# Innovation Round Table 2021

Beyond Pittsburgh

WEDNESDAY, FEBRUARY 17, 2021, 2:00 PM-3:30 PM

Brought to you by Zoom



Presented by Carnegie Mellon University Libraries and Software Engineering Institute's Research Services,

Innovation Roundtable brings together students, faculty, and researchers to discuss how the resources and services provided by these information centers fuel innovation, problem solving, and collaboration. This year's event will focus on the unique experience of the first cohort of our remote/hybrid/on-site campus community and the expert methods provided by the University's Faculty Librarians and SEI Research Services staff for enabling virtual collaboration and innovation.

# Program

### Digital Resilience in Libraries and the Pandemic

Special Guest Speaker

Keith Webster, Dean of Carnegie Mellon University Libraries

When CMU transitioned 2,000 courses from their normal campus locations to a remote modality in March, the faculty and staff of the University Libraries leapt into action, connecting instructors and learners to virtual materials and providing workflow tools to facilitate virtual research and collaboration. What allowed us to pivot so readily? A talented team was critical, and, in many ways, we've been laying the groundwork for the past 25 years as we've increased our investment in digital tools and technologies. In this presentation, Keith Webster will speak on how the pandemic has introduced an accelerated pace of change, and, with it, a unique opportunity to make significant moves to maintain the momentum of recent times.

## University Libraries | Research Services: Here to Collaborate and Consult with You

**Panelists** 

Rachel Callison, Senior Research Librarian, Research Services, SEI

Hannah Gunderman, Research Data Management Consultant, CMU Libraries

Huajin Wang, Liaison Librarian, Co-director of Open Science & Data Collaborations Program, CMU Libraries

Melanie Gainey, Liaison Librarian, Co-director of Open Science & Data Collaborations Program, CMU Libraries

In this panel discussion, librarians and staff from the University Libraries will describe the services that the libraries provide and the ways in which how they collaborate and communicate has changed due to the pandemic.

#### Collaboration in the New Normal

Special Guest Speaker

Tom Longstaff, CTO, Software Engineering Institute

We all learned a new way to work in 2020, driven by COVID-19; this way of working partnered a future of new technology with collaboration and emerged as an effective way to maintain, and to extend, our research productivity. From Zoom to remote labs to virtual reality we have started to embrace a new way of working together that promises to be better than we could have achieved prior to the pandemic. How does our DE&I initiative come together with technology and new research in cognition to build a positive future barely imagined before the necessity of invention? What might the future hold with the use of even more advanced technologies to be productive anywhere, anytime, and with anyone? Tom Longstaff will explore the benefits and challenges of the future that has been stimulated over the past year.

# Overview of the Software Engineering Institute's (SEI's) Internship Program

Presenter

Lindsey Mercer, Talent Acquisition Specialist

Lindsey Mercer will present an overview of the SEI's internship program, describing the application process, research opportunities available, and the impact that interns have had at the SEI.

### SEI Internship Program—Advantages to Participation and the Impact of COVID-19

Presenter

Dan Costa, Technical Manager, Enterprise Threat and Vulnerability Management, SEI CERT Division

Dan Costa will moderate a panel discussion with CMU students, Jacob Oaks and Samantha Chaves, who currently participate in the SEI's Internship Program. Austin Vershave, a previous internship participant who was recently promoted to a full-time SEI position as Assistant Cyber Security Engineer, will also be a member of the panel. The discussion will emphasize impacts of COVID-19 on the goals and objectives of their work, as well as provide a brief description of how these internships may lead to full-time SEI positions.

#### **Zoom Room Breakout Sessions**

The program includes two Zoom breakout sessions:

- 1. A discussion of the SEI CERT Internship Program led by Dan Costa, Lindsey Mercer, Michelle Tomasic and Cameron Mitchell
- 2. An overview of library services with a discussion led by University Libraries and SEI Research Services Librarians Hannah Gunderman, Melanie Gainey, Huajin Wang, and Rachel Callison

### Meet the Presenters



**Special Guest Speaker Keith Webster**Dean of Carnegie Mellon University Libraries

Keith Webster was appointed Dean of University Libraries at Carnegie Mellon University in July 2013 and was additionally appointed as Director of Emerging and Integrative Media Initiatives in July 2015. He also has a courtesy academic appointment at the University's H. John Heinz III College. Previously, Keith was Vice President and Director of Academic Relations and Strategy for the global publishing company John Wiley and Sons. He was formerly Dean of Libraries and University Librarian at the University of Queensland in Australia, leading one of the largest universities and hospital library services in the southern hemisphere. Earlier positions include University Librarian at Victoria University in New Zealand, Head of Information Policy at HM Treasury, London, and Director of Information Services at the School of Oriental & African Studies, University of London.

