PEARC18 July 22-26, 2018 Pittsburgh, PA

URSSI US Research Software Sustainability Institute

The Conceptualization of URSSI – How You Can Engage

Sandra Gesing
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July 24, 2018

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Conceptualizing a US Research Software Sustainability Institute (URSSI)

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SI2-S2I2 Conceptualization: Conceptualizing a US Research Software Sustainability Institute (URSSI)

NSF Org:	OAC Office of Advanced Cyberinfrastructure (OAC)
Initial Amendment Date:	December 21, 2017
Latest Amendment Date:	December 21, 2017
Award Number:	1743188
Award Instrument:	Standard Grant
Program Manager:	Vipin Chaudhary OAC Office of Advanced Cyberinfrastructure (OAC) CSE Direct For Computer & Info Scie & Enginr
Start Date:	December 15, 2017
End Date:	June 30, 2019 (Estimated)
Awarded Amount to Date:	$499,999.00

URSSI
US Research Software Sustainability Institute

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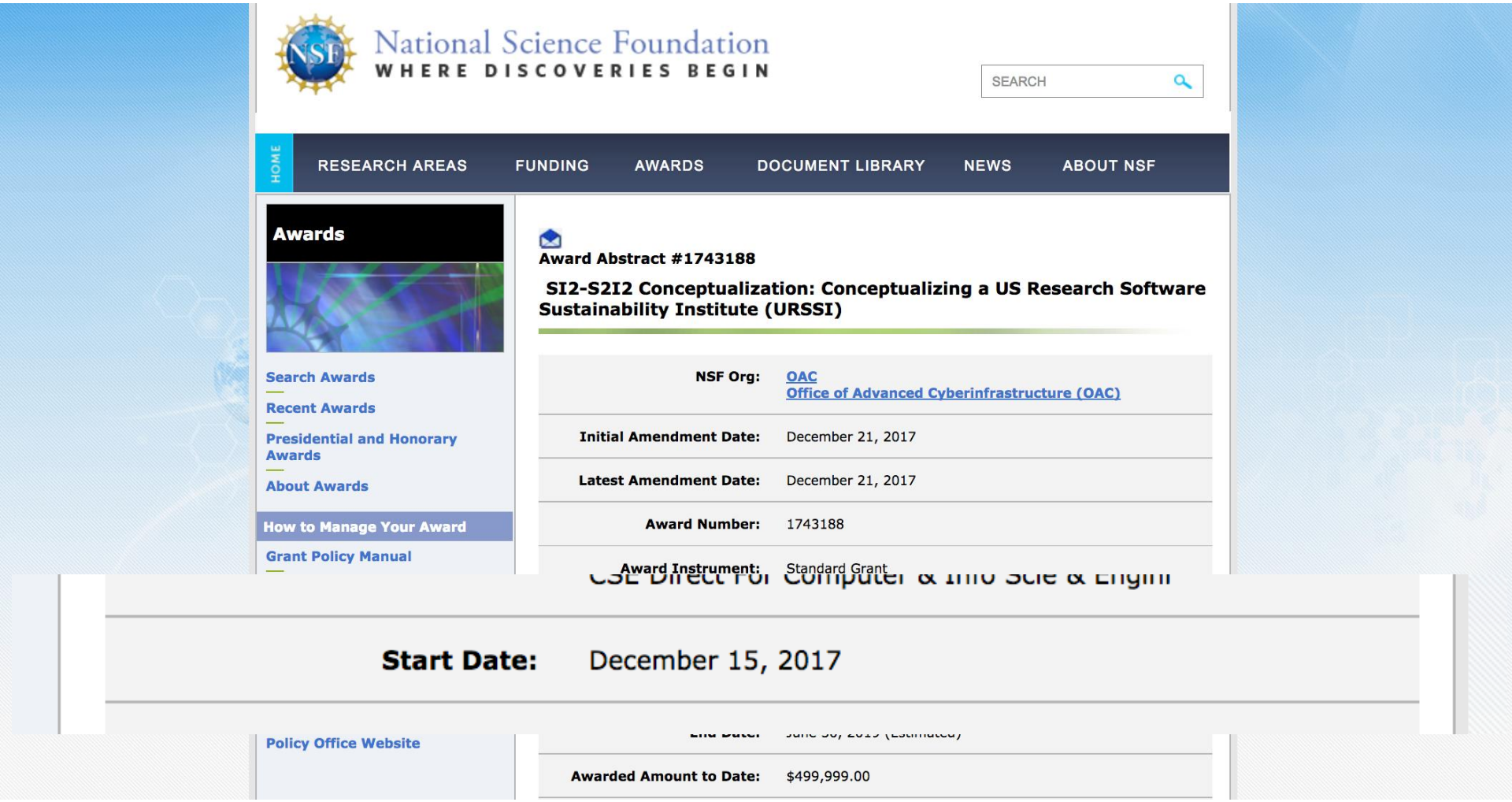

