

# US-RSE:

## US Research Software Engineer Association

Ian Cosden  
Princeton University

Jeffrey C. Carver  
University of Alabama

Charles  
Ferenbaugh  
Los Alamos National  
Laboratory

Sandra Gesing  
University of Notre Dame

Chris Hill  
Massachusetts Institute of  
Technology

Daniel S. Katz  
University of Illinois at  
Urbana-Champaign

Christina Maimone  
Northwestern University

Lance Parsons  
Princeton University

Jordan Perr-Sauer  
National Renewable Energy  
Laboratory

# Introducing the US-RSE

## A community-driven organization

### People:

- Writing and contributing research software at
  - Universities, laboratories, knowledge institutes, companies, & more
- Interested in research software engineer careers
  - Students, researchers, software engineers
- Identifying as RSE “allies”
  - Manage, sponsor, support



# Our current RSE definition

We like an **inclusive definition** of **Research Software Engineers** to encompass those who regularly use expertise in programming to **advance research**.

This includes **researchers** who spend a significant amount of time programming, full-time **software engineers** writing code to solve research problems, and **those somewhere in-between**.

We aspire to apply the skills and practices of software development to research to create **more robust, manageable, and sustainable research software**.

# Mission of the US-RSE

## 1. Community

- Create a professional community to share knowledge, connections, and resources

## 2. Advocacy

- Promote RSEs impact on research, highlighting the critical and valuable role RSEs serve

## 3. Resources

- Access to information and material to support individuals and RSE groups

# A Brief History of the US-RSE

- Movement and Term: Born in the UK
  - 2012 SSI's Collaborations Workshop - "Research Software Engineer"
  - Late 2013 UKRSE Association forms with ~50 members



# A Brief History of the US-RSE

- Movement and Term: Born in the UK
  - 2012 SSI's Collaborations Workshop - "Research Software Engineer"
  - Late 2013 UKRSE Association forms with ~50 members
- US: Winter 2017-2018
  - Int'l Survey of RSEs: ~175 US responses
    - 12 responded with interest to build a national community
  - UK Sponsored *1<sup>st</sup> International RSE Leaders Meeting*
    - 5 US delegates



Int'l RSE Leaders Meeting 2018

# A Brief History of the US-RSE

- Movement and Term: Born in the UK
  - 2012 SSI's Collaborations Workshop - "Research Software Engineer"
  - Late 2013 UKRSE Association forms with ~50 members
- US: Winter 2017-2018
  - Int'l Survey of RSEs: ~175 US responses
    - 12 responded with interest to build a national community
  - UK Sponsored *1<sup>st</sup> International RSE Leaders Meeting*
    - 5 US delegates
- Jan-Feb 2018: US-RSE Slack workspace and first website go live



# RSE Associations Around the World

 Society of Research Software Engineering (UK)



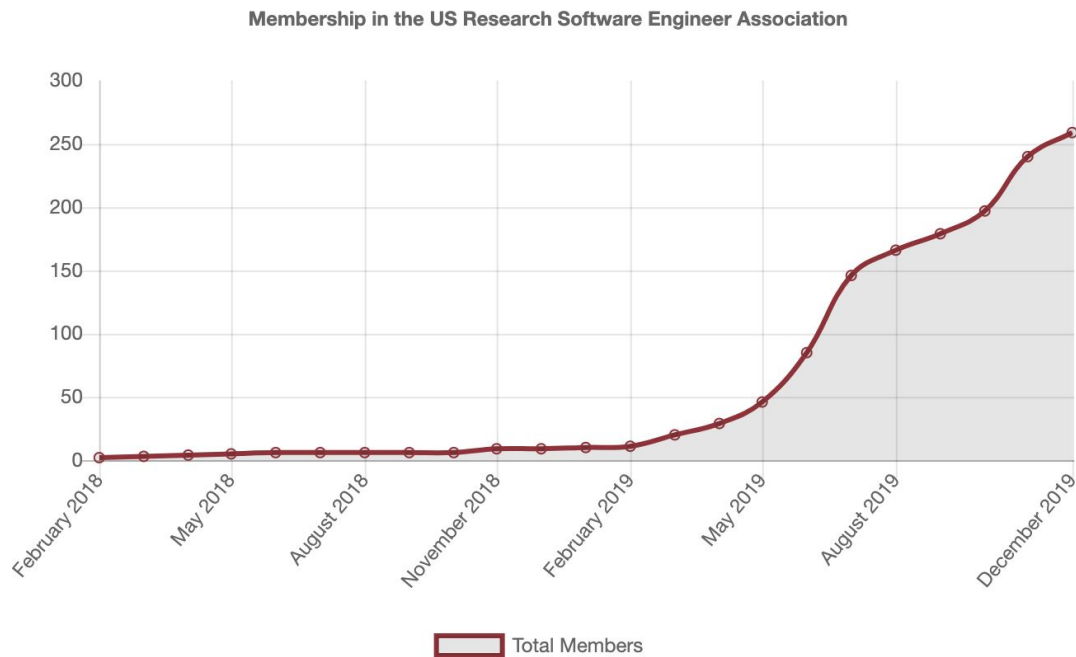
Photo by Antonia Cozacu, Jan Philipp Dietrich, de-RSE e.V. (CC BY 4.0)





