

# BRIAN ROBERT CALLAHAN

Curriculum vitae

email: callab3rpi@gmail.com

<https://briancallahan.net/>

## EDUCATION

- Ph.D.** Science & Technology Studies, Rensselaer Polytechnic Institute, Troy, NY  
August 2018  
Dissertation: *Complexities of Collaboration: An Open Source Story*  
Dissertation Advisor: Mike Fortun
- MS** Science & Technology Studies, Rensselaer Polytechnic Institute, Troy, NY  
December 2015
- MA** Anthropology, Monmouth University, West Long Branch, NJ  
August 2014  
Thesis: *From Basson to Fagott: Evolution vs. Revolution*  
Thesis Advisor: William P. Mitchell
- BHA** Music Performance & Anthropology, Carnegie Mellon University, Pittsburgh, PA  
May 2009  
*College Honors*  
*University Honors*

## REFEREED PUBLICATIONS

### Journal Articles

- Callahan, Brian Robert. Forthcoming. "A first commentary on the CW Record Protocol." QEX.
- Callahan, Brian Robert. Forthcoming. "Experiments in gaming over SSTV." QEX.
- Callahan, Brian Robert. Forthcoming. "DataTV: A protocol for embedding data into SSTV transmissions." QEX.
- Fortun, Kim, Brian Callahan, Brandon Costelloe-Kuehn, Brad Fidler, Alison Kenner, Aalok Khandekar, Alli Morgan, Lindsay Poirier, and Mike Fortun. Forthcoming. "Hosting the Platform for Experimental, Collaborative Ethnography." *American Anthropology*.
- Callahan, Brian Robert. 2021. "Protocol for Formatting and Transmitting Binary Data over Morse CW." QEX 326 (May/June 2021): 31-33.
- Callahan, Brian Robert, Charles Hathaway, and Mukkai Krishnamoorthy. 2016. "Quantitative Metrics for Generative Justice: Graphing the Value of Diversity." *Teknokultura* 13(2): 567-586.

### Book Chapters

Fortun, Mike, Lindsay Poirier, Alli Morgan, **Brian Callahan**, and Kim Fortun. 2021. "What's so funny 'bout PECE, TAF, and Data Sharing?" In *Collaborative Anthropology Today: A Collection of Exceptions*, edited by Dominic Boyer and George E. Marcus. Cornell University Press.

Eglash, Ron, William Babbitt, Audrey Bennett, Kathryn Bennett, **Brian Callahan**, James Davis, John Drazen, et al. 2016. "Culturally Situated Design Tools: Generative Justice as a Foundation for STEM Diversity." In *Moving Students of Color from Consumers to Producers of Technology*, edited by Yolanda Rankin and Jakita Thomas, 132-151. Hershey, PA: IGI Global.

### Conference Proceedings

**Callahan, Brian Robert**. 2016. "SocialBSD: A Review of Diversity and Inclusivity Initiatives in the \*BSD Community and Imagining Future Pathways." Proceedings of AsiaBSDCon 2016: 167-176.

### GRANTS WON

**2020** Teaching and Learning Collaboratory Seed Grant: *The Rensselaer Cybersecurity Collaboratory*  
Rensselaer Polytechnic Institute, Brian Callahan, PI

### SCHOLARLY OUTPUTS

**2015-present** PECE, the Platform for Experimental Collaborative Ethnography

PECE has a global network of over 500 users working on a wide variety of projects from Asthma and pollution research, to Disaster Studies, to Cybersecurity, Japanese oral history, and more. Also used to support numerous graduate and undergraduate courses at UCI, RPI, and beyond.

