Robert Soulé - Curriculum Vitae

Contact Information

Email	robert.soule@yale.edu
Web	http://www.cs.yale.edu/homes/soule/
Address	Yale University 10 Hillhouse Avenue, Room 408 New Haven, CT, 06511, USA

Education

09/2006 - 05/2012	**New York University**, New York, NY Ph.D. in Computer Science Thesis: *Reusable Software Infrastructure for Stream Processing*.
01/2004 - 01/2007	**New York University**, New York, NY M.Sc. in Computer Science Thesis: *Ensuring Content Integrity for Untrusted Peer-to-Peer Content Distribution Networks*.
09/1995 - 05/1999	**Brown University**, Providence, RI B.A.(s) in Computer Science, Philosophy, and Art Semiotics.

Employment History

Academic Positions

07/2019 - *present*	**Yale University**, Departments of Computer Science and Electical Engineering, New Haven, CT, USA Associate Professor (7/2022 -), Assistant Professor (7/2019 - 6/2022)
01/2014 - 07/2019	**Università della Svizzera italiana**, Department of Informatics, Lugano, Switzerland Associate Professor (12/2018-7/2019), Assistant Professor (1/2014-12/2018)
06/2012 - 12/2013	**Cornell University**, Department of Computer Science, Ithaca, NY, USA Postdoctoral Associate

Industrial Positions

07/2024 - present	**Cerebras Systems**, Sunnyvale, CA, USA Office of the CTO, Principal Visiting Professor (Part-time)
02/2023 - 03/2024	**Moloco**, Redwood City, CA, USA Machine Learning and Data Infrastructure (Consultant)
07/2019 - 02/2023	**Intel Corporation**, Palo Alto, CA, USA Network and Edge, Switch Fabric Group (Part-time)
01/2017 - 07/2019	**Barefoot Networks**, Palo Alto, CA, USA Advanced Applications, Research Scientist
05/2008 - 05/2011	**IBM T. J. Watson Research Center**, Hawthorne, NY, USA Data Intensive Systems and Analytics, Research Co-op (Part-time)
09/2005 - 09/2006	**Morgan Stanley**, New York, NY, USA Application and Data Security, Associate
06/2002 - 09/2005	**Bloomberg LP**, New York, NY, USA Technical Lead
12/2001 - 06/2002	**Tradeware**, New York, NY, USA Software Engineer
04/2000 - 10/2001	**LimeWire**, New York, NY, USA Software Engineer
06/1999 - 04/2000	**New Era Of Networks, Inc.**, New York, NY, USA Software Engineer

Awards & Honors

Awards and Fellowships

2025	ACM Distinguished Member
2025	Oxford University Astor Visiting Lectureship
2025	SIGCOMM Networking Systems Award
2022	IEEE Senior Member
2021	Intel Connectivity Group Division Recognition Award
2021	ACM Senior Member
2019	ACM SIGMETRICS Highlights Beyond Sigmetrics
2015	Google Faculty Research Award
2010	R&D 100 Award For The Most Breakthrough Innovation
2010	IBM Invention Plateau Award
2010	IBM Invention Achievement Award
2006	Henry H. MacCracken Fellowship, New York University.

Paper Awards

2020	Best Paper Award at ACM International Conference on Emerging Networking Experiments and Technologies (CoNEXT)
2018	Best Paper Award at USENIX Symposium on Networked Systems Design and Implementation (NSDI)
2012	Best Paper Award at ACM International Conference on Distributed Event-Based Systems (DEBS)

Research

Research Interests:

Networking, distributed systems, databases, and programming languages.

Grants

09/2026 - 09/2027	*Agentic Acceleration of Verified Asynchronous Hardware Design*, (co-PI), with Rajit Manohar, Jane Street Research Collaboration Award. 12 months. $148,960.
09/2025 - 09/2026	*Developing an Energy Proportional Switch*, (PI), with Rajit Manohar, Yale Planetary Solutions Acceleration Grant. 12 months. $100,000.
09/2023 - 08/2026	*TECAN: Telemetry-Enabled Carbon Aware Networking*, (PI), with Noa Zilberman. Engineering and Physical Sciences Research Council (EPSRC) / National Science Foundation (NSF). £1,095,000 (Yale portion: $439,999).
05/2023 - 05/2027	*Improved Microservice Communication through Rethought Data Center Memory Architecture* (PI), with Peter Alvaro. Intel Corporation. 36 months. $225,000 (Yale portion: $45,000).
10/2022 - 10/2026	*CNS Core: MEDIUM: MASON: Memory at Scale on Networks*, (PI), with Peter Alvaro and Avi Silberschatz. National Science Foundation. $1,000,000 (Yale portion: $500,000).
05/2021 - 08/2021	*Tools and Support Software for the Development of Applications on a P4-programmable Host Adaptor*, (PI), with Antonio Carzaniga. Pensando Systems. 3 months. $16,000.
05/2021 - 05/2022	*Deployment of ONF's Aether Platform on Yale Campus Network*, (PI), Yale School of Engineering and Applied Science Dean's Innitiative. 12 months. $22,000.
05/2021 - 05/2024	*Network Support for Disaggregated Memory with Explicit Identifiers*, (PI), with Peter Alvaro and Avi Silberschatz. Intel Corporation. 36 months. $336,000 (Yale portion: $186,000).
03/2021 - 02/2022	*A Low-Cost P4 Programmable Device.* (PI). Network Programming Initiative. 12 months. $25,000.
07/2020 - 07/2021	*Approaches to Contact Tracing and Limiting COVID-19 Outbreaks in Schools in Connecticut*, (Co-PI), with Xin Zhou, Marie Brault, Avi Silberschatz, Donna Spiegelman, and Sten Vermund. Yale School of Public Health COVID Rapid Response Research Fund. 12 months. $75,000.