# A Brief History of the US-RSE

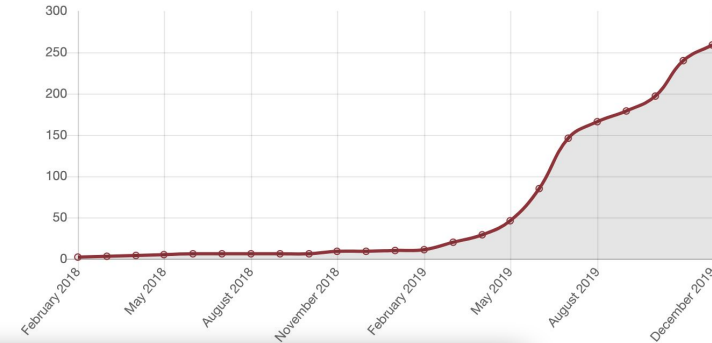
- 2019
  - Significant growth in activity and membership



# A Brief History of the US-RSE

- 2019
  - Significant growth in activity and membership
  - Website redesign, logo

Membership in the US Research Software Engineer Association

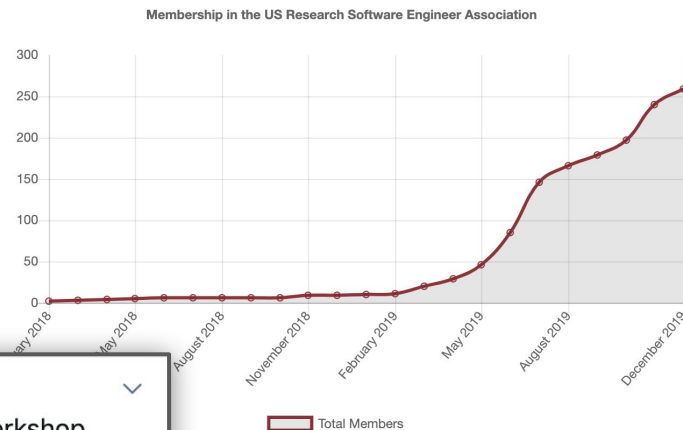


<https://us-rse.org>



# A Brief History of the US-RSE

- 2019
  - Significant growth in activity and membership
  - Website redesign, logo
  - Twitter, newsletters
  - Code of Conduct