*Contributions:* Lead Open Knowledge Developer

Technical knowledge: code (HTML/CSS/JS/PHP), documentation, best practices for technological stewardship

*Contributions:* Lead Systems Administrator

systems administration lead for the entire global network of servers, cybersecurity/information security, installation lead, maintenance lead

*Current Instances maintained, selected list:*

worldpece.org  
theasthmafiles.org  
disaster-sts-network.org  
centerforethnography.org  
forschungswerk-stadt.de  
cva.unifr.ch

*Historical Instances maintained:*

Japanese oral history project (decom. 2020)

### FELLOWSHIPS AWARDED

**2014-2016** GK-12/3Helix Fellowship, NSF

## CONFERENCE PARTICIPATION

### Papers presented

- 2021** "Life Outside the Big 4: The Adventure of D on OpenBSD," DConf 2021, Nov. 20-21, 2021.
- 2021** "Stories from reviving and extending a university's information security program," Seattle GNU/Linux Conference 2021, Nov. 5-6, 2021.
- 2021** "Design your own communication protocols," QSO Today Virtual Ham Expo, Aug. 14-15, 2021.
- 2021** "Talking PECE: Translating social science speak to technologists and vice-versa," Summer School Virtual Conference, Aug. 3, 2021.
- 2021** "The education of hacking: A year of teaching all the things," BSidesROC 2021, Rochester, NY. Mar. 20, 2021.
- 2020** "Middleware, Light Structure, Experimental Systems: Designing the Platform for Experimental Collaborative Ethnography (PECE)," 4S/EASTS Conference. August 2020. (Mike Fortun, Kim Fortun, Tim Schutz, Angela Okune, James Adams, Prerna Srigyan, Lindsay Poirier, **Brian Callahan**, Brandon Costelloe-Kuehn, Ali Kenner, Aalok Khandekar, Renato Vasconcellos Gomes)
- 2020** "The education of hacking: A year of teaching all the things," BSidesROC 2020, Rochester, NY. Mar. 21, 2020. (Cancelled/COVID-19)
- 2019** "Learning to (Open)BSD through its porting system," vBSDCon 2019, Reston, VA, Sep. 5-7, 2019.
- 2018** "Hosting the Platform for Experimental Collaborative Ethnography," Displacements: the Biennial Meeting of the Society for Cultural Anthropology, Apr. 19, 2018. (Kim Fortun, Mike Fortun, Lindsay Poirier, Alli Morgan, **Brian Callahan**, Brandon Costelloe-Kuehn, Alison Kennner, Brad Fidler, Aalok Khandekar)
- 2018** "Making it all work: The Infrastructures and Limits of (Digital) Collaboration," Institutions and Societies 2018, SUNY Albany, Albany, NY, Feb 23, 2018.
- 2017** "Coding Collaboration: Exploring a Definition Through a Transgender Hacker Collective," American Anthropological Association Annual Meeting 2017, Washington, D.C., Nov. 29-Dec. 3, 2017.
- 2017** "Leveraging Collaborative Mentorship to Strengthen Your Free Software Community" (with Lisa Marie Maginnis), Seattle GNU/Linux Conference, Seattle Central University, Seattle, WA, Oct. 6-7, 2017.

- 2017 “Rethinking Citizen Science by Doing Citizen Science” (with J. Dylan Rees), Society for the Social Studies of Science Conference 2017, Boston, MA, Aug. 30-Sep. 2, 2017.
- 2017 “Collaboration as a multi-scalar phenomenon,” Northeast Science and Technology Studies Conference 2017, York University, Toronto, Ontario, Canada, Apr. 22-23, 2017.
- 2016 “Trans Tech: Ethnography of a Hacker Collective,” American Anthropological Association Annual Meeting 2016, Minneapolis, MN, Nov. 16-20, 2016.
- 2016 “Towards a Transgender Technoscience,” Trans\*Studies Conference 2016, University of Arizona, Tucson, AZ, Sep. 7-10, 2016.
- 2016 “Diverse Be-longings: Trans Hacker Collectives as New Sites of Tech Diversity Understandings,” Theorizing the Web 2016, New York, NY, Apr. 15-16, 2016.
- 2016 “Trans Code: Free Software as Model & Critique of Diversity by Transgender Hackers” (with Lillian Lemmer), LibrePlanet 2016, MIT, Cambridge, MA, Mar. 19-20, 2016.
- 2016 “SocialBSD: A Review of Diversity and Inclusivity Initiatives in the \*BSD Community and Imagining Future Pathways,” AsiaBSDCon 2016, Tokyo University of Science, Tokyo, Japan, Mar. 10-13, 2016.
- 2016 “The Trans Tech Network: Using Culture to Challenge Structure and Diversity,” Institutions and Societies 2016, SUNY Albany, Albany, NY, Feb. 26, 2016.
- 2015 “Pathways to Social Justice in Social Science-Computer Science Collaboration,” American Anthropological Association Annual Meeting 2015, Denver, CO, Nov. 18-22, 2015.
- 2015 “Devio.us, the Free OpenBSD Shell Provider and Online \*BSD User Group: Technical and Social Lessons Learned from Half a Decade of Service” (with Bryce Chidester), vBSDcon 2015, Reston, VA, Sep. 11-13, 2015.
- 2015 “Building BUGs: A Broad View of the New York City \*BSD User Group” (with George Rosamond), BSDCan 2015, University of Ottawa, Ottawa, Canada, Jun. 10-13, 2015.

