Welcome to ASYNC 2025

Welcome to Portland Oregon

General Chairs	Program Chairs	Local Chairs	Publicity Chair
Georgios Dimou	*Marly Roncken*	*Prasad Joshi*	*Prafull Purohit*
Masashi Imai	*Matthias Függer*	*Andrew Lines*	

- The ASYNC Organizing Committee and IEEE Computer Society are committed to a positive, respectful environment for everyone in our community. There is no place for harassment or bullying.
- IEEE takes these issues very seriously and has established the **IEEE Ethics Reporting Line** to investigate all reports of misconduct or violations of the IEEE Code of Ethics.
- The **IEEE CS Committee to Assist in Reporting Ethics & Conduct Violations** (CS Assist) can help anyone who needs it to report any issues to the IEEE Ethics Reporting Line.
- If you need immediate help on-site, please go to the **Registration Desk**.

IEEE COMPUTER SOCIETY Assist

Committee to Assist in Reporting Ethics and Conduct Violations

CS Assist committee: **assist@computer.org**

IEEE Ethics Reporting Line: **www.ieee-ethics-reporting.org**

+1.888.359.6323

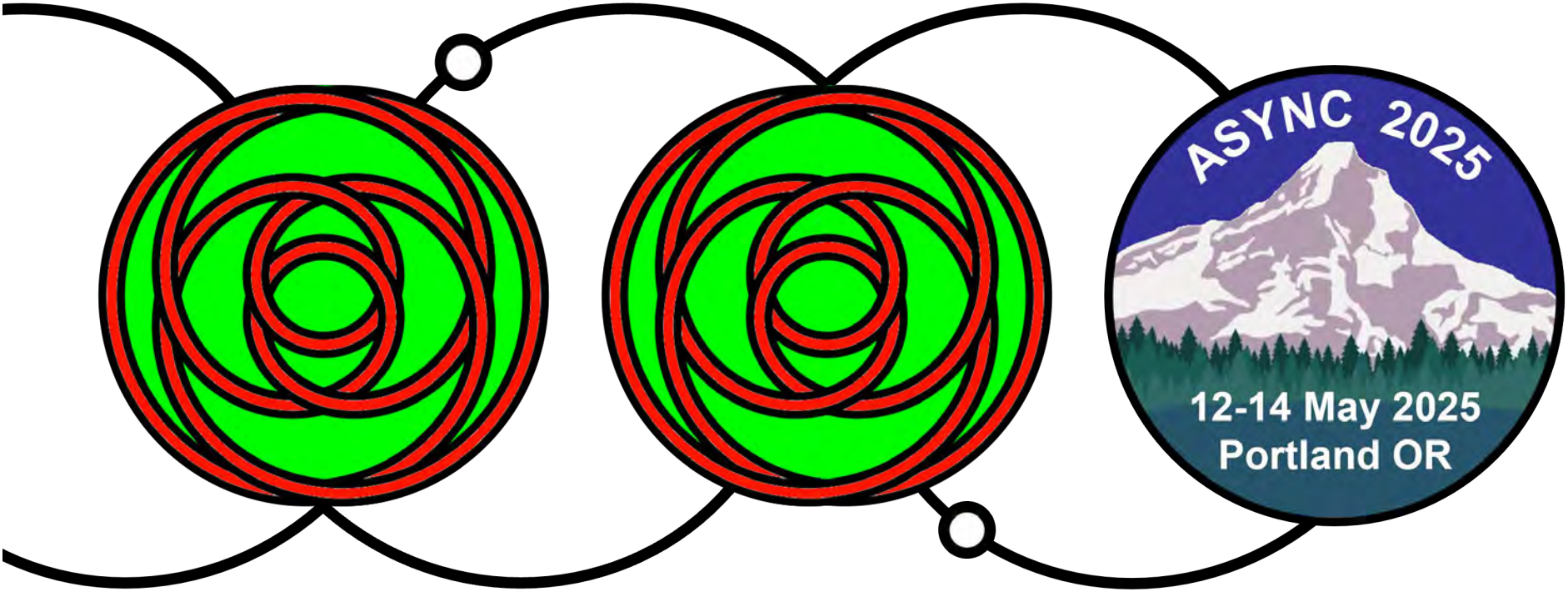
IEEE COMPUTER SOCIETY IEEE

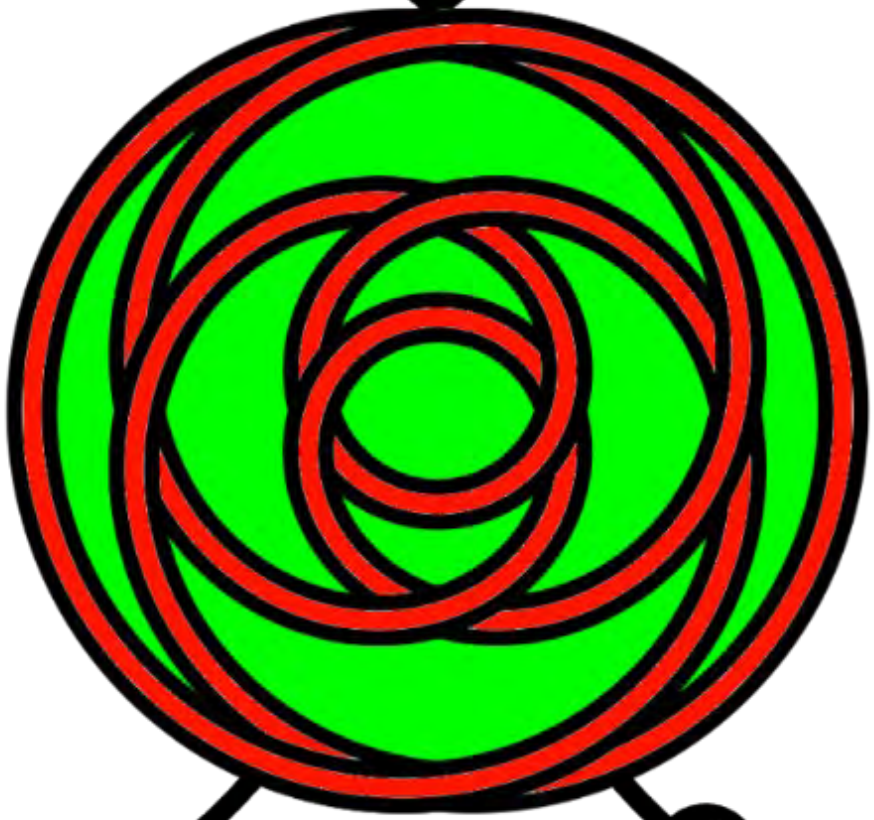
on-line Proceedings

- https://conferences.computer.org/asyncpub25
  - ID: asyncpub25
  - Passwd: conf25//

Portland Oregon

- The "City of Roses"
  - o where the Willamette River flows into the Columbia River
  - o in the shadow of snow-capped Mount Hood





The C-element logo for ASYNC 2025 is a symmetric knot with eight crossings that generalizes rose curves, in acknowledgment of Portland as “the City of Roses” – see https://en.wikipedia.org/wiki/rose_(mathematics) for more information on rose or rhodonea curves.