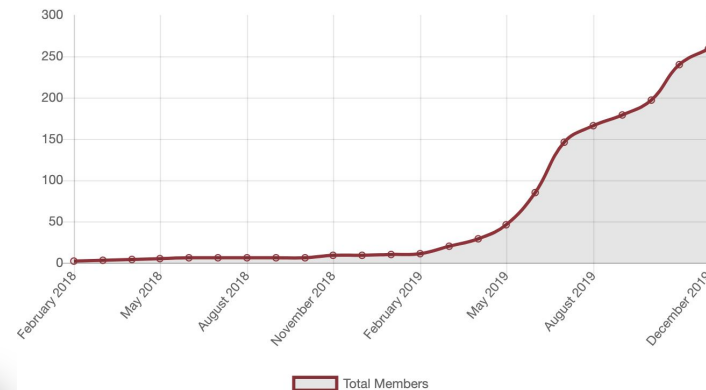


# A Brief History of the US-RSE

## ● 2019

- Significant growth in activity and membership
- Website redesign, logo
- Twitter, newsletters
- Code of Conduct
- Events: PEARC19, SC19
- Funding from Sloan Foundation for in-person workshop

Membership in the US Research Software Engineer Association



US  
RSE

US RESEARCH  
SOFTWARE ENGINEER  
ASSOCIATION



**US Research Software Engineers** @us\_rse · Apr 10

Mark your calendars! We'll be holding a free US-RSE virtual workshop April 22 & 23. Discussions, technical talks, and more. Additional details coming soon:

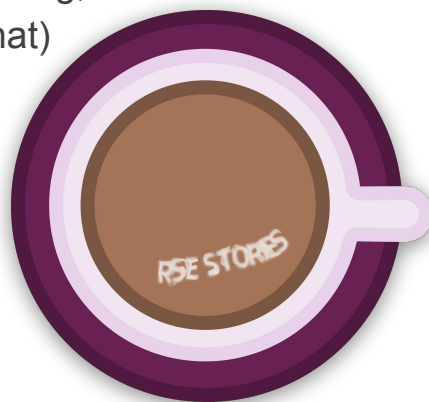


Virtual US-RSE Workshop  
Virtual US-RSE Workshop  
[us-rse.org](https://us-rse.org)

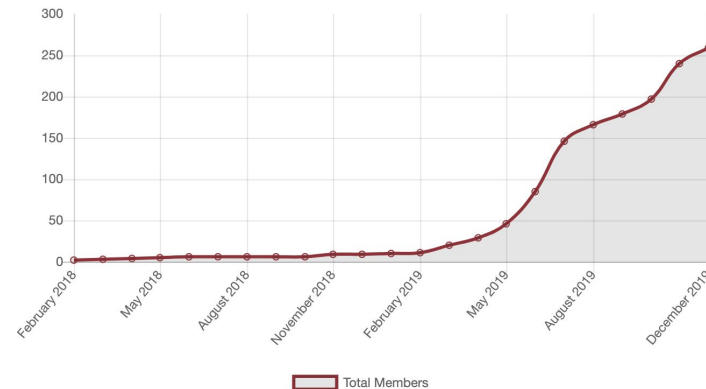


# A Brief History of the US-RSE

- 2019
  - Significant growth in activity and membership
  - Website redesign, logo
  - Twitter, newsletters
  - Code of Conduct
  - Events: PEARC19, SC19
  - Funding from Sloan Foundation for in-person workshop
  - New initiatives: Syndicated blog, RSE stories (shout out to Vanessa Sochat)



Membership in the US Research Software Engineer Association



**US Research Software Engineers** @us\_rse · Apr 10

Mark your calendars! We'll be holding a free US-RSE virtual workshop April 22 & 23. Discussions, technical talks, and more. Additional details coming soon:



Virtual US-RSE Workshop  
Virtual US-RSE Workshop  
[us-rse.org](https://us-rse.org)