#### **Conferences organized**

- 2014 New York City \*BSD Conference 2014, New York, New York, Feb. 8, 2014.

#### **INVITED TALKS**

- 2021 CU Boulder Technology, Cybersecurity & Policy Seminar Series, CU Boulder, Oct. 25, 2021.
- 2021 “PolyglotBSD,” New York City \*BSD User Group, May 5, 2021.

- 2020** "Introducing the CW Record Protocol," Troy Amateur Radio Association, Nov. 17, 2020.
- 2019** "Hypatia Software Organization: A who, what, why, and how of advancing diversity in technology," Defcon 201, Sep. 20, 2019.
- 2018** "OpenBSD and You," Defcon 201, Dec. 21, 2018.

## **INTERVIEWS**

- 2021** "Open Source Voices," Episode 26, Dec. 14, 2021.
- 2021** "QSO Today," Episode 371, Oct. 16, 2021.
- 2021** "BSD Now," Episode 422, Sep. 30, 2021.
- 2021** "Eclectic Tech," Episode 38, American Radio Relay League, Jul. 15, 2021.

## **CAMPUS/DEPARTMENTAL TALKS**

### **Rensselaer Polytechnic Institute, Troy, NY**

*Department of Computer Science*

Introduction to Open Source: Lab, Open Source Documentation and Community Interaction (Spring 2017, Fall 2016, Spring 2016, Fall 2015)

**Spring 2015** Rensselaer Center for Open Source: Lecture, Welcome to OpenBSD!

*Department of Interdisciplinary Humanities and Social Sciences*

**Fall 2016** Open Source Art, Music, and Culture: Lecture, Transgender Communities in Open Source

## **TEACHING EXPERIENCE**

### **Courses Taught**

### **Rensselaer Polytechnic Institute, Troy, NY**

*IT & Web Science Program*

- Spring 2022** Information Systems Security  
Web Science Systems Development  
Technology Studies (as independent study)
- Jan 2022** CompTIA Security+ Certification
- Fall 2021** SSCP Certification  
Web Systems Development
- Spring 2021** Information Systems Security  
Web Science Systems Development  
OSCP Certification (as independent study)  
SSCP Certification (as independent study)
- Fall 2020** Modern Binary Exploitation

Web Systems Development  
SSCP Certification (as independent study)

**Spring 2020** Information Systems Security  
Web Systems Science Development

**Fall 2019** Modern Binary Exploitation (Instructor of Record; co-taught with Dr. Ana Milanova, Computer Science)  
Web Systems Development  
Web Science Systems Development (as large-group independent study)

**Spring 2019** Information Systems Security  
Web Science Systems Development  
Modern Binary Exploitation (as large-group independent study)  
Penetration Testing (independent study)

