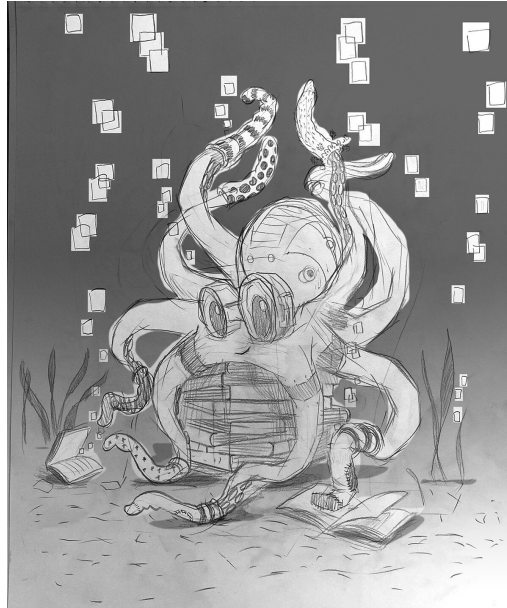


Vermont EPSCoR
The Vermont Complex Systems Center
The University of Vermont



Request for Applications for the
Study of Online, Collective Knowledge, and
Stories (SOCKS)
2023–2027

Proposals Due November 17, 2021

Objective

The Vermont Established Program to Stimulate Competitive Research (VT EPSCoR) and the Vermont Complex Systems Center at The University of Vermont (UVM) seek applications for five-year research projects related to the Science of Stories. Projects will leverage lexical instruments developed by the Vermont Complex Systems Center, a research group at UVM. Those projects selected for award will be invited to participate in the 2022 EPSCoR RII Track-1 proposal (a \$20M grant to improve Vermont's research infrastructure).

The goal of this solicitation is to identify projects that describe story ecology in an array of spaces including, for example, literature, public health, labor, policy, political science, computational history, demographic change, and the spread of misinformation. These story ecology descriptions may be variously connected with hypothesis testing, theoretical development, and applications that address pressing societal or environmental problems.

Background

Stories are an essential part of how people comprehend, explain, predict, and seek to navigate the world. What are the fundamental kinds of stories? How do stories told through social networks influence our behavior? A powerful approach to quantifying the components of stories centers on enumerating the base units of n -grams—contiguous sequences of n words, including punctuation and other text elements in a body of writing—and how usages of and interactions between n -grams unfold over time. This solicitation seeks projects that will:

1. Develop Storywrangler, an n -gram time series visualization platform, that is open, online, story centric, and supported by the curation of new, diverse largescale text corpora within Vermont's supercomputing environment (Fig. 1).
2. Develop powerful, 'distant reading', telescope-like instruments for the principled, theory driven, quantitative measurement of the shapes of stories within specific spaces through meaning, characters, events, and narratives.
3. Instruments will then be used to Describe story ecology in an array of applications including literature, public health, labor, policy, political science, computational history, demographic change, and the spread of misinformation.

The Storywrangler platform will be able to function in real time for social media or news; retrospectively for works of digitized literature, archival documents, and other recorded texts; and will be generally extendable for the study of any evolving complex system comprising many distinct components.

A visual comparison of phrase popularity in 150 billion tweets. Read more [here](#).

