

MAY 20-23, 2024 AT THE HILTON SAN FRANCISCO UNION SQUARE, SAN
FRANCISCO, CA

45th IEEE Symposium on Security and Privacy

Sponsored by the IEEE Computer Society Technical Committee on Security and Privacy
in cooperation with the International Association for Cryptologic Research

Trent Jaeger – University of California, Riverside
IEEE S&P 2024 General Chair

Welcome to S&P 2024!

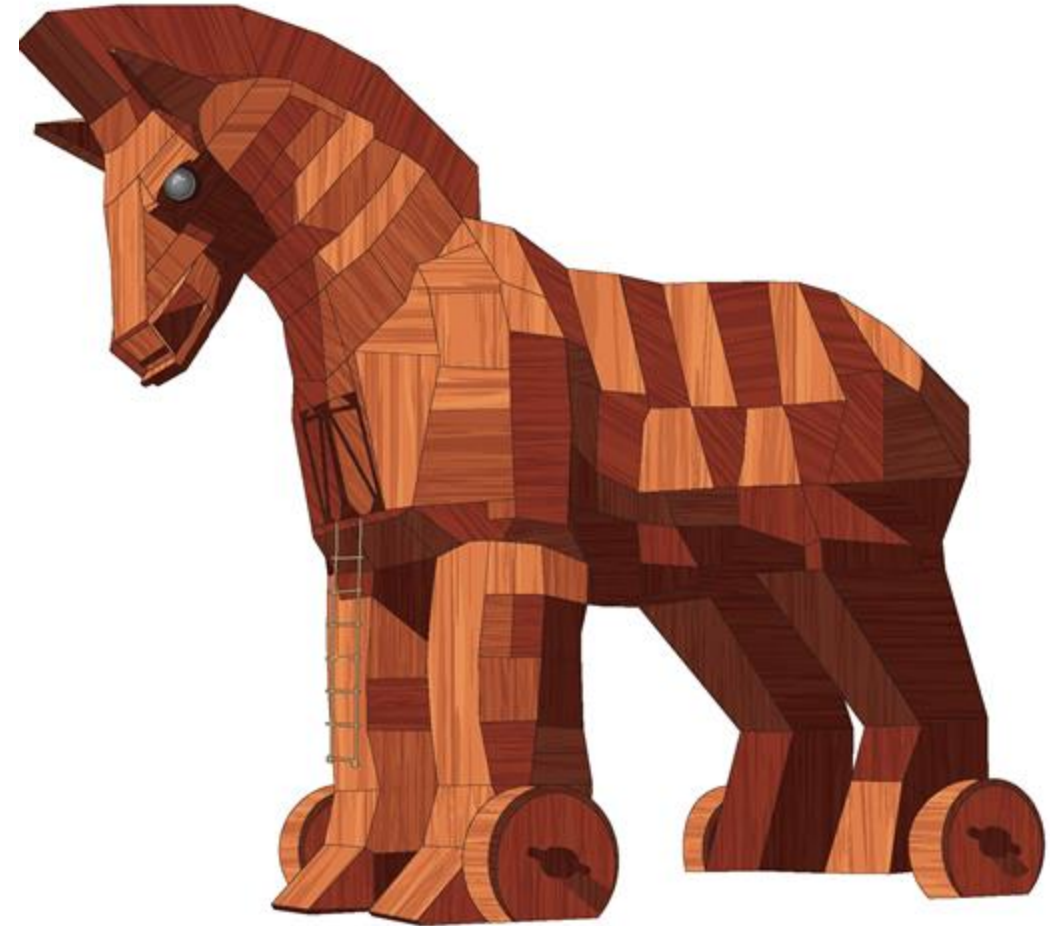
At the *Hilton San Francisco
Union Square!*

First ***fully in-person*** event
... in a few years!



What a year!