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URSSI
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URSSI Team

Karthik **Ram**
UC Berkeley

Sandra **Gesing**
Notre Dame

Jeff **Carver**
University of Alabama

Daniel S. **Katz**
UIUC

Nic **Weber**
U. Washington

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URSSI Team

Senior Personnel

Wolfgang **Bangerth** · Anshu **Dubey** · Melissa **Haendel** · Michael A **Heroux** · Kathryn **Huff** · Suresh **Marru** · Kate **Mueller** · Jarek **Nabrzyski** · Kyle **Niemeyer** · Marlon **Pierce** · Ariel **Rokem** · Arfon **Smith** · Tracy **Teal** · Matthew **Turk** · Rick **Wagner** · Michael **Zentner**

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Research Software

Use	90%	95%
Can't continue without	70%	63%

http://doi.org/10.5281/zenodo.843607

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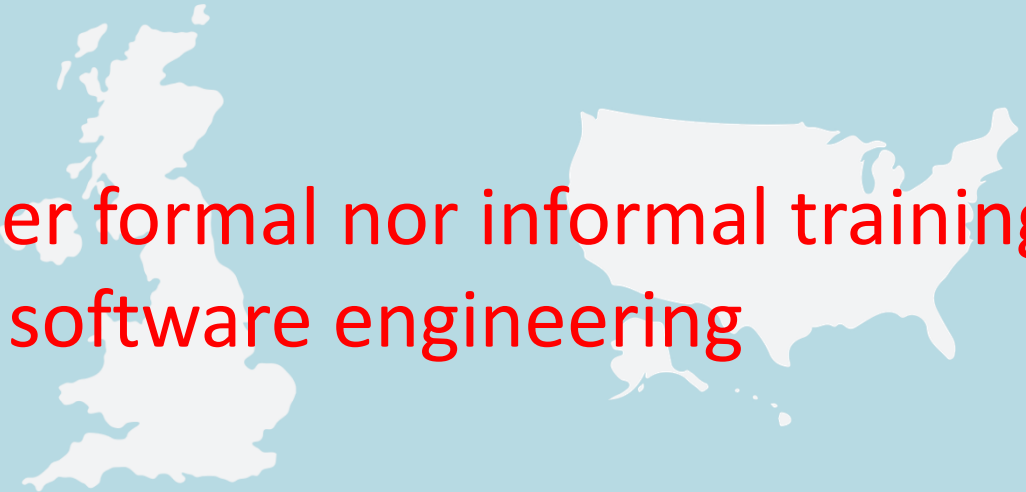
Research Software



> 50% neither formal nor informal training in software engineering

Use	90%	95%
Can't continue without	70%	63%

http://doi.org/10.5281/zenodo.843607

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Research Software

Lack of career paths

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Can't continue without	70%	63%

http://doi.org/10.5281/zenodo.843607

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Research Software

How to cite software?

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Areas of Concern

- Functioning of the individual and team
- Functioning of the research software
- Functioning of the research field itself

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Functioning of the Individual and Team

- Training & education
- Ensuring appropriate credit for software development
- Enabling publication pathways for research software
- Fostering satisfactory and rewarding career paths for people who develop and maintain software
- Increasing the participation of underrepresented groups in software engineering