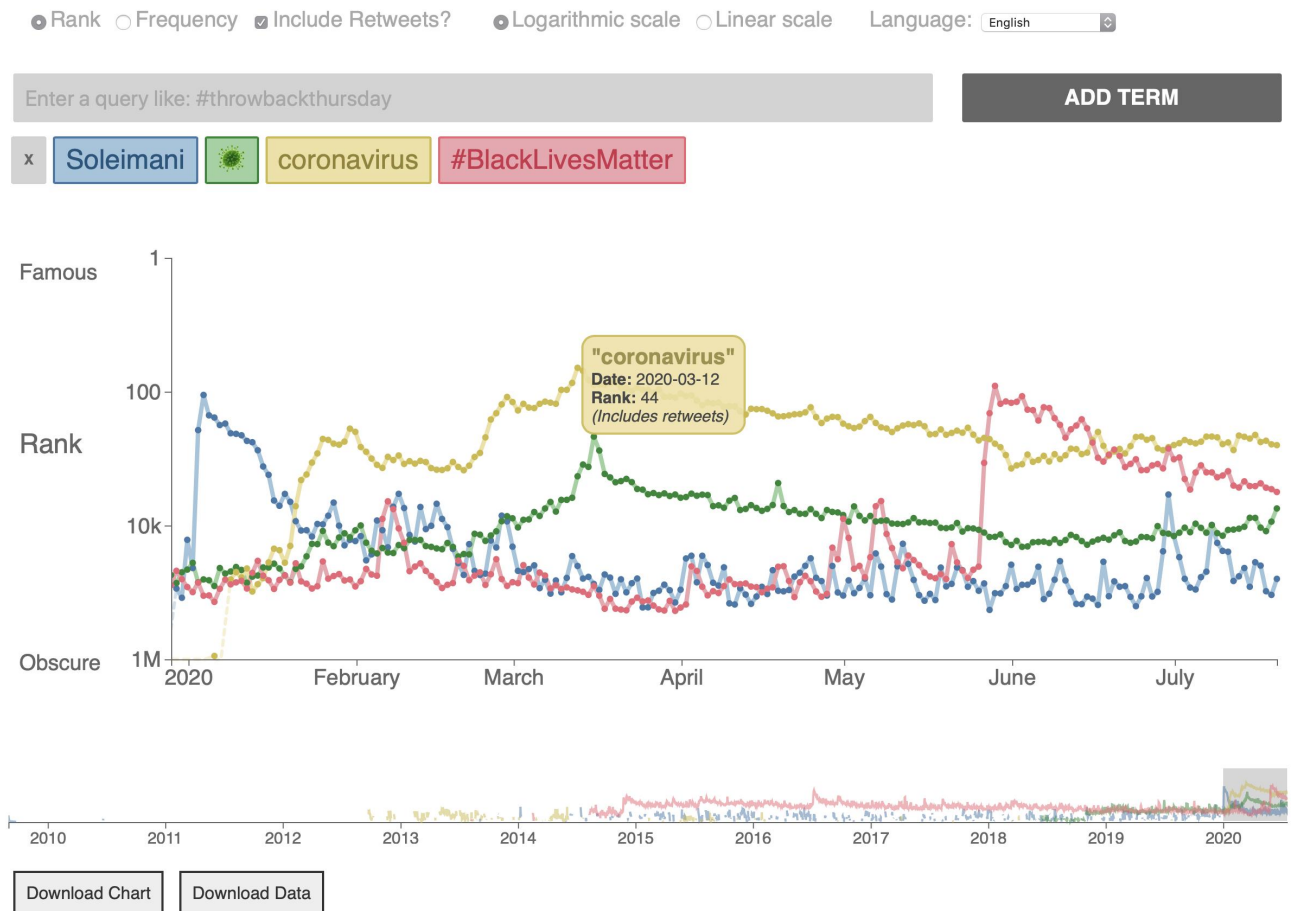


Figure 1: Screenshot of the Storywrangler site showing example of the Twitter n-gram time series for the first half of 2020. The series reflect three global events: the assassination of Iranian general Qasem Soleimani by the United States on 3 January 2020, the COVID-19 pandemic (the virus emoji and coronavirus), and the Black Lives Matter protests following the murder of George Floyd by Minneapolis police (#BlackLivesMatter). The n-gram Storywrangler dataset for Twitter records the full ecology of text elements, including punctuation, hashtags, handles, and emojis. The displayed time range can be adjusted with the selector at the bottom, and all data are downloadable. More details can be found on the Storywrangler site <http://storywrangling.org>, and in the associated Science Advances publication which can be found at <https://www.science.org/doi/10.1126/sciadv.abe6534>.