- **196** accepted papers (1,147 submissions)
 - ↑ trend (196 in SP23; 146 in SP22)
 - 3 tracks; 3 full days
 - 7-minute talks + posters
- 755 unique participants
 - 688 in person (284 students)
 - 0 virtual
- \$45K Student Travel support!
 - 42 travel grants and 9 registration grants
 - NSF, ARO
- \$115K in new donations



Thanks to S&P 2024 Organizing Committee!

General Chair	Trent Jaeger	University of California, Riverside
Program Chairs	Patrick Traynor	University of Florida
	William Enck	North Carolina State University
Vice Chair / Registration	Marina Blanton	University at Buffalo
Treasurer	Briland Hitaj	SRI International
Donations Chairs	Eleonora Losiouk	University of Padova
	Yueqi Chen	University of Colorado
Publications Chairs	Ziming Zhao	University at Buffalo
	Syed Hussain	Penn State University
Publicity Chairs	Nathalie Baracaldo	IBM Research
	Sandra Rueda	Universidad de Los Andes
Student Travel Committee Chair	Thang Hoang	Virginia Tech
Workshops Chairs	Yuan Tian	University of California, Los Angeles
	Gang Wang	University of Illinois

Thanks to S&P 2024 Organizing Committee!

Posters Chair	Kassem Fawaz	University of Wisconsin
Short Talks Chair	Mohsen Lesani	University of California, Santa Cruz
Diversity, Equity, and Inclusion Chair	Xueling Zhang	Rochester Institute of Technology
Site Chair	Regan Robertson	ExecutivEvents, Inc.
Registration Manager	Maddie Berglund	ExecutivEvents, Inc.
General Chair Emeritus	Daniel Takabi	Old Dominion University
Test of Time Awards Committee	Nicolas Christin (Chair)	Carnegie Mellon University
	Adrienne Porter Felt	Google
	Dave Levin	University of Maryland
	Paul Pearce	Georgia Tech
	Taesoo Kim	Georgia Tech and Samsung Research
Web Chair	Prajwal Panzade	Georgia State University

Thanks to S&P 2024 Steering Committee!

Gabriela Ciocarlie	UT San Antonio
Thorsten Holz	CISPA
Christopher Kruegel	UC Santa Barbara
Alina Oprea	Northeastern University
Sean Peisert	UC Davis
Mike Reiter	Duke University
Hovav Shacham	UT Austin
Greg Shannon	INL
Carmela Troncoso	EPFL

Chair	Gabriela Ciocarlie	UT San Antonio
Vice Chair	Thorsten Holz	CISPA Helmholtz Center for Information Security
Treasurer	Yong Guan	Iowa State University
TC Awards Chair	Tegan Brennan	Steven Institute of Technology

Thank you to our 2024 Donors!

Platinum Supporters



Silver Supporters



Gold Supporters

Bronze Supporters



Thank you to our 2024 Donors!

Special Supporter



MARY JANE SUAREZ PARTAIN

Program Director

Lunch: If you are a student looking to transition from graduating to the workforce or obtaining a certification to earn more skills, join Women of CyberSecurity (WiCyS) for lunch with Program Director, Mary Jane Partain to learn how a WiCyS Membership can help advance your career.

Lobby: Women in CyberSecurity (WiCyS) will be hosting a meet and greet in the lobby with Program Director Mary Jane Partain. Stop by to learn about WiCyS' training programs, mentor/mentee programs, and how WiCyS is Recruiting, Retaining, and Advancing Women in CyberSecurity.