**Spring 2017** IT & Society

*Department of Science & Technology Studies*

**Spring 2018** Introduction to STS  
Sustainability by Design  
Sustainability Careers

**Fall 2017** Gender in Culture  
Gender in History  
Introduction to STS

**Spring 2017** Design in Culture  
Race as a Global Challenge  
Race in Culture  
Sustainability by Design

**Fall 2016** Gender in Culture  
Introduction to STS

**Russell Sage College, Troy, NY**

*Department of Arts & Letters*

**Fall 2018** Public Speaking & Presentations

**RESEARCH EXPERIENCE**

**2020-present** Cybersystems Security Research Group  
Rensselaer Polytechnic Institute, Brian Callahan, PI

**2015-present** Lead Open Knowledge Developer, Platform for Experimental and Collaborative Ethnography (PECE)  
University of California, Irvine, Kim Fortun, PI

**2015-present** Lead Systems Administrator, Platform for Experimental and Collaborative  
Ethnography (PECE)  
University of California, Irvine, Kim Fortun, PI

**2014-2016** Fellow, GK-12/3Helix  
Rensselaer Polytechnic Institute, Ron Eglash, PI

**DEPARTMENTAL/UNIVERSITY SERVICE**

**2021** Judge, HackRPI Fall 2021

**2021-present** Graduate Administrator, Information Technology & Web Science

**2019-present** Graduate Admissions Committee, Information Technology & Web Science

**2019-present** Curriculum Committee, Information Technology & Web Science  
Graduate

**2019-present** Curriculum Committee, Information Technology & Web Science  
Undergraduate

**2019-present** Concentration advisor, Information Dominance, Graduate, ITWS

**2019-present** Concentration advisor, Information Security, Graduate, ITWS

**2019-present** Concentration advisor, STS, Undergraduate, ITWS

**2019-present** Concentration advisor, Information Security, Undergraduate, ITWS

**2019-present** Faculty advisor, RPI-Sage chapter of Hillel International: The Foundation  
for Jewish Life at Colleges and Universities

**2019-present** Faculty advisor, RPISEC, the Information Security Club and CTF Team  
Rensselaer Polytechnic Institute

**2019-2020** Cybersecurity Analysis Team, Member  
Rensselaer Polytechnic Institute

**2016-2019** Principal Bassoonist, University Orchestra  
Rensselaer Polytechnic Institute

**2016-2017** Department of Science & Technology Studies Colloquium Committee  
Rensselaer Polytechnic Institute

**2016-2017** Department of Science & Technology Studies Graduate Representative  
Rensselaer Polytechnic Institute

**2012-2014** Information Technology University Steering Council, Graduate

Representative  
Monmouth University

2012-2014      Principal Bassoonist, University Orchestra  
Monmouth University

### **GRADUATE THESES ADVISED**

2022      Advisee: Alden Ford, Computer Science

2022      Advisee: Nick Meyer, Information Technology & Web Science

2022      Advisee: Stephen Trepel, Computer Science (co-advised with Dr. Bulent Yenner,  
Computer Science)

2021      A security-focused open source clone of the Amazon SQS messaging service  
Advisee: Honghao Li, Information Technology & Web Science

2021      A security policy combating counterfeiting for the average small business  
Advisee: Isaac Llewellyn, Information Technology & Web Science

### **UNDERGRADUATE THESES ADVISED**

2017      Pedestrian Dis/Order: Reimagining Our Urban Streets  
Advisee: Morgan Johnson, Science & Technology Studies

### **PROFESSIONAL AFFILIATIONS**

American Anthropological Association  
American Association for the Advancement of Science  
American Radio Relay League  
Association for Computing Machinery  
Society for the History of Technology  
Society for the Social Studies of Science

### **PROFESSIONAL CERTIFICATIONS**

CompTIA Security+

### **NON-PROFIT/PROFESSIONAL EXPERIENCE**

2016-2021      Clerk, Hypatia Software Organization, Inc.  
Boston, MA

2016-2021      Director, Hypatia Software Organization, Inc.  
Boston, MA

2013-present      Developer, The OpenBSD Project  
Calgary, Alberta, Canada