Conceptualizing a US Research Software Sustainability Institute (URSSI)

Berkeley — UNIVERSITY OF CALIFORNIA

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http://urssi.us

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URSSI context

- Modern research is digital, products created, analyzed, and stored electronically, using software

- Much software developed specifically for research, by researchers

- Research software essential to progress in almost all research fields
  - But often not developed in an efficient or sustainable way

- Researchers know their disciplines
  - Often don't have training and understanding of best practices to ease development & maintainability and to encourage sustainability & reproducibility

- Developers don't match the diversity of overall society or of user communities

URSSI conceptualization goals

- Conceptualize (plan) a US Research Software Sustainability Institute

- Cut across existing activities funded by NSF and beyond

- Directly and indirectly positively impact all software development and maintenance projects

- Focus on the entire research software ecosystem, including the people who create, maintain, and use research software

- Outputs:
  - Eager supportive & inclusive community
  - Concrete institute plan configured to offer valued services
  - Published survey and data that demonstrates community need

URSSI team

PIs

- Karthik Ram (PI, UC Berkeley)
- Jeffrey Carver (Alabama)
- Sandra Gesing (Notre Dame)
- Daniel S. Katz (Illinois)
- Nicholas Weber (Washington)

Advisory Committee

- Richard Arthur (GE Global)
- Michelle Barker (ARDC)
- Phil Bourne (Virginia)
- Daniel Crawford (MolSSI & Va Tech)
- Neil Chue Hong (SSI & Edinburgh)
- James Howison (Texas)
- Kurt Schwehr (Google)
- Jeff Spies (SHARE)
- Nancy Wilkins-Diehr (SGCI & UCSD)

Senior Personnel

- Wolfgang Bangerth (Colorado State)
- Anshu Dubey (Argonne)
- Melissa Haendel (Oregon State)
- Mike Heroux (Sandia)
- Katy Huff (Illinois)
- Suresh Marru (Indiana)
- Kate Mueller (Notre Dame)
- Jarek Nabrzyski (Notre Dame)
- Kyle Niemeyer (Oregon State)
- Marlon Pierce (Indiana)
- Ariel Rokem (Washington)
- Arfon Smith (STScI)
- Tracy Teal (Carpentries)
- Matt Turk (Illinois)
- Rick Wagner (Argonne)
- Mike Zentner (Purdue)

URSSI activities

- Workshops

- Survey
  - http://bit.ly/urssi-2018-survey

- Ethnographic studies

- Communication

- Through all activities, iteratively build on existing, extensive understanding of the challenges for sustainable software and its developers

Strawhorse Plan from Workshop 1

- Development Support (consulting & short term small project support)

- Incubator (technology advice, business planning, usability advice, etc.)

- Training (courses & guides)

- Policy (research & campaigns)

- Community (fellowships, workshops, blogs, website)

How to get involved in URSSI

- Watch the web page: http://urssi.us

- Join the mailing list – via form on the URSSI web page

- Suggest and discuss topics: http://discuss.urssi.us

- Follow on twitter: https://twitter.com/si2urssi

- Use GitHub: http://github.com/si2-urssi/
  - Repos for the web site (PRs to add) and workshops

- Take the survey: http://bit.ly/urssi-2018-survey

- If you have questions, want to suggest something, want to volunteer, email us: contact@urssi.us

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