Program of Events

- | | | | |
|---|------|-------------------|-------------------------------|
| • Poster & Networking Reception <ul style="list-style-type: none">• 27 posters | Mon | 5:00PM – 7:00 PM | Plaza A/B |
| • NSF SaTC Q&A Session | Mon | 5:05 PM – 6:05 PM | Golden Gate |
| • LGBTQ+ & Allies Networking <ul style="list-style-type: none">• <i>Thanks to Google!</i> | Mon | 6:30 PM – 7:30 PM | Golden Gate
Ballroom Foyer |
| • Short Talks | Tue | 5:05 PM – 5:50 PM | Continental 5 |
| • DARPA AIxCC Discussion <ul style="list-style-type: none"><i>Led by Perri Adams</i> | Tue. | 5:05 PM – 6:05 PM | Continental 6 |
| • TC Business Meeting | Tue | 6:05 PM – 6:50 PM | Continental 6 |

S&P Workshops (Thursday, May 23)



SecWeb: Workshop on Designing Security for the Web ⓘ



ConPro: 8th Workshop on Technology and Consumer Protection ⓘ



DLSP: 7th Deep Learning Security and Privacy Workshop ⓘ



SAGAI: Security Architectures for Generative Artificial Intelligence ⓘ



LangSec: 10th Workshop on Language-Theoretic Security and Applications ⓘ



SafeThings: 8th Workshop on the Internet of Safe Things ⓘ

Reminders / Announcements

Media:

- SP24 papers available at <https://www.computer.org/csdl/proceedings/sp/2024/1RjE8VKKk1y>
- Videos posted to YouTube shortly after SP24
- Twitter: #SP24 @IEEEESP

Hotel:

- Badge: + Workshops; good for access to workshops on Thursday
- We are in an unsecured public space —badges, unattended items
- Plated lunch every day of conference – boxed lunch on Thursday
- If you requested a special dietary option for lunches, and you don't have a card with your name badge, please stop back at IEEE registration to get a card. You will have one for the entire week.

Code of Conduct



S&P Code of Conduct

IEEE Symposium on Security and Privacy (S&P) and IEEE Security and Privacy Workshops (SPW) are dedicated to providing a harassment-free conference experience for everyone, regardless of gender, gender identity and expression, sexual orientation, disability, physical appearance, body size, race, age or religion. We do not tolerate harassment of participants in any form. Harassment includes, but is not limited to:

To make a report:

 Call 220-333-3430

 Email sp-incident-reporting@ieee-security.org

 Ask at registration to contact a code steward



Honoring Professor Ross Anderson (Cambridge)

- Groundbreaking Research in Security Protocols and Privacy Technologies
- Influential Contributions to the Economics of Information Security
- Development of Security & Privacy Standards and Policies
- Practical Solutions for Emerging Threats in Digital Systems
- Advancing Understanding and Mitigation of Cybersecurity Risks
- Tremendous Impact on Academia and Industry Worldwide
- Inspiration for countless researchers



Introducing 2024 Program Chairs

Patrick Traynor and William Enck

Program Chairs' Welcome

MAY 22-25, 2023 AT THE HYATT REGENCY, SAN FRANCISCO, CA & ONLINE

44th IEEE Symposium on Security and Privacy

Sponsored by the IEEE Computer Society Technical Committee on Security and Privacy
in cooperation with the International Association for Cryptologic Research