Keith has held professorships in information science at Victoria University of Wellington and City University, London. He is a Chartered Fellow and an Honorary Fellow of the Chartered Institute of Library and Information Professionals (UK), and has served on government advisory boards, journal editorial boards, and as an officer in professional and learned societies around the world. He became Chair of the National Information Standards Organization on 1 July 2018.

Keith's professional interests include research evaluation, learning space design, and trends in scholarly communication. He is a regular speaker on topics such as the future of research libraries and the impact of open science on publishing and libraries.



Special Guest Speaker
Tom Longstaff

Chief Technology Officer, Software Engineering Institute

Tom Longstaff is responsible for formulating a technical strategy and leading the funded research program of the institute based on current and predicted future trends in technology, government, and industry.

Before joining the SEI as CTO in 2018, Tom was a program manager and principal cybersecurity strategist for the Asymmetric Operations Sector of the Johns Hopkins University Applied Physics Laboratory (APL), where he led projects on behalf of the U.S. government, including nuclear command and control, automated incident response, technology transition of cyber R&D, information assurance, intelligence, and global information networks. He also was chair of the Computer Science, Cybersecurity, and Information Systems Engineering Programs and co-chair of Data Science in the Whiting School at Johns Hopkins.

Prior to joining the staff at APL, Tom was the deputy director for technology for the CERT Division at the Software Engineering Institute. In his 15-year tenure at the SEI CERT Division, he helped create many of the projects and centers that made the program an internationally-recognized network security organization. His work included assisting the Department of Homeland Security and other agencies to use response and vulnerability data to define and direct a research and operations program in analysis and prediction of network security and cyber terrorism events.

Tom received his bachelor's degree in physics and mathematics from Boston University and his master's degree in applied science and his Ph.D. in computer science from the University of California, Davis.



**Dan Costa**Technical Manager of Enterprise Threat and Vulnerability
Management, CERT Division, Software Engineering Institute

Dan Costa leads the research and engineering efforts of the Insider Risk and Applied Network Defense teams, which conduct empirical research and develop solutions that enable organizations to effectively manage insider risks and advance the state of the practice in technical cybersecurity assessments. Dan has over 13 years of professional experience in cybersecurity and software engineering, and is a Certified Information Systems Security Professional and an IEEE Certified Professional Software Engineering Master. Dan holds a Bachelor of Science in Computer Science degree from Bucknell University and is an adjunct faculty member in the H. John Heinz III College at Carnegie Mellon University.



**Shannon Riffe**Director of Marketing, Communications, and External Relations,
Carnegie Mellon University Libraries

Shannon Riffe has been with Carnegie Mellon University since April 2015 and currently holds the title of Director of Marketing, Communications, and External Relations in the University Libraries. Prior to that she was Associate Director of Online Engagement in the CMU Office of Advancement. Before joining CMU, she held a similar position at the University of Michigan. In her current role, Shannon manages the internal and external communications and outreach for the Libraries. She is a two-time judge for the Council for Advancement and Support of Education (CASE) Circle of Excellence Awards in the Category of Digital Communications and a three-time CASE COE Award winner. She was a member of the first cohort of the CMULead leadership development program and is the co-lead for the Libraries' diversity, equity, and inclusion strategic plan.



**Andy Prisbylla**Library Event Planner, Carnegie Mellon University Libraries

A graduate of the University of Pittsburgh's MLIS program, Andy Prisbylla has worked within the Libraries in a variety of capacities, beginning his employment in the mailroom and working his way up from there. In his spare time, Andy enjoys movies, art, photography, and spending time with his cat Molly.



**Huajin Wang**Liaison Librarian and Program Director for Open Science & Data
Collaborations, Carnegie Mellon University Libraries

As a liaison librarian, Huajin Wang helps students and faculty with their information and data needs. As the program director for Open Science & Data Collaborations, she leads innovative initiatives that facilitate research data sharing, reuse and reproducibility, and bring together communities across disciplinary boundaries to build a healthy data ecosystem. As a researcher, she has led many successful research projects and collaborated with biologists, clinicians, information professionals, and data scientists on interdisciplinary research topics. Huajin holds a PhD in Cell Biology. Before joining the libraries, she has had more than 10 years of experience in biomedical research including molecular and cellular biology, lipid metabolism, bioinformatics, and computational analysis of large biomedical datasets.