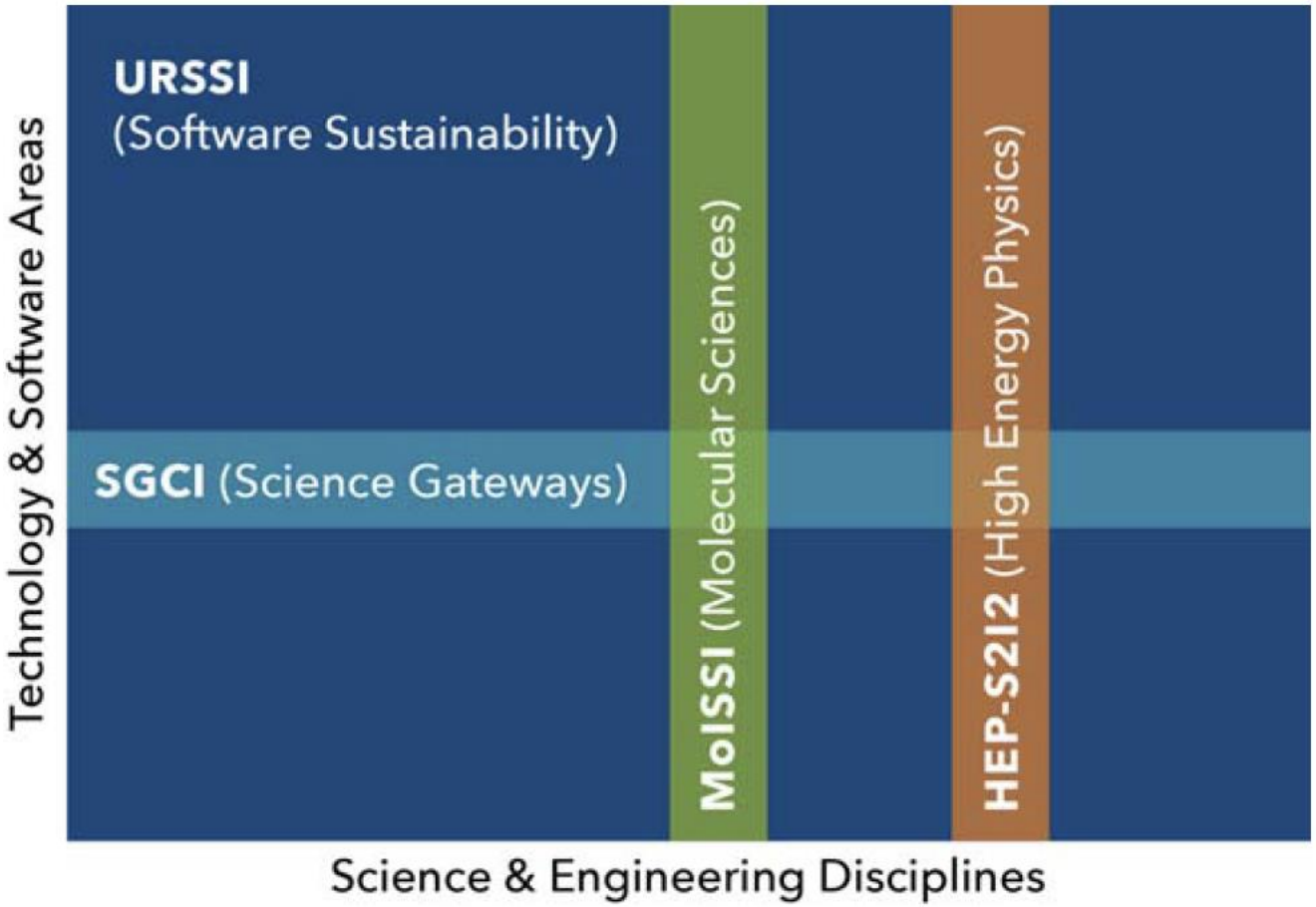
Functioning of Research Software

- Supporting sustainability of the software
- Growing community, evolving governance, and developing relationships between organizations, both academic and industrial
- Fostering both testing and reproducibility
- Supporting new models and developments (e.g., agile web frameworks, Software-as-a-Service)
- Supporting contributions of transient contributors (e.g., students)

Functioning of the Research Field Itself

- Growing communities around research software and disparate user requirements
- Cataloging extant and necessary software
- Disseminating new developments
- Training researchers in the usage of software
- Understanding and improving pipelines of diverse developers and maintainers