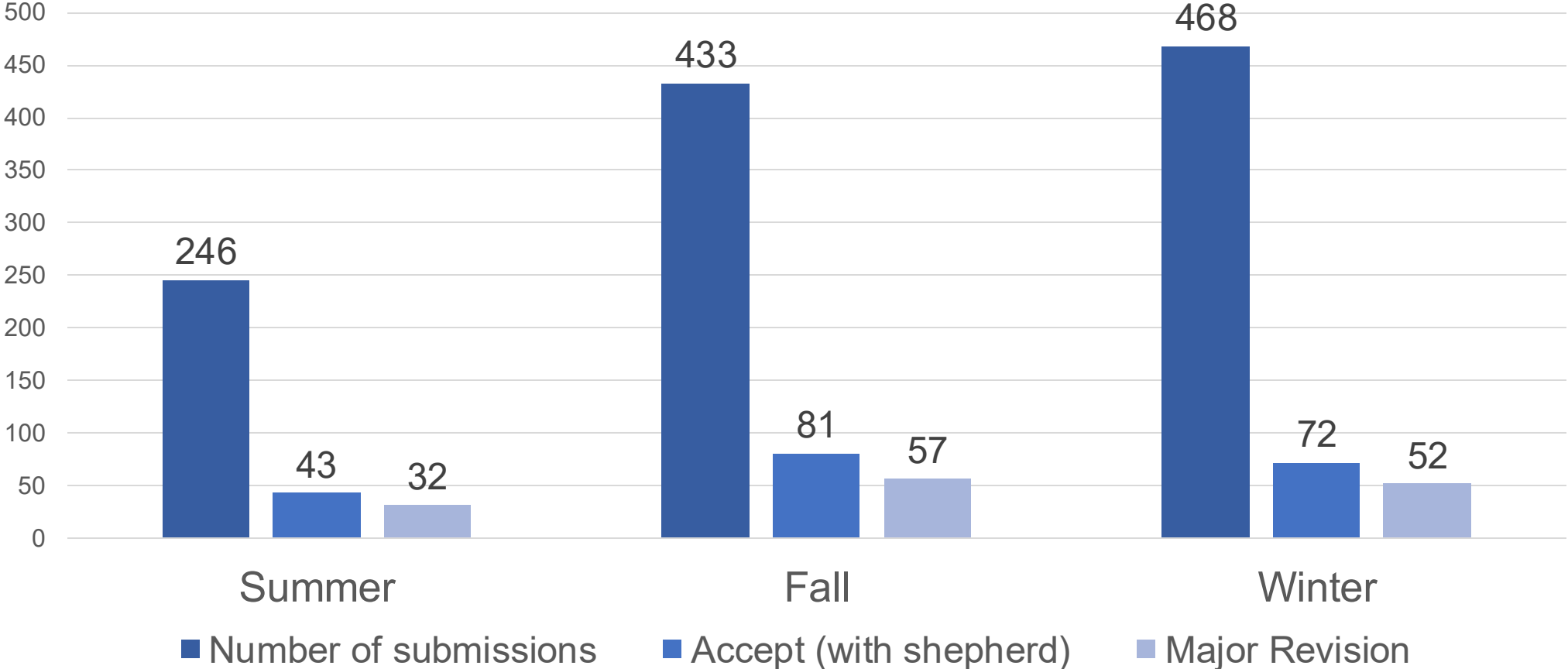
Thomas Ristenpart
Cornell Tech

Patrick Traynor
University of Florida

How the program came to be

- 3 submission cycles (Spring, Summer, Winter)
 - Resubmissions accepted from some 2022 and earlier 2023 deadlines
 - R1 review (2 reviews per paper)
 - Early reject of many papers for which we saw no path towards acceptance
 - R2 reviews (2+ additional reviews per paper)
 - Research Ethics Committee (REC) review after R1 decisions
 - Author rebuttal and interaction period
 - Decisions (Accept, Conditional Accept, Major Revision, Reject)
- Obviously, execution sometimes messier, and many corner cases
 - Associate Chairs and Program Committee did a ton of work to try to make as smooth as possible
 - Program Chairs worked to “keep trains running” and deal with complex cases