Portland Oregon

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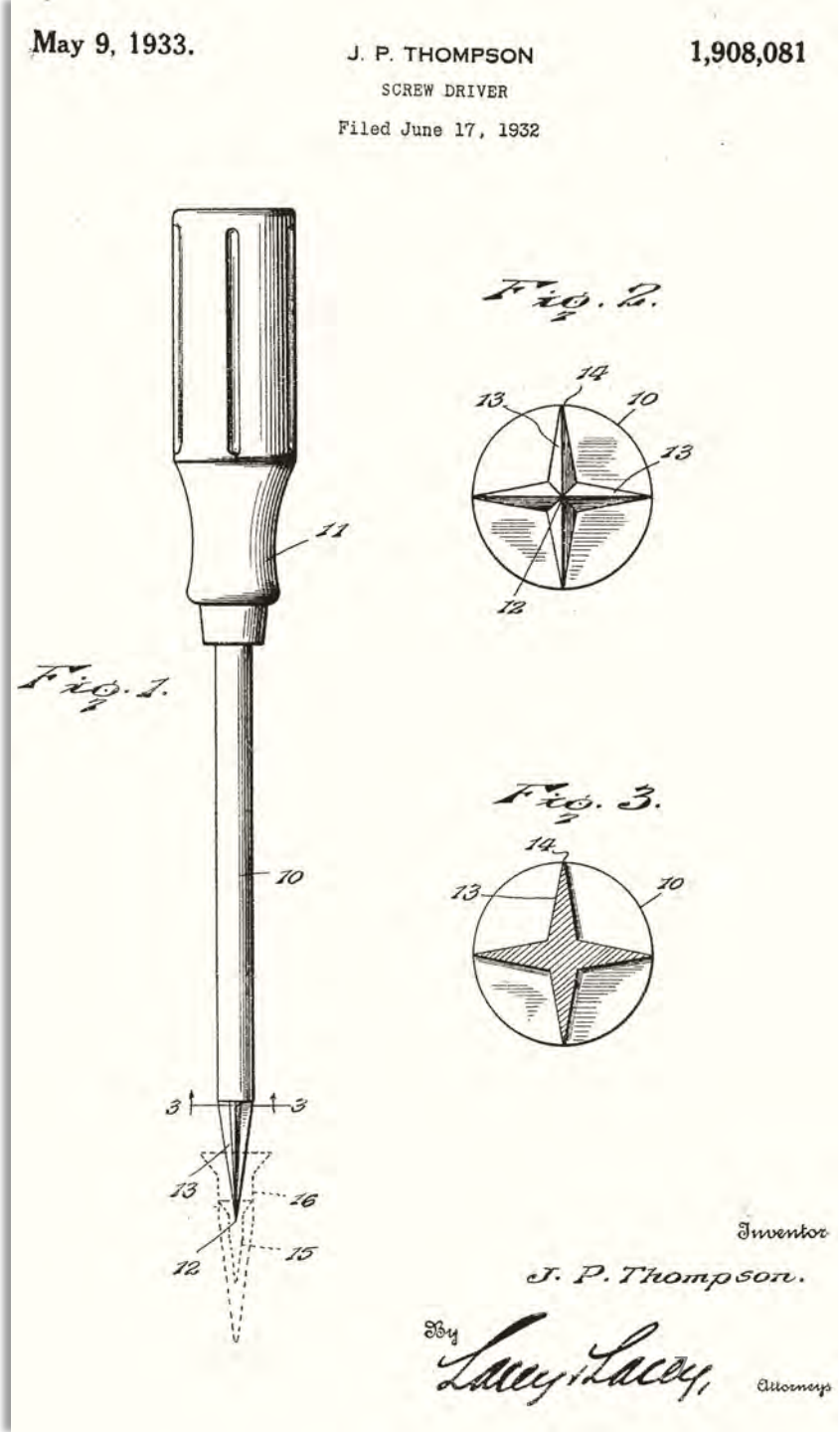
  - where the Willamette River flows into the Columbia River
  - in the shadow of snow-capped Mount Hood
- Known for
  - its parks, bridges, bicycle paths, and eco-friendliness
  - its coffeehouses, craft distilleries and breweries, food (carts)
  - Powell’s Books
- Home to
  - "Philips" screw and driver invention by John P. Thompson

Phillips SCREW DRIVER Patents (1932)

- Invented by John P. Thompson
  - Screw (US Patent 1908080)
  - Screw Driver (US Patent 1908081)
  - Innovative cruciform groove

- Rights sold to Henry F. Phillips (1933)
  - Revolutionized assembly lines


May 9, 1933. J. P. THOMPSON 1,908,081

SCREW DRIVER

Filed June 17, 1932

Fig. 1.

Fig. 2.

Fig. 3.