11

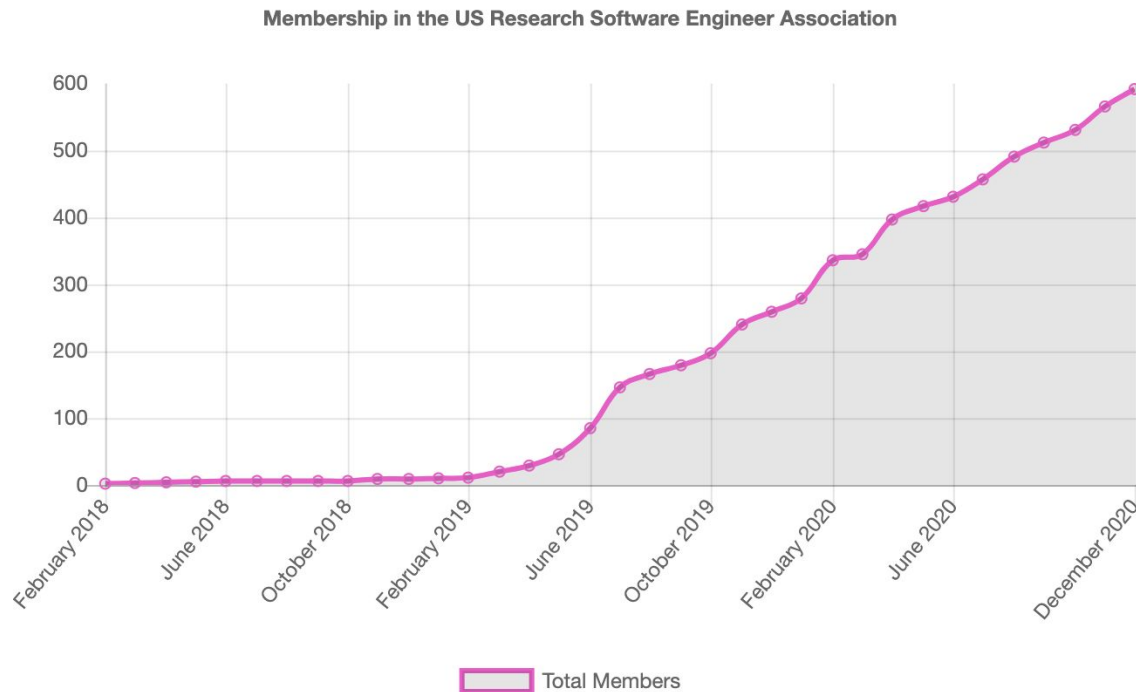


14



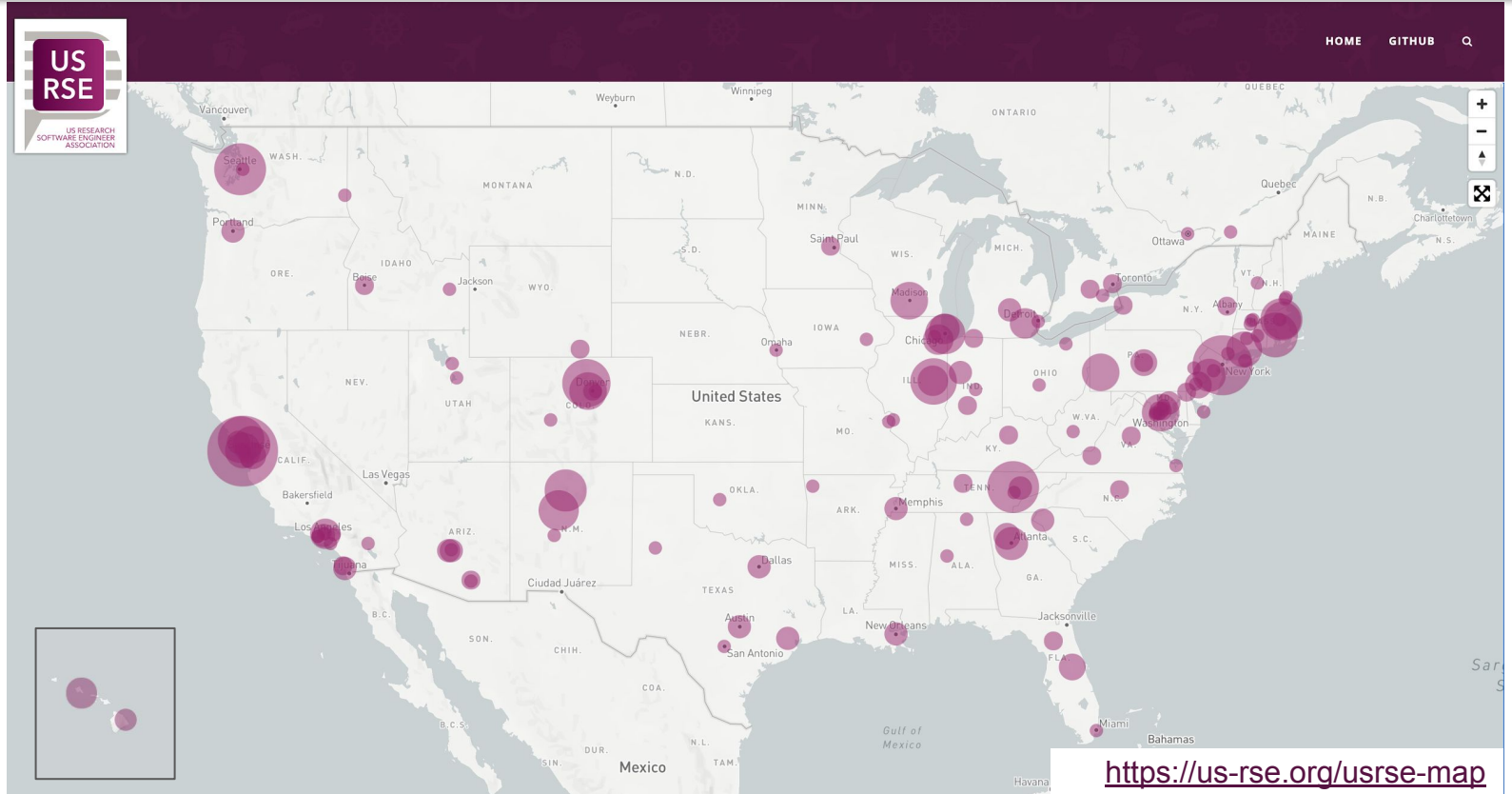
# 2020 Brought...