URSSI and Other S2I2 Projects



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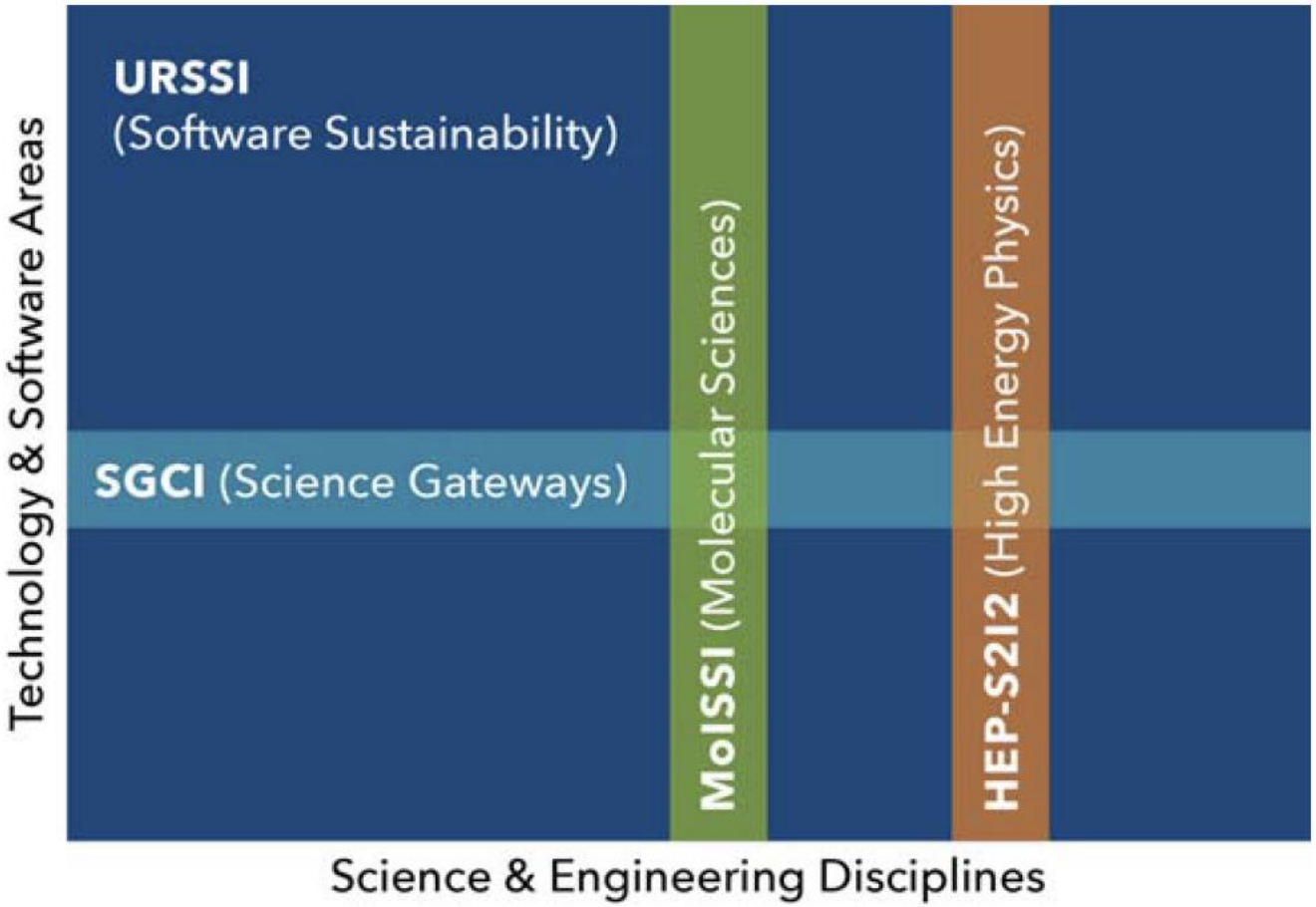
URSSI and Other S2I2 Projects



Goal: Close collaboration and fill in gaps on each axis

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Conceptualization

- Workshops
  - First workshop took place in April in Berkeley

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Conceptualization

- Workshops
  - First workshop took place in April in Berkeley
  - Next workshop will take place in October in Chicago
  - Software credit workshop
  - Incubator workshop
- Survey
- Ethnographic studies
- Mission and vision working group