Submissions, Acceptances, MRs

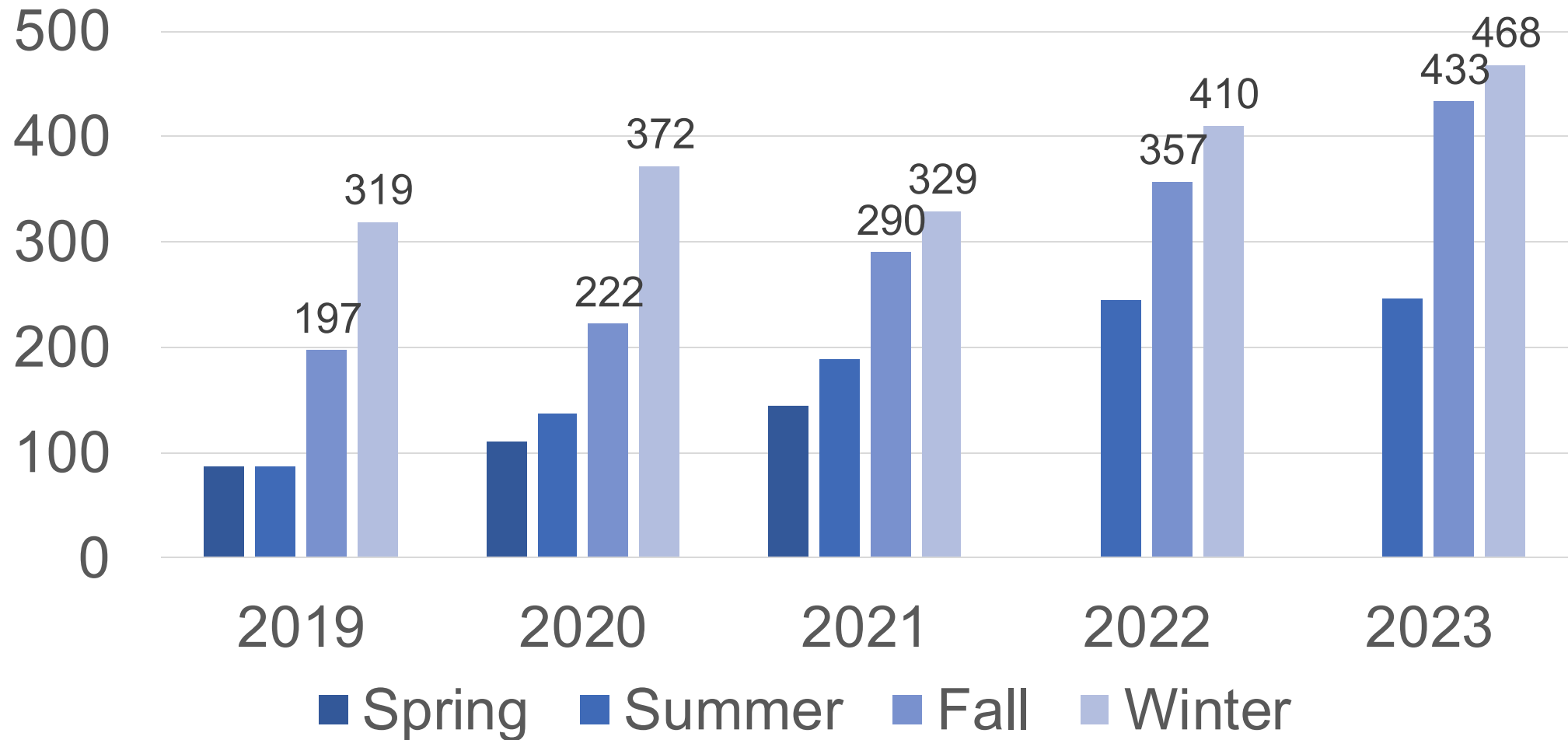


Desk rejects: 23

Total Number of Submissions: **1,147**

Total accepted: **196**

Number of Submissions over the Years



~13% increase in submissions over 2022

Acceptance rates

Category	Number	Rate
Accepts (new)	14	1.4%
Conditional Accepts (new)	66	6.5%
Accepts (resubmission)	83	62.9%
Conditional Accepts (resubmission)	33	25.0%
Overall accept rate	196	17.0%

2022 overall accept rate: 14.5%

66% won a Distinguished Paper Award (stay tuned!)