- More Membership Growth!





# Where are our members located - US?





# 2020-2021 Events

- US-RSE Virtual Workshop
  - 2-day event in April (available on YouTube)
- Conference workshops
  - PEARC20
  - SC20
- SORSE (International Series of Online Research Software Events)
  - <https://sorse.github.io/>
- Established formal governance
- (Mostly) Monthly Community Calls
  - Next: March 11th
- Annual General Meeting (Dec)
- US-RSE & ADSA Early Career Panel (Feb)

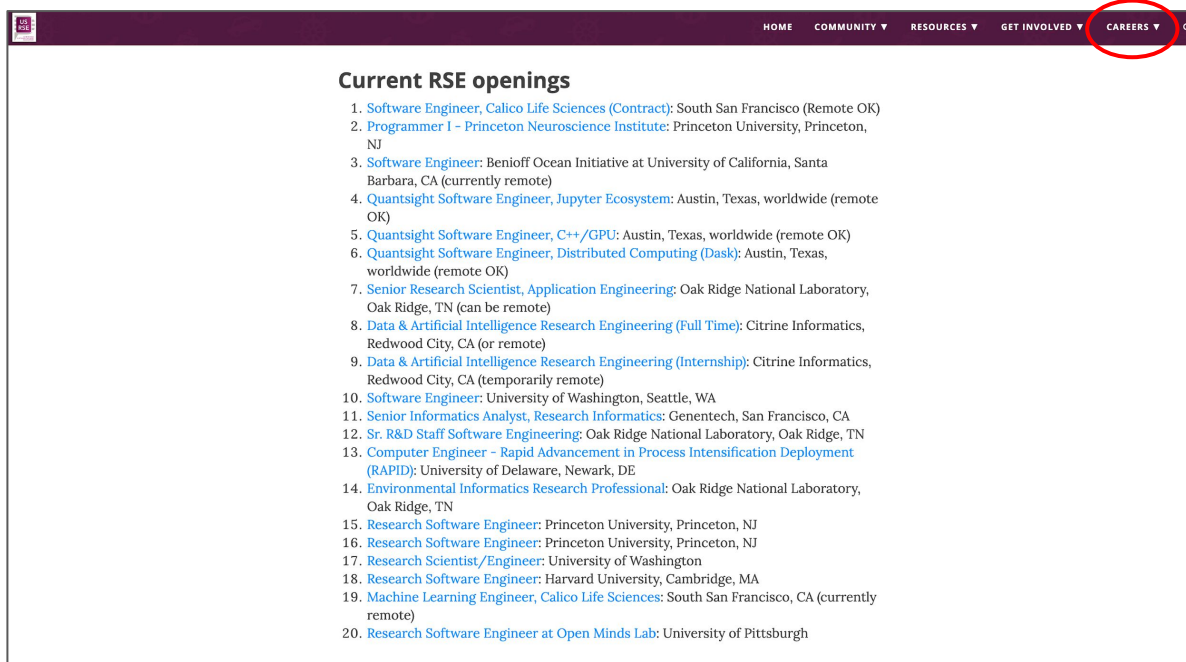


Sept 2020 Community Call

# RSE Job Board

- RSE job board and [#jobs](#) channel
  - 91 unique jobs posted all time
  - 20 as of March 2<sup>nd</sup>

<https://us-rse.org/jobs>



The screenshot shows the 'Current RSE openings' page on the website <https://us-rse.org>. The navigation bar at the top includes links for HOME, COMMUNITY, RESOURCES, GET INVOLVED, and CAREERS (which is circled in red). The main content area lists 20 job openings, each with a number, job title, and location/remote status.