Initial Straw Man

	Supporting software	Supporting science	Supporting community	Science Impact
Development support	x			x
Incubator	x			x
Training	x	x		x
Policy		x	x	x
Community	x	x	x	x

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How to Connect

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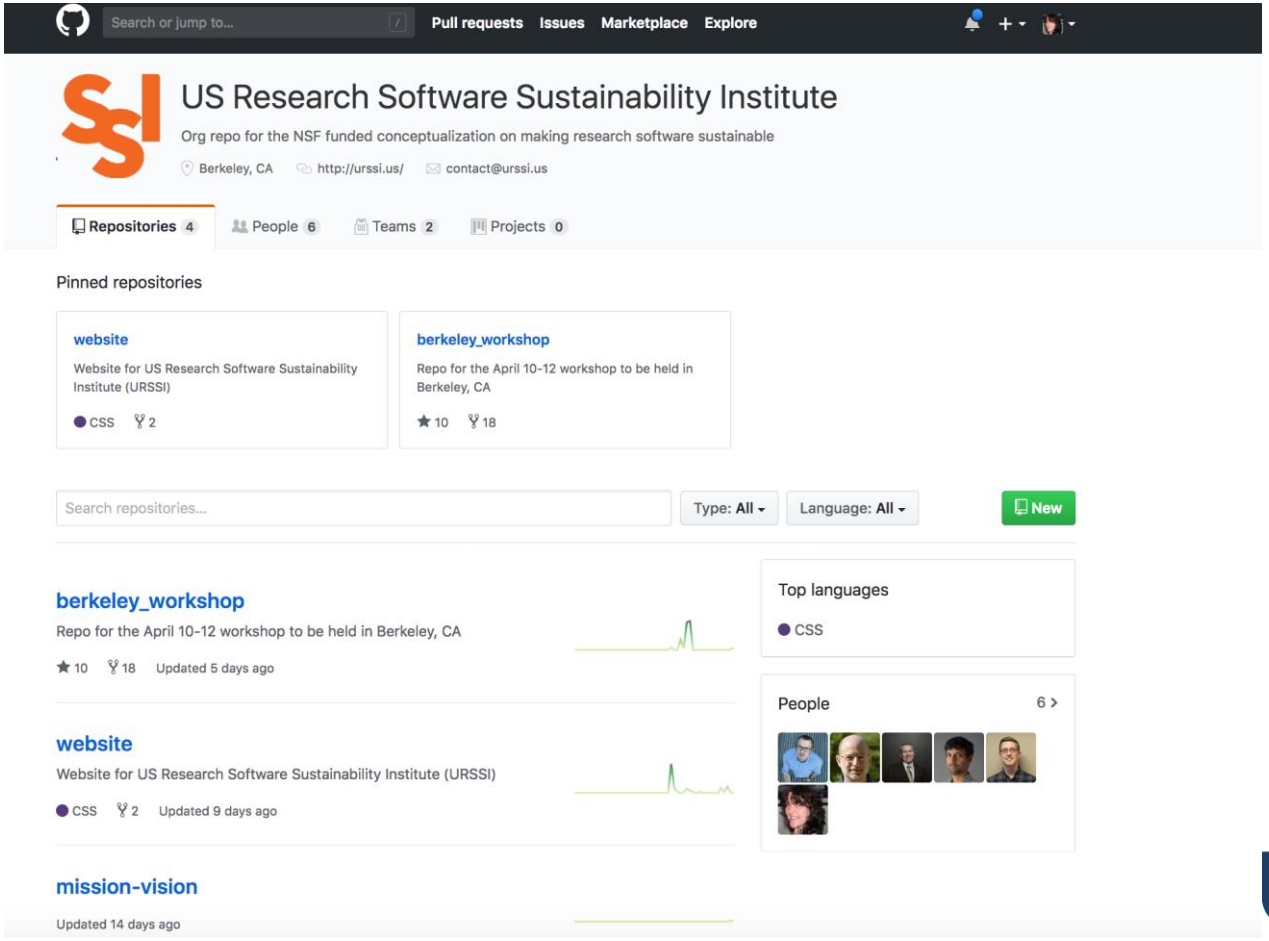