#### **Melanie Gainey**

Liaison Librarian supporting the Biological Sciences, Biomedical Engineering, and Psychology departments at CMU and Co-Director of the Open Science & Data Collaborations Program, Carnegie Mellon University Libraries

Melanie Gainey has worked on many open science initiatives and helps support reproducible research with digital tools, training, and events. As a trained neuroscientist, she brings research expertise to her role as a librarian. She spent 10+ years studying plasticity of neural circuits in sensory cortex while receiving her Ph.D. in Neuroscience at Brandeis University and during her postdoctoral training at U.C. Berkeley.



**Hannah Gunderman** Research Data Management Consultant, Carnegie Mellon University Libraries

Hannah Gunderman is a human geographer by training, using qualitative and quantitative data to help tell stories about the world around us, using GIS, data mining, and ethnography to capture how humans experience the landscapes around them. She holds a PhD in Geography from the University of Tennessee-Knoxville, where in her dissertation she collected qualitative and quantitative data to inform an analysis of Doctor Who's impact on viewers in the areas of empathy and geopolitical awareness. Hannah also holds a Masters of Arts in Geography/Environment and Natural Resources (with a Statistics minor) and a Bachelor of Science in Geography/ Natural Resource Management from the University of Wyoming. In her master's thesis, she used qualitative and quantitative data to geospatially understand the impact of the Grateful Dead on the present-day economic landscape of the United States. As a geographer, she has been exposed to many forms of research data in multiple settings, and has learned the do's (and don'ts!) of how to manage these data.



#### Michele Tomasic

Director of Operations, CERT, Software Engineering Institute

Michele Tomasic leads the CERT Division's operational activities, developing operational strategies and implementing processes, programs, and associated metrics that are focused on increasing the efficient operation of the CERT Division. She also leads efforts to improve internal communications, and review and adapt SEI and CERT operational processes to increase effectiveness and efficiencies. Day to day, Michele manages and coordinates operational workflows, staffing processes, and organizational effectiveness efforts both in the Pittsburgh and DC offices. She is responsible for developing, organizing, and initiating activities which represent the CERT Division Director's Office. Michele acts as the lead on selected special projects and any strategic operational programs or initiatives which involve coordination of CERT and the SEI as a whole. She analyzes and develops solutions which involve program and operations management. Michele works closely with internal executive level parties and teams within CERT and the SEI. She also serves as a resource and advisor to the Director and Deputy Director in developing and managing schedules, monitoring performance against plans, and overseeing inherently interdisciplinary or shared initiatives.



**Cameron Mitchell**Operations Assistant, CERT, Software Engineering Institute

Cameron Mitchell provides senior level operations support to the CERT Director's Office and assists with the workflow and transfer of information within the division. Cameron assists CERT leadership in logistics, customer interfaces, and planning activities. Cameron serves as a direct contract for CERT communications, conference sponsorships, and CERT internal events. He also serves as a resource and advisor to the Director of Operations in developing and managing schedules, developing and maintaining internal websites, and overseeing the execution of shared initiatives.



#### Lindsey Mercer

Lindsey Mercer is responsible for the full lifecycle recruitment of technical and operational talent at the SEI. She also manages the SEI's internship program for 40+ summer interns and 30+ academic year interns including recruiting, onboarding, and program management. Before joining the SEI, Lindsey was an Account Manager/Recruiter for a globally recognized search firm in IT and Engineering. She has a Bachelor of Business Administration degree from Mount Aloysius College. Lindsey obtained her SHRM-

Talent Acquisition Specialist, Software Engineering Institute



**Shay N. Badolato**Event Planner II, Communication Services,
Software Engineering Institute

CP certification in August 2020.

Before joining the SEI, Shay Badolato was a hospitality professional for over 6 years with Fairmont Hotels & Resorts at Fairmont Pittsburgh where she held two positions, Concierge and Sales, Catering, and Events Coordinator. Shay is a published writer in Whirl Magazine, Pennsylvania Meetings & Events Magazine, Mt. Lebanon Magazine, and Maniac Magazine. She has a Bachelor of Arts degree in Professional Writing with a Visual Communications Design focus from La Roche University. Shay spent her time at La Roche University as Editor-in-Chief of the campus newspaper, the La Roche Courier, and Co-President of Sigma Tau Delta, English Honors Society.