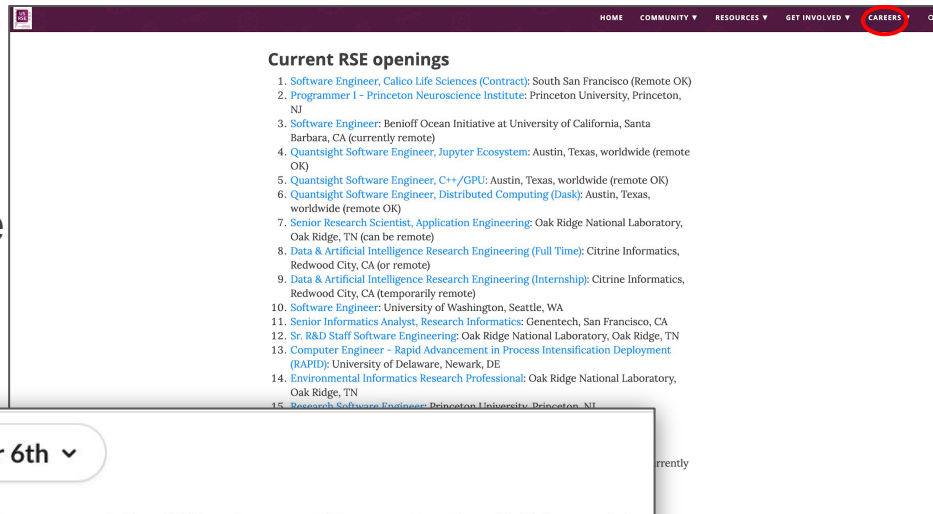
**Current RSE openings**

1. [Software Engineer, Calico Life Sciences \(Contract\)](#): South San Francisco (Remote OK)
2. [Programmer I - Princeton Neuroscience Institute](#): Princeton University, Princeton, NJ
3. [Software Engineer](#): Benioff Ocean Initiative at University of California, Santa Barbara, CA (currently remote)
4. [Quantsight Software Engineer, Jupyter Ecosystem](#): Austin, Texas, worldwide (remote OK)
5. [Quantsight Software Engineer, C++/GPU](#): Austin, Texas, worldwide (remote OK)
6. [Quantsight Software Engineer, Distributed Computing \(Dask\)](#): Austin, Texas, worldwide (remote OK)
7. [Senior Research Scientist, Application Engineering](#): Oak Ridge National Laboratory, Oak Ridge, TN (can be remote)
8. [Data & Artificial Intelligence Research Engineering \(Full Time\)](#): Citrine Informatics, Redwood City, CA (or remote)
9. [Data & Artificial Intelligence Research Engineering \(Internship\)](#): Citrine Informatics, Redwood City, CA (temporarily remote)
10. [Software Engineer](#): University of Washington, Seattle, WA
11. [Senior Informatics Analyst, Research Informatics](#): Genentech, San Francisco, CA
12. [Sr. R&D Staff Software Engineering](#): Oak Ridge National Laboratory, Oak Ridge, TN
13. [Computer Engineer - Rapid Advancement in Process Intensification Deployment \(RAPID\)](#): University of Delaware, Newark, DE
14. [Environmental Informatics Research Professional](#): Oak Ridge National Laboratory, Oak Ridge, TN
15. [Research Software Engineer](#): Princeton University, Princeton, NJ
16. [Research Software Engineer](#): Princeton University, Princeton, NJ
17. [Research Scientist/Engineer](#): University of Washington
18. [Research Software Engineer](#): Harvard University, Cambridge, MA
19. [Machine Learning Engineer, Calico Life Sciences](#): South San Francisco, CA (currently remote)
20. [Research Software Engineer at Open Minds Lab](#): University of Pittsburgh

<https://us-rse.org>

# RSE Job Board

- RSE job board and [#jobs](#) channel
  - 91 unique jobs posted all time
  - 20 as of March 2<sup>nd</sup>
- Second most viewed page on the site
- Success!



The screenshot shows the 'Current RSE openings' section of the website. It lists 15 positions, including Software Engineer, Programmer I, and various research and data roles across different institutions like Calico Life Sciences, Princeton University, and Oak Ridge National Laboratory. The 'CAREERS' link in the top navigation bar is highlighted with a red circle.

