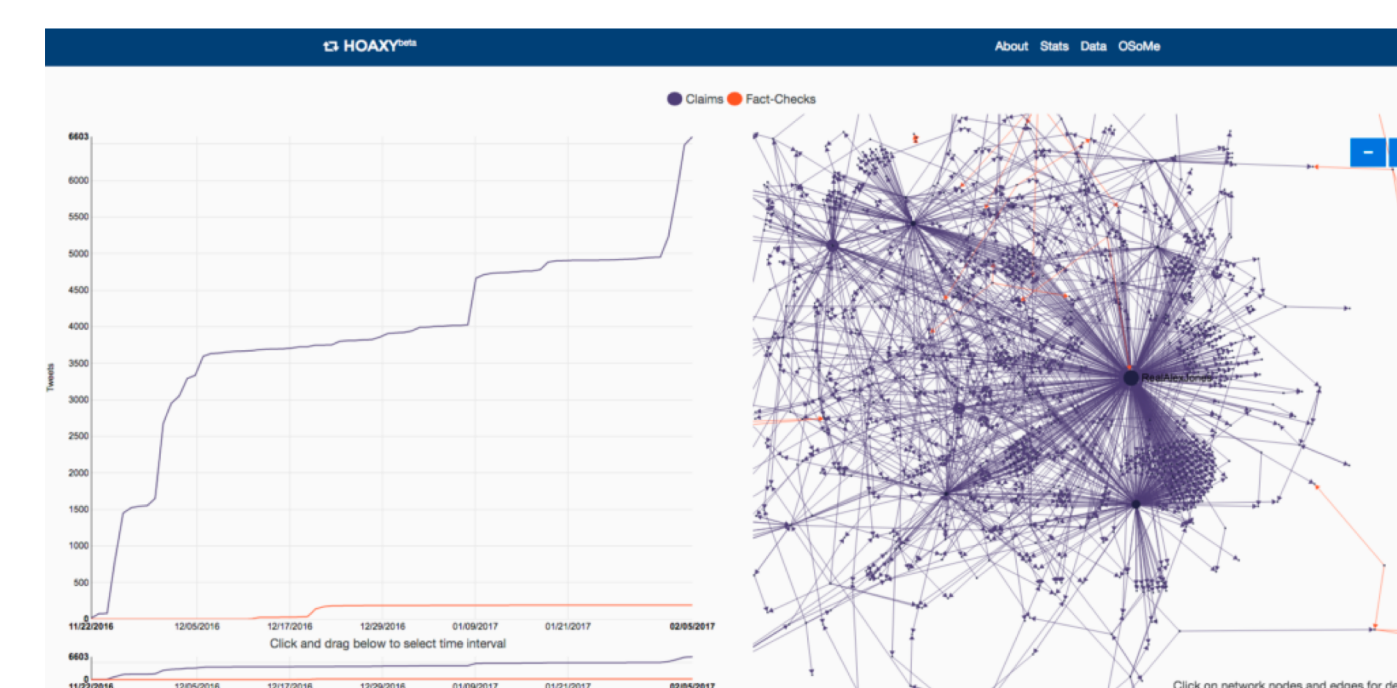figure from Salathe Lab (Penn State)

Disease Spread in Networks

figure from Sean Lawson (Culture Digitally), Hoaxy plot of Pizzagate information

Fake News, Information Propagation and Zero Forcing in Graphs