### Software Engineering Institute's Spring Interns



Jacob Oaks has been working as an Intern at the Software Engineering Institute, Emerging Technology Center since January 2020. In this position Jacob has enriched his knowledge of machine learning by interacting with some of the United States' greatest minds in the field and by performing focused studies of modern literature. In addition, he has earned valuable practical experience developing programs and machine learning frameworks utilizing modern tools. Jacob sees his career going in one of two directions: he would love to continue to expand his knowledge of machine learning and continue to engage with the technical innovations being made every day in the field. Specifically, working towards commercially available self-driving vehicles has always sounded fun to him. He would also love to fulfill his life-long dream (ever since he was a kid) of developing engaging and innovate video game and user experiences.



Samantha Chaves began working at the Software Engineering Institute in May 2020 and is currently a CERT M&R Intern in the CERT Division. She is a graduate student at Florida State University, double majoring in Cybersecurity and Computer Science. During her undergraduate studies, she obtained her bachelor's in Computer Science with a minor in Mathematics. This past summer, she was fortunate enough to start her first position in the industry as an intern with SEI's Platform Insight Division. Her future career goal is to work with the government where she can become an expert in the Cybersecurity field. Apart from her academic career, Samantha enjoy taking drives to the beach, cooking, and she also has a passion for fitness.

### SEI Intern Promoted to Assistant Cyber Security Engineer



Austin Vershave began working at the SEI in May 2019 as an intern in the CERT Division with CERT Cyber Workforce Development (CWD) team. Austin just completed his undergraduate degree at La Roche University in Computer Science. On finishing up his internship, Austin accepted an offer from the SEI for a full-time position with the title of Assistant Cyber Security Engineer for the CWD team. During his internship, Austin participated in creating cyber security exercises for the Regional Cyber Center and the Cyber Protection teams. Austin hopes he continues to grow within the security industry and is excited about starting his new career!

#### Research Services... at a Glance

#### Connecting you to the information you need

Our expert staff is dedicated to providing you with the information most relevant to your research using our expansive library network. This network includes direct access to subscription-only, full-text databases such as

IEEE Explore

Lexis/Nexis

ACM Digital Library

• Gartner Core Research

SCOPUS

Hoovers

Web of Science

• DTIC

#### **Common Requests for information include**

- searching general, government, and scholarly literature sources
- · analyzing and verifying citations
- improving current awareness
- acquiring books and article materials via inter/intra-library loan



#### Sheila L. Rosenthal

Manager of Research Services, Software Engineering Institute

In her position, Sheila defines goals, negotiates policies, makes plans to insure the continuing availability of timely and appropriate information to all areas of the organization, and oversees all aspects of research services. In addition, she ensures the availability of electronic resources in all formats (e.g., e-books and e-journals) as well as provides printed resources, borrowed from the CMU Libraries or other external organizations, which support the mission of the SEI. She maintains awareness of current publication trends and information practices through membership in professional organizations and participation in workshops, seminars, and conferences. Sheila provides direct supervision of the Research Services staff and, in regard to Carnegie Mellon University, she serves as the official liaison to the Carnegie Mellon Library community and fulfills all requirements to maintain membership within the Research Center Information Managers (RCIM) FFRDC Library Directors/Managers Group.



Rachel L Callison

Research and Reference Librarian, Software Engineering Institute

Rachel has been the Research and Reference Librarian at SEI Research Services since 2004, and was promoted to Senior Librarian in 2011.

Prior to joining Carnegie Mellon, she was with the University of Pittsburgh (1995-2004) in several roles: Reference & Public Services Librarian at the Information Sciences Library, the Business Library, and the Engineering Library; and the Administrator of the Department of Library and Information Sciences, School of Information Sciences (now the School of Computing and Information).

An interest in learning environments, information fluency, and the research process led Rachel to design and teach numerous courses and workshops, including graduate courses for MLIS students at the University of Pittsburgh, since 1999. Rachel has authored several professional publications and has held numerous governance and leadership roles within the Special Libraries Association (local and national) and the local chapter of the Association of College and Research Libraries.

Requests or Questions?

Send us an email at rs-team@sei.cmu.edu