Inventor

J. P. Thompson.

By Lacey & Lacey, Attorneys

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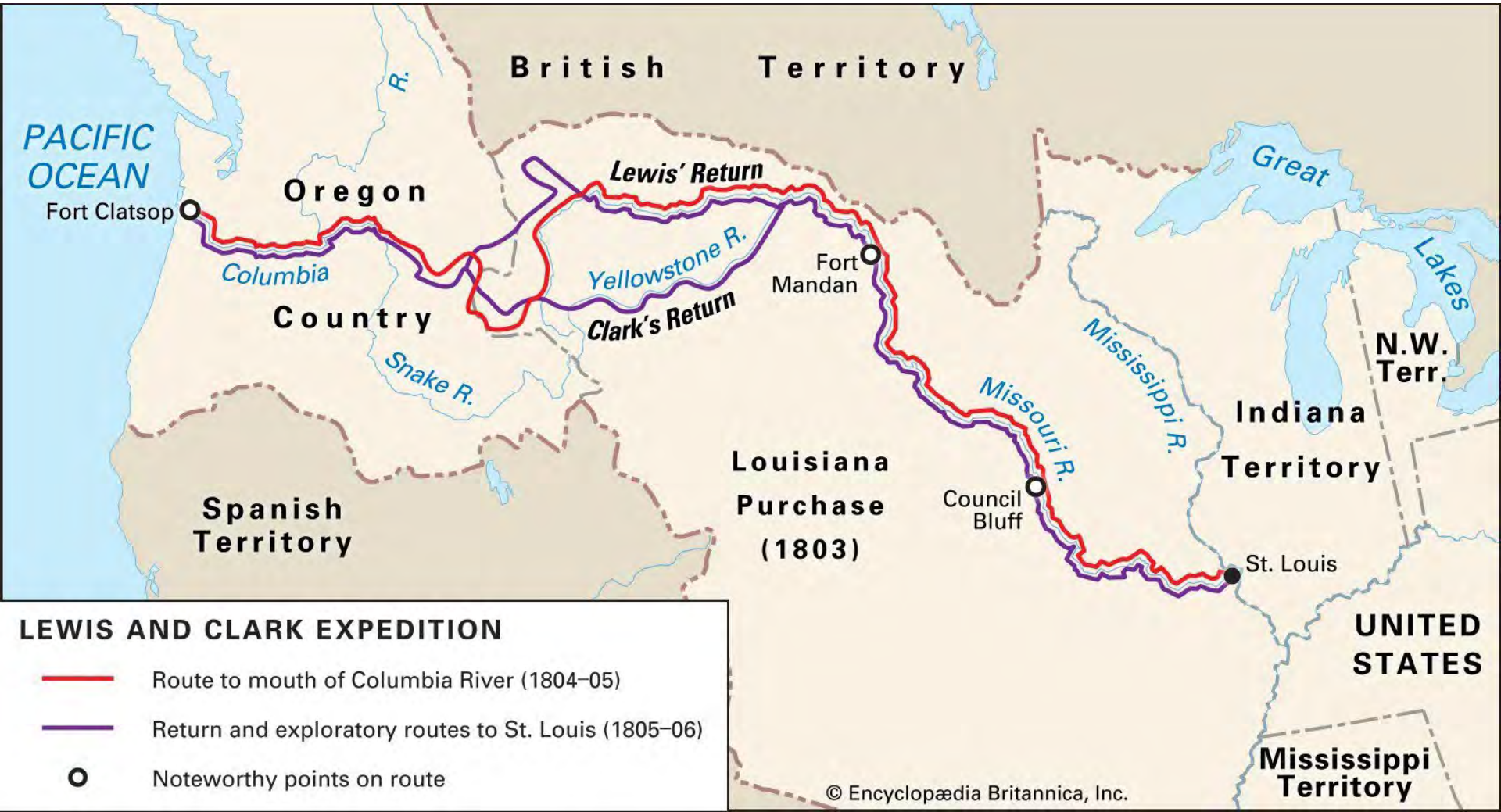
- Home to
  - "Philips" screw and driver invention by John P. Thompson
- **Near**
  - **1805 winter quarters of the Lewis and Clark Expedition**