**Current RSE openings**

1. [Software Engineer, Calico Life Sciences \(Contract\)](#): South San Francisco (Remote OK)
2. [Programmer I - Princeton Neuroscience Institute](#): Princeton University, Princeton, NJ
3. [Software Engineer](#): Benioff Ocean Initiative at University of California, Santa Barbara, CA (currently remote)
4. [Quantsight Software Engineer, Jupyter Ecosystem](#): Austin, Texas, worldwide (remote OK)
5. [Quantsight Software Engineer, C++/GPU](#): Austin, Texas, worldwide (remote OK)
6. [Quantsight Software Engineer, Distributed Computing \(Dask\)](#): Austin, Texas, worldwide (remote OK)
7. [Senior Research Scientist, Application Engineering](#): Oak Ridge National Laboratory, Oak Ridge, TN (can be remote)
8. [Data & Artificial Intelligence Research Engineering \(Full Time\)](#): Citrine Informatics, Redwood City, CA (or remote)
9. [Data & Artificial Intelligence Research Engineering \(Internship\)](#): Citrine Informatics, Redwood City, CA (temporarily remote)
10. [Software Engineer](#): University of Washington, Seattle, WA
11. [Senior Informatics Analyst, Research Informatics](#): Genentech, San Francisco, CA
12. [Sr. R&D Staff Software Engineering](#): Oak Ridge National Laboratory, Oak Ridge, TN
13. [Computer Engineer - Rapid Advancement in Process Intensification Deployment \(RAPID\)](#): University of Delaware, Newark, DE
14. [Environmental Informatics Research Professional](#): Oak Ridge National Laboratory, Oak Ridge, TN
15. [Research Software Engineer](#): Princeton University, Princeton, NJ



**Valeria** 5:33 PM

Tuesday, October 6th ▾

Hi all!

I just want to write something as appreciation to this group. I feel like I am still new to the RSE world but I just want to thank everybody involved in this project. I found my very first job as an RSE exactly through this Slack space and this week it's my first week 🚀🎉🐼



# US-RSE Slack

- Most communication happens in slack
  - Get invite after joining
- Example discussion channels
  - Q & A
  - Education & Training
  - Diversity, Equity, and Inclusion
  - Community Calls
  - Hiring & Interviewing
  - Jobs
  - National labs & regional groups
  - Python
- We openly encourage the creation of new channels