Program committee did huge amount of work

- 205 PC members in Round 3 (including associate chairs)
 - Estimated to be **~2,300 reviews**
- **Keeping review quality high challenging**
 - Rely on reviewers, discussions, associate chairs to flag issues
 - As we scale, more difficulty ensuring issues (papers, bad reviews, etc.) don't slip through the cracks
- Small number of PC membership changes over the year
 - Handful of cases of removal by program chairs for poor performance
 - Some excused for life events
- Research Ethics Committee chaired by Srdjan Capkun
 - Almost exclusively provided feedback to authors asking for clarifications

Associate Chairs make the process scale

Henry Corrigan-Gibbs

MIT

Adam Doupe

Arizona State University

Sarah Meiklejohn

Google / UCL

Nicolas Papernot

University of Toronto and Vector Institute

Christina Poepper

NYU Abu Dhabi

Mariana Raykova

Google

Elissa Redmiles

MPI SWS

Andrei Sabelfeld

Chalmers University

Ben Stock

CISPA

Yuval Yarom

University of Adelaide

**Thank
you!!!**

Test of Time Awards

- IEEE Security and Privacy "Test of Time" awards recognize papers that have made a lasting impact on the field
- Eligible papers must have been published at S&P between 10 and 12 years prior (2012-2014)
- Award committee
 - Adrienne Porter Felt, Google
 - Dave Levin, University of Maryland
 - Nicolas Christin, Carnegie Mellon University (chair)
 - Paul Pearce, Georgia Tech
 - Taesoo Kim, Georgia Tech



Test of Time Awards Selection Process

- Considered **all** papers published at Oakland between 2012 and 2014.
- **Round 1:**
 - Each committee member **independently** came up with a list of 5 candidates
 - No coordination (by design)
 - Some folks used quantitative metrics (e.g., cites/year, total #cites), some used qualitative arguments
 - Yielded 14 unique papers for consideration
- **Round 2:**
 - Collegial discussion (~1 week) to (try to) whittle the 14 papers down to a single winner

Test of Time Awards Selection Process

- Considered **all** papers published at Oakland between 2012 and 2014.
- **Round 1:**
 - Each committee member **independently** came up with a list of 5 candidates
 - No coordination (by design)
 - Some folks used quantitative metrics (e.g., cites/year, total #cites), some used qualitative arguments
 - Yielded 14 unique papers for consideration
- **Round 2:**
 - Collegial discussion (~1 week) to (try to) whittle the 14 papers down to a single winner
 - In the end, could only whittle it down to **two** winners, which are...

Test of Time Award Winner

Modeling and Discovering Vulnerabilities with Code Property Graphs

Fabian Yamaguchi, Nico Golde, Daniel Arp, Konrad Rieck

IEEE Symposium on Security and Privacy, 2014

Test of Time Award Winner

Zerocash: Decentralized Anonymous Payments from Bitcoin

Eli Ben Sasson, Alessandro Chiesa, Christina Garman, Matthew Green,
Ian Miers, Eran Tromer, Madars Virza

IEEE Symposium on Security and Privacy, 2014

Distinguished Paper Awards

- Award committee consists of the program chairs and associate chairs
- Shortlist of 21 papers:
 - Straight accepts for fresh submissions (14 papers)
 - 2 votes for BPA (7 total across all cycles)
- Discussion plus voting by committee
- This year there were a lot of papers that people felt were deserving of an award, so we increased the number of awards to 12
 - 6% of accepted papers
 - 1% of submissions



MEGA: Malleable Encryption Goes Awry

Matilda Backendal (ETH Zurich)

Miro Haller (ETH Zurich)

Kenneth Paterson (ETH Zurich)

Practically-exploitable Cryptographic Vulnerabilities in Matrix

Martin R. Albrecht (Royal Holloway, University of London)

Sofía Celi (Brave Software)

Benjamin Dowling (University of Sheffield)

Daniel Jones (Royal Holloway, University of London)

Weak Fiat-Shamir Attacks on Modern Proof Systems

Quang Dao (Carnegie Mellon University)

Jim Miller (Trail of Bits)