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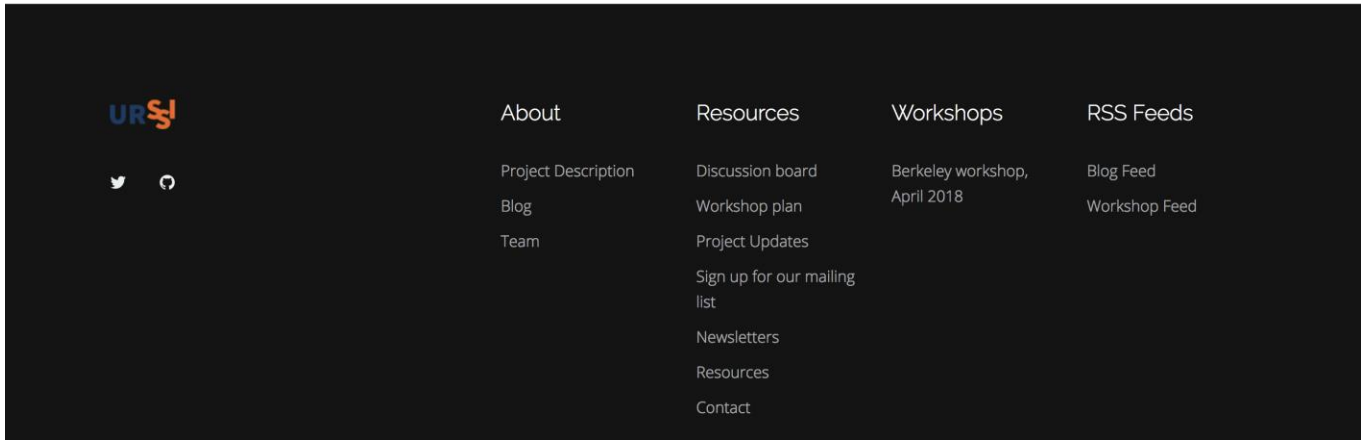

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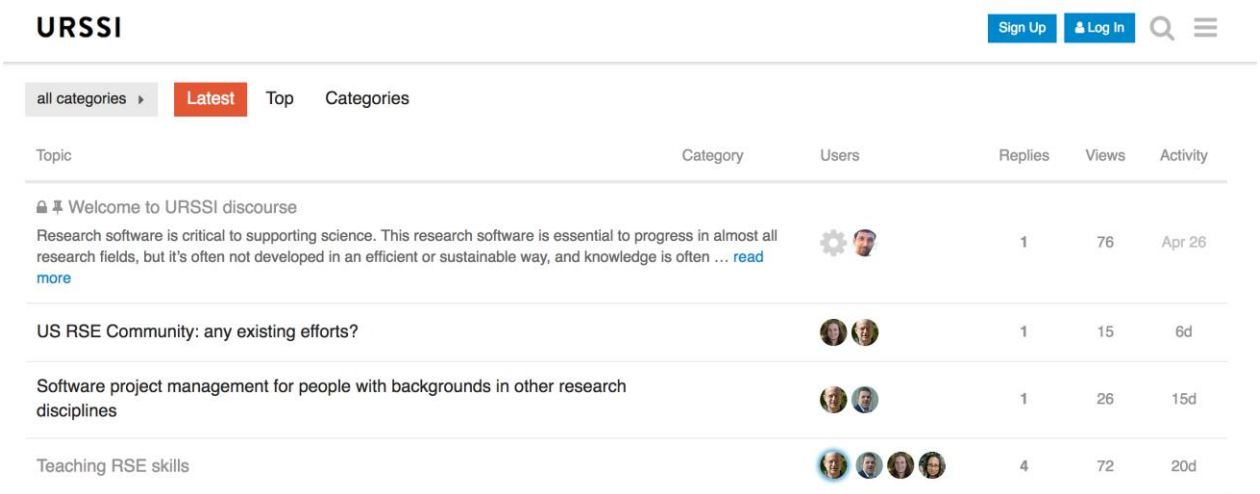

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Thanks!

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- Twitter https://twitter.com/si2urssi
- Workshops http://urssi.us/workshops/

Join us for our next workshop in October in Chicago!

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