# DEI Working Group

- Diversity, Equity, and Inclusion Working Group
- Spawned from 2020 Community Call
- Meeting regularly to address DEI within:
  - US-RSE Association
  - Broader RSE community
- US-RSE DEI Speaker Series
  - Promote DEI awareness and best practices through lectures, workshops, and more
  - Dr. Cherri Pancake: March 25, 2021
- Careers in RSE
  - Showcase the diversity of fields and positions in research software engineering
  - <https://github.com/USRSE/rse-roles>
- Engage and promote DEI Tech Groups
  - Women in HPC, Code 2040, and many others

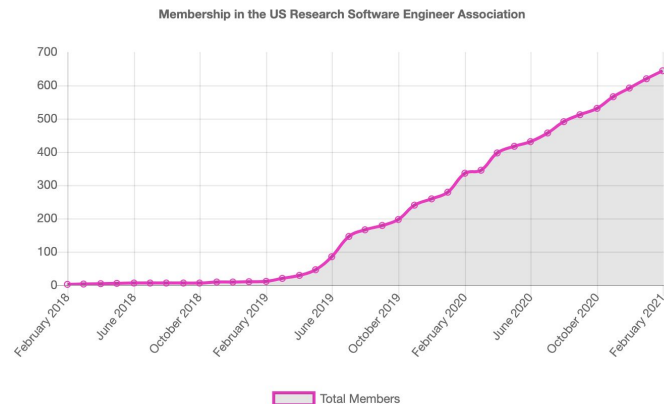


Image by [Gerd Altmann](#) from [Pixabay](#)

# US-RSE Future Plans

## Short Term (2021-2022)

- Raise awareness of US-RSE & RSE
- Monthly Community Calls to continue
- Community engagement and development
- International RSE Survey
  - Help us better understand RSEs in the world and US
  - We need your help: share & complete the survey
- Events
  - US-RSE workshop, Community Building Workshop
- Non-profit status

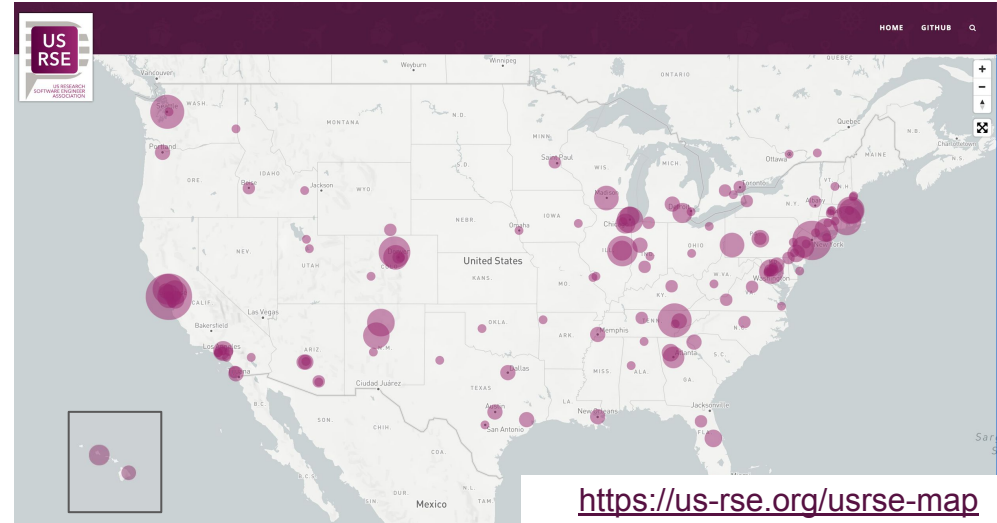


# US-RSE Envisioned Plans

## Long Term (2022-2025)

- Annual RSE Conference and/or workshop(s)
- Regional and local events/chapters
- Advocacy program to promote RSEs
- Career development program

**#US-RSECon2023**



# Should I join?





# Join us!

Thanks to the UK RSE Association (Society) and other national groups for inspiring and guiding us!

<https://us-rse.org/join>



Thanks to everyone who has contributed to the community!

[contact@us-rse.org](mailto:contact@us-rse.org)

<https://us-rse.org>