About the NSF RII Track-1 EPSCoR Program:

The EPSCoR program is designed to fulfill the mandate of the National Science Foundation (NSF) to promote scientific progress nationwide. Jurisdictions are eligible to participate in the NSF EPSCoR Research Infrastructure Improvement (RII) Program based on their level of total NSF support over their most recent five years. Through this program, NSF facilitates the establishment of partnerships among academic institutions and organizations in governmental, non-profit, and commercial or industrial sectors that are designed to effect sustainable improvements in a jurisdiction's research infrastructure, Research and Development (R&D) capacity, and hence, its R&D competitiveness.

RII Track-1 awards provide up to \$20M total over five years to support research-driven improvements to jurisdictions' physical, cyber infrastructure, and human capital development in topical areas selected by the jurisdiction's EPSCoR steering committee as having the best potential to improve future R&D competitiveness. The project's research and capacity-building activities must align with the specific research priorities identified in the submitting jurisdiction's Science and Technology (S&T) Plan.

We seek to have a suite of satellite projects that use the Vermont Complex Systems Center instruments to undertake one or more of the following objectives:

1. Test hypotheses or develop theory;
2. Develop applications for addressing societal or environmental needs.

Projects may fall into any one of the following categorical areas:

- Literature
- Public Health
- Clinical Health Care
- Public Policy
- Media Studies (e.g., misinformation; conspiracy theories; spread of ideas)
- Labor and Economic Trends
- Political Science
- Computationally-aided History or Journalism
- Other!

Projects may either draw on existing data sets currently used by the Vermont Complex Systems Center (e.g., Twitter, Reddit, Google Books) or identify new, large volume data sets. Project descriptions may include pursuit of new data, and preparation of data for use as well.

Project proposals should include outline of personnel – including a principal investigator and at least one other co-principal investigator, intentions to recruit and employ at least one or more undergraduate, graduate research assistant, or postdoctoral associate; and budgetary needs.

In addition to receiving \$5K in the coming year for planning purposes to develop proof-of-concept results/ visualization, those selected will be invited to participate in the \$20M Track-1 proposal. As part of the Track-1 funding, awardees will be able to seek funding e.g., for summer salary of key personnel, undergraduate and graduate student assistantships, and access to programming support.

This planning solicitation will fund 3-5 themes, and successful applicants will work as part of a team of 20-25 faculty, undergrads, grads, and postdocs on the subsequent Track-1 proposal.

Proposal Outline

Project narrative (3 pages max., exclusive of references and CVs):

1. Describe the project categorical area (theme or topic) and how the Science of Stories leads to hypothesis testing, theory development, or novel applications;
2. Describe the type of data you will use, how you will acquire it, and prepare it for integration into Vermont Complex Systems Center instruments;
3. Explain the methods you will employ to obtain the data;
4. Describe the hypothesis to test, the theories to draw on and/or the applications to be developed;
5. Justify the intellectual merits of the project;
6. Identify key personnel and provide a brief overview of the scope of work, including preliminary personnel and budgetary needs;
7. Provide CVs for all key personnel; and
8. References.

Proposals should be submitted through the VT EPSCoR SOCKS website (<http://uvm.edu/epscor/socks>). Questions about this solicitation should also be sent through the website.

Information Sessions

Several information sessions will be held to orient potential applicants about Vermont Complex Systems Center instruments or applications. These hour-long information sessions will be held remotely via Zoom the following days:

1. Friday, October 15 at 12pm
2. Monday, October 18 at 11am
3. Friday, October 22 at 1pm

The links to join the information sessions are available on the VT EPSCoR SOCKS website (<http://uvm.edu/epscor/socks>), and session recordings will be posted following each event.

Timelines

Applications are due November 17, 2021. Those selected for involvement in the Track-1 proposal will be notified by December 3, 2021. Those selected will be required to participate in Track 1 grant brainstorming and writing workshops to be held during the winter.

Eligibility

Proposals must be led by an individual or individuals employed by an institution of higher education in an EPSCoR state (Vermont is an EPSCoR state).

We encourage non-academic organizations with large, historical text corpora to reach out to potential academic partnerships.

Basic Review Criteria

- Clarity of writing
- Expertise of key personnel
- Contribution to the Science of Stories