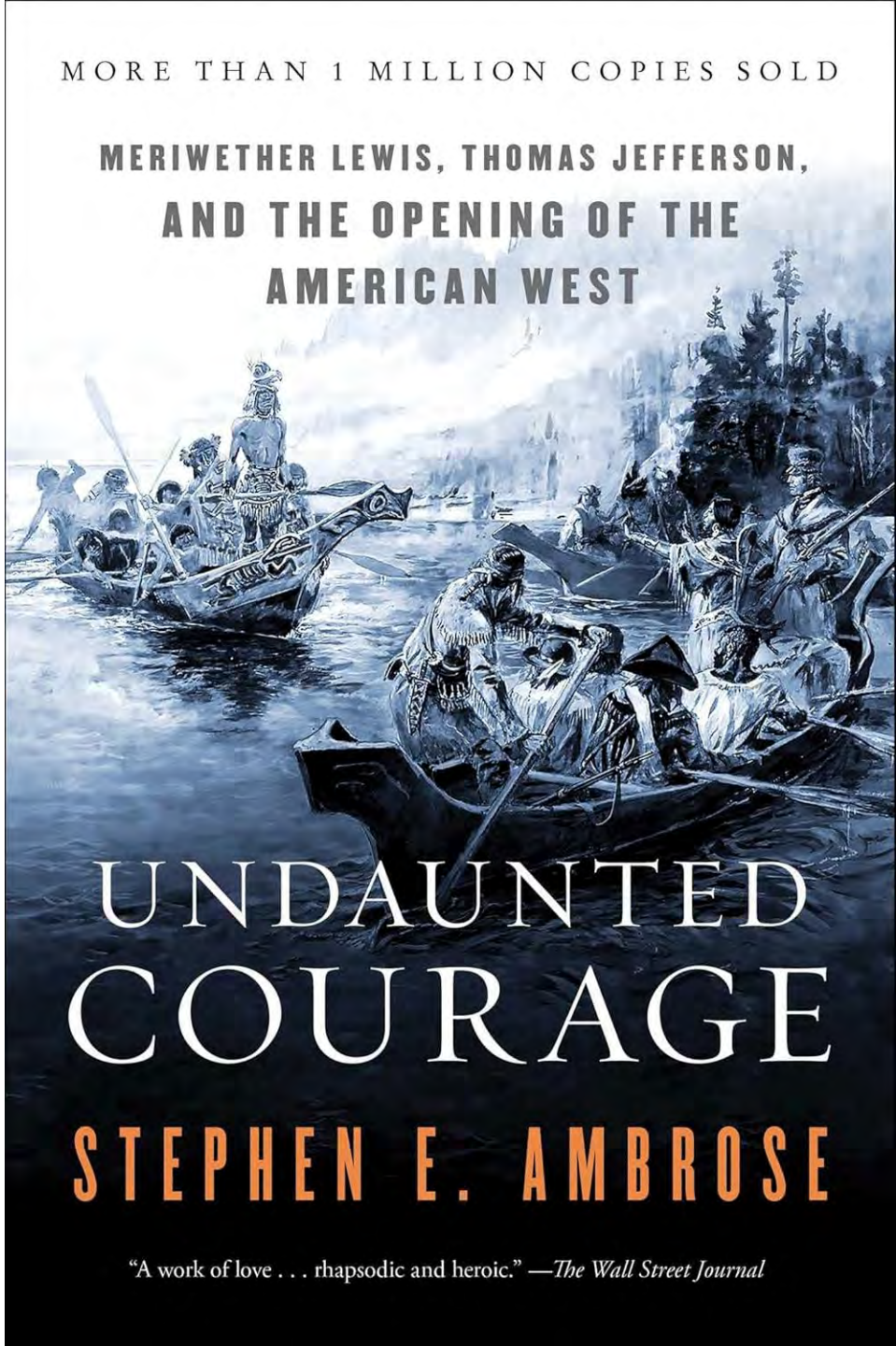
Lewis and Clark Expedition



ASYNC 2025 Award

- Keynote speakers
- Best Paper Nominees

for the UNDAUNTED COURAGE they bring to our field



FOCUS of ASYNC 2025
Collaboration and Outreach

- Asynchrony
  - is a way of thinking/tooling/designing—not a design area

- To know where asynchrony works best
  - Collaborate in many different application domains
    - **Reach out to our Monday-Tuesday Keynote speakers !!!**
  - Know our past
    - **Listen to our Wednesday Keynote speakers !!!**
  - Act together
    - **Participate in our Wednesday evening ASYNC Community session**
    - **on CAD, outreach, workforce development, etcetera**

ASYNC Community Session

- Increase interactions and work collectively on common goals
- CAD tools – important to all of us
  - Collect information on existing CAD tools and flows
    - Current status, plans, access, documentation, etcetera
  - Collect community thoughts on future CAD tools
    - How do we combine efforts from different groups ?
- Opportunities for young (or new) community members
- Community platforms: Google Group, YouTube channel

Monday Keynote

Physical Computation in the Era of Hardware Specialization

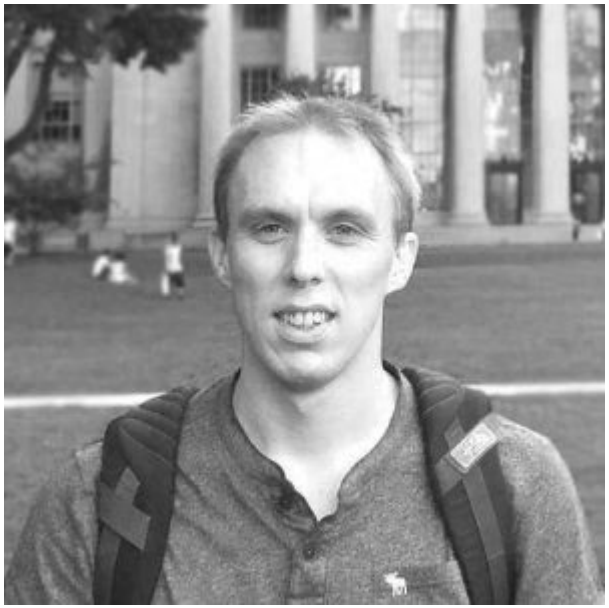
Jennifer Volk – George Tzimpragos
University of Wisconsin-Madison, USA