Opal Wright (Trail of Bits)

Paul Grubbs (University of Michigan)

Typing High-Speed Cryptography against Spectre v1

Basavesh Ammanaghatta Shivakumar (MPI-SP)

Gilles Barthe (MPI-SP and IMDEA Software Institute)

Benjamin Grégoire (Inria and Université Côte d'Azur)

Vincent Laporte (Inria Nancy)

Tiago Oliveira (MPI-SP)

Swarn Priya (Inria and Université Côte d'Azur)

Peter Schwabe (MPI-SP & Radboud University)

Lucas Tabary-Maujean (ENS Paris-Saclay)

Red Team vs. Blue Team: A Real-World Hardware Trojan Detection Case Study Across Four Modern CMOS Technology Generations

Endres Puschner (Max Planck Institute for Security and Privacy)

Thorben Moos (UCLouvain)

Christian Kison (Bundeskriminalamt)

Steffen Becker (Ruhr University Bochum & Max Planck Institute for Security and Privacy)

Amir Moradi (Ruhr University Bochum)

Christof Paar (Max Planck Institute for Security and Privacy)

It's (DM) Clobbering Time:

Attack Techniques, Prevalence, and Defenses

Soheil Khodayari (CISPA Helmholtz Center for Information Security)

Giancarlo Pellegrino (CISPA Helmholtz Center for Information Security)

The Leaky Web: Automated Discovery of Cross-Site Information Leaks in Browsers and the Web

Jannis Rautenstrauch (CISPA Helmholtz Center for Information Security)

Giancarlo Pellegrino (CISPA Helmholtz Center for Information Security)

Ben Stock (CISPA Helmholtz Center for Information Security)

WaVe:

a verifiably secure WebAssembly sandboxing runtime

Evan Johnson (University of California San Diego)

Evan Laufer (Stanford University)

Zijie Zhao (University of Illinois Urbana-Champaign)

Shravan Narayan (University of California San Diego)

Stefan Savage (University of California San Diego)

Deian Stefan (University of California San Diego)

Fraser Brown (Carnegie Mellon University)

Characterizing Everyday Misuse of Smart Home Devices

Phoebe Moh (University of Maryland)

Pubali Datta (University of Illinois Urbana-Champaign)

Noel Warford (University of Maryland)

Adam Bates (University of Illinois Urbana-Champaign)

Nathan Malkin (University of Maryland)

Michelle L. Mazurek (University of Maryland)

Not Yet Another Digital ID: Privacy-preserving Humanitarian Aid Distribution

Boya Wang (EPFL)

Wouter Lueks (CISPA Helmholtz Center for Information Security)

Justinas Sukaitis (ICRC)

Vincent Graf Narbel (ICRC)

Carmela Troncoso (EPFL)

“In Eighty Percent of the Cases, I Select the Password for Them”: Security and Privacy Challenges, Advice, and Opportunities at Cybercafes in Kenya

Collins W. Munyendo (The George Washington University)

Yasemin Acar (The George Washington University)

Adam J. Aviv (The George Washington University)

Space Odyssey: An Experimental Software Security Analysis of Satellites

Johannes Willbold (Ruhr-Universität Bochum)

Moritz Schloegel (Ruhr-Universität Bochum)

Manuel Vögele (Ruhr-Universität Bochum)

Maximilian Gerhardt (Ruhr-Universität Bochum)

Thorsten Holz (CISPA Helmholtz Center for Information Security)

Ali Abbasi (CISPA Helmholtz Center for Information Security)

Changes to the 2024 Procedures

- Major Revisions have been eliminated from the 2024 Conference.
- Instead, all papers will be published with meta-reviews, providing context for the acceptance of each paper.
- Please see the 2024 CFP for full details:
<https://www.ieee-security.org/TC/SP2024/cfpapers.html>
- The community is faced with a wide range of challenges, and we hope that you actively engage in addressing them.