

20TH ANNIVERSARY

SEI Software Engineering Workshop For Educators 2023

In-Person

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Day 1

Welcome and Introduction

Workshop Objectives

Share and refine ways to include software engineering concepts, methods, and practices in college and university courses

Form working relationships among participants and nurture a software engineering educator community

Collect brief “impact” stories that enable us to show value of continuation of the workshops

Workshop Expectations

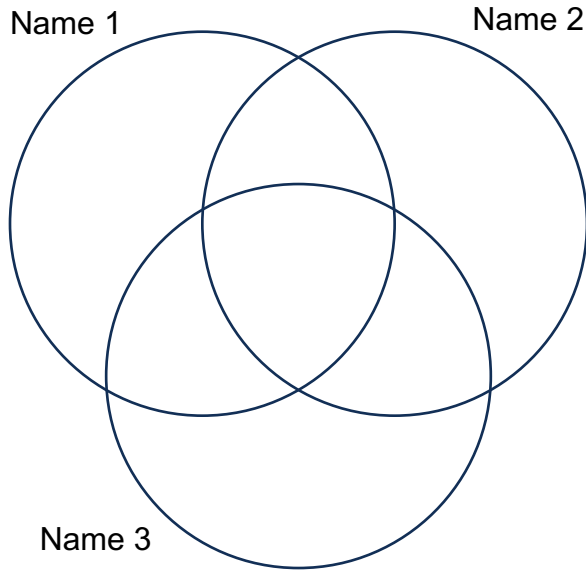
The workshop is a two-way conversation

- Ask questions
- Participate in polls and open questions

There are more attendees than usual at the workshop afternoon session

- Keep your comments brief and to the point
- Give everyone a chance to participate

Introductions



- Seek out colleagues you don't know or would like to get to know better.
- Form groups of three or four around a flip chart.
- Label each of the circles with your name.
- Fill in the Venn Diagram with topics unique to you, and those shared by two or three of you.
- Topics might be facts about yourself, hobbies, subjects you teach, modes of engaging students.
- Choose one member to share results with the rest of the group.

Agenda: Day 1

Time	Activity
08:30 – 09:00	Breakfast
09:00 – 09:30	Welcome and Introductions – Workshop Hosts, All Artifacts Sharing Goals, Rules, and Schedule – Workshop Hosts, All
09:30 – 10:15	Artifact Sharing (Panel 1)
10:15 – 10:30	Break
10:30 – 12:00	Artifact Sharing (Panel 2, Panel 3)
12:00 – 13:00	Lunch

Time	Activity
13:00 – 13:30	Welcome and Introductions, Workshop Goals, Agenda – Workshop Hosts, All
13:30 – 14:30	20th Anniversary Session: Changes Over the Years Len Bass, Carnegie Mellon University; Lawrence Jones, ABET; Linda Northrop, Software Engineering Institute
14:30 – 15:00	Break
15:00 – 16:30	Instruction: Supporting Neurodivergent Students in College and Onwards Dr. Andrew Begel, PhD of the Software and Societal Systems Department at Carnegie Mellon University

All times are EDT

Agenda: Day 2

Time	Activity
08:30 – 09:00	Breakfast
09:00 – 09:15	Morning icebreaker, Review agenda, Reflection, Ideas for day 3
09:15 – 10:00	Artifact Sharing (Panel 4)
10:00 – 10:30	Break
10:30 – 12:00	Artifact Sharing (Panel 5, Panel 6)
12:00 – 13:00	Lunch

Time	Activity
13:00 – 14:30	Instruction: Welcome to the Glorious Nation of Ambrosia! Cyber Forensics and Incident Response Rotem Guttman – Senior Cybersecurity Researcher and Cyber Forensics and Incident Response (CyFIR) Capstone Instructor, Software Engineering Institute William R. Nichols, AI – Infrastructure Engineer, Software Engineering Institute
14:30 – 15:00	Break
15:00 – 16:30	Instruction: Experiential Learning or, How I Learned to Stop Worrying and Love the Classroom Rotem Guttman – Senior Cybersecurity Researcher and Cyber Forensics and Incident Response (CyFIR) Capstone Instructor, Software Engineering Institute William R. Nichols, AI – Infrastructure Engineer, Software Engineering Institute

Social Event — SEIber Café (17:30 — 19:30)

Software Engineering Institute, Carnegie Mellon University

All times are EDT

Agenda: Day 3

Time	Activity
08:30 – 09:00	Breakfast
09:00 – 09:15	Review agenda, reflection, plan for day 3
09:15 – 10:00	Artifact Sharing (Panel 7)
10:00 – 10:30	Group Photo; Break
10:30 – 12:00	Artifact Sharing or Deep Dive
12:00 – 13:00	Lunch
Time	Activity
13:00 – 13:15	Review agenda for day 3
13:15 – 14:30	Educator-Led Session Breakout Group Discussion
14:30 – 14:50	Break
14:15 – 15:15	Summary of Breakout Group Discussion Breakout Group Leads
15:15 – 15:30	Closing Wrap-Up – Workshop Hosts Graduation – All Request for Feedback and Impact Statements – Educators

All times are EDT

Shared Artifact Presentations

Part 1: Presentation — 10 minutes

- Educators present “shared artifact” abstracts
 - overview, learning objectives
 - issues: pros and cons, tips on usage
 - question for the group to discuss

Part 2: Discussion – 5 minutes

- Educators respond to questions and discuss
 - how might I use or adapt the artifact for my own use in the classroom?
 - what advice might I offer to my colleague in using the artifact?
 - how does this make me think differently about the topic?
- The topic is open to the entire group for discussion.

Notes on Attribution

If you use any shared artifact in your classes or programs, please include proper attribution.

Options

- <Educator Name>. 2023 SEI Software Engineering Educators Workshop. Pittsburgh, PA. August 2023.
- Adapted from material presented by <Educator Name> from <University> at the 2023 SEI Software Engineering Educators Workshop
- Materials provided by <Instructor Name> from <University> at the 2023 SEI Software Engineering Educators Workshop

Shared Artifact Themes

Sessions from previous years: projects and assignments, curriculum/capstone, architecture, management, devops, and security

Organizing themes from previous years:

- **topic:** architecture, design, test, requirements, quality attributes, security, analysis, agile, devops, software life cycle
- **level:** K12, undergrad, master, professional
- **reflection:** teaching experience, what belongs in curriculum, how to teach/engage students
- **medium:** video game, case study, lecture, assignment, syllabus, curriculum, online education
- **scope:** curriculum, syllabus, course, module
- **technology:** IoT, Java, big data, SOA, microservices

Time Permitting ... Potential Discussion Topics

- More detail on a particular artifact or topic emerging from discussion
- How to incorporate this year's instruction topics into courses
- Software Engineering in Undergraduate Curricula
 - What from the workshop can be used in undergraduate courses?
 - What format is best? How would you include the topics?
 - What materials would you need to teach the topics?
- Software Engineering in Graduate Curricula
 - Same topics as above
- Continuation of discussion topics from last year on practices and lessons learned for virtual and hybrid teaching: Online to in-person, Student evaluation, Student engagement, Hybrid classroom, Technology impact
- Others?

Joining Hybrid Meetings on Zoom

You are welcome to join the hybrid meetings on Zoom so that you can see the remote participants and participate in the chat.

Please make sure that both your mic and speakers are muted so that we do not create feedback.

- The room is set up so that we can hear each other properly.

We will be using Poll Everywhere to blend remote and on-location responses.

- pollev.com/mainsummit799



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