Tuesday Keynote

Programming Biological Systems across Scales using Synthetic Biology

Thomas E. Gorochowski

School of Biological Sciences, University of Bristol, UK



Wednesday Keynote

Asynchronous History and Stories

Jens Sparsø – *Technical University of Denmark*
Tomohiro Yoneda – *National Institute of Informatics in Tokyo*

Some statistics

- Total papers: 24
  - o regular: 16
  - o short Industrial: 3
  - o short Fresh idea and demo: 5
- Attendees: ∼46 (including 12 students)
- Countries of attendees: 8

Regular Papers

Publication + 30 minutes talk (including Q&A)

Original and well-explored scientific work, up to 8 pages

- Reviewed by
  - 41 Program Committee members from 17 countries
  - 17 secondary reviewers
- ~5 reviews per paper
- Blind review
  - Reviewers don't know the authors
  - Authors don't know the reviewers of their paper
- Discussion forum between peer reviewers
  - 16 of 30 accepted for publication ~53% acceptance rate
  - 1 papers was shepherded

Publications have up to 10 pages to accommodate reviewer feedback

short Industrial Papers

Publication + 20 minutes talk (including Q&A)

Publications have up to 6 pages

- to “put a stake in the ground”
- to accommodate (light) review feedback

Fresh Idea/Demo Papers

Presentation: 10 minutes talk + 10 minutes discussion

Intention

- Discussion forum for new or controversial ideas or position statements
- Leverage joint experience to "test" the presented idea

Fairness

- Respect the author's right to work out his or her fresh idea and publish it at ASYNC 2026 or earlier

ASYNC protocol

Wait for the microphone...

- **Stand up**
- **State your name and affiliation**
- **Ask your question**

special THANKS

Authors

- for writing compelling and high-quality papers

Program Committee and Secondary Reviewers

- for comprehensive and constructive feedback to all the authors

Jordi Cortadella – Ian Jones – Andreas Steininger

- for going the extra mile by shepherding papers
- in addition to being Program Committee members

Martha Nunez

- for preparing the ASYNC 2025 Proceedings and Symposium Handout

Oregon Handcraft (Zach White) and DIGITAL CRAFT PDX (Bart)

- for artisanal wood and laser-sharp services

PhD Student Mohamed Ghonim

- as our photographer and for volunteering his help to this Symposium

Sponsors

(plus anonymous sponsors)

Best Paper Award
ASYNC 2025

Selection Committee:

Milos Krstic (Chair)

Laurent Fesquet

Montek Singh

Selection Criteria

- Significant technical contribution in theory or practice
- Large potential impact
- Breadth of impact
- Shows significant opportunity for asynchronous design
- Removes significant obstacle for asynchronous design
- Novelty
- Mature data and results
- Clear and concisely written paper with good diagrams
- Sanity Check – correlate with Program Committee reviews

Best Paper Nominees

in ASYNC 2025 program order

- [ ] **MONDAY 14:30-15:00 (#99 – regular) BEST PAPER NOMINEE**
  A Synthesis Toolflow for the Predictable Implementation
  of High-Performance Bundled-Data Asynchronous NoCs on FPGA
  Giuseppe Chessa, Elena Bellodi, Michele Favalli, Davide Zoni, and Davide Bertozzi

- [ ] ***WEDNESDAY 10:00-10:30 (#85 – regular) BEST PAPER NOMINEE***
  Post-Placement Timing Optimisations on Asynchronous Designs
  Dimitrios Tsalapatas, Nikolaos Chatzivangelis, Christos P. Sotiriou,
  and Nikolaos Sketopoulos

- [ ] ***WEDNESDAY 11:20-11:50 (#87 – regular) BEST PAPER NOMINEE***
  Investigating the Effects of Permanent Faults in QDI Circuits: A Formal Perspective
  Raghda El Shehaby, Matthias Függer, Florian Huemer, Andreas Steininger

Voting process

- Narrow Committee's choice down to a single paper
- Consider additional criteria
  - presentation quality and clarity
  - hallway or Q&A discussion

- Mark (the box for) your choice in handout *Best Paper Nominees*

- Return your vote (just) before lunch on Wednesday
- The winner will be announced after lunch on Wednesday

Enjoy ASYNC 2025