06/2020 - 06/2021	*Network Support for Storage Class Memory and Security Implications*, (PI), with Avi Silberschatz. Cisco Systems. 12 months. $121,692.
06/2020 - 06/2021	*PMDB: A Database for Storage Class Memory*, (PI), with Avi Silberschatz. Western Digital. 12 months. $70,000.
09/2020 - 09/2023	*ADVERT: Compositional Atomic Specifications for Distributed System Verification*, (Co-PI), with Zhong Shao and Ji Yong Shin. National Science Foundation. $749,943.
06/2019 - 07/2019	*Incremental Programming Support*, (PI), with Antonio Carzaniga. Cisco Systems. 10 days. $10,000.
01/2019 - 01/2020	*Debugging Programmable Data Planes*. (PI). Hasler Foundation. 12 months. $48,636 CHF.
09/2017 - 09/2018	*Consensus for Main Memory*. (PI). Western Digital. 12 months. $45,000.
01/2018 - 01/2020	*Research Scholarships for Visiting Masters Students*. (PI). Hasler Foundation. 24 months. $50,000 CHF.
09/2017 - 09/2021	*Exploratory Visual Analytics for Interaction Graphs*, (PI), with Buğra Gedik and Michele Lanza. Swiss National Science Foundation, National Research Programme 75 Big Data. 48 months. $569,308 CHF.
09/2016 - 09/2019	*Consensus Protocol Exploiting Network Co-Design*, (PI), with Fernando Pedone. Swiss National Science Foundation. 36 months. $377,160 CHF.
04/2016 - 04/2018	*Research Scholarships for Visiting Masters Students*. (PI). Hasler Foundation. 24 months. $50,000 CHF.
12/2015 - 12/2018	*Online Data Center Modeling*, (PI), with Timothy Roscoe. Swiss National Science Foundation. 36 months. $347,014 CHF.
02/2015 - 02/2016	*Online Data Center Modeling*, (PI), with Timothy Roscoe. Google Faculty Research Award. 12 months. $136,777.

PhD Students

09/2023 - *present*	George Neville-Neil (Yale)
09/2023 - *present*	Pasquale Polverino (USI, co-advised with Antonio Carzaniga)
09/2022 - *present*	Amirmohammad Nazari (Yale)
09/2021 - *present*	Atul Pokharel (Yale)

PhD Student Alumni and First Position

02/2015 - 12/2020	Daniele Rogora (USI), SoundHound
09/2016 - 07/2020	Theo Jepsen (USI), Postdoctoral Associate at Stanford University
09/2016 - 07/2020	Pietro Bressana (USI), Intel Corporation
09/2014 - 01/2019	Huynh Tu Dang (USI), Western Digital Research

Postdoctoral Associates

09/2026 -	Cecilio Tamarit (Yale)

Postdoctoral Associate Alumni

05/2021 - 06/2022	Haoyu Wang (Yale), NEC Research
09/2020 - 12/2020	Vishal Shrivastav (Yale), Assistant Professor at Purdue University

Undergraduate Independent Study, Senior Project, or Summer Experience

Fall 2026	Santiago Gonzalez, Francis Fan, Adrian Hoang
Spring 2026	Jack Pothier
Spring 2025	Alex Huang, Brian Choi, Alex Yuen

Fall 2024	Alex Huang, Brian Choi, Alex Yuen, Troy Feng
Summer 2024	Alex Huang
Spring 2024	Jack Pothier, Ali Hasnain bin Umer
Fall 2023	Cierra Ouellette, Sameer Sultan, David Cheng
Spring 2023	Ross Johnson
Fall 2022	Matthew Miller
Spring 2022	Seun Omonije, Abraham Mensah, Mohamed Shatry
Fall 2021	Seun Omonije, Aidan Evans
Spring 2021	Adam Wolnikowski, Tucker Moses
Fall 2020	Adam Wolnikowski, Sara Lewis, Tucker Moses
Spring 2020	Dylan King, Tucker Moses
Fall 2019	Seun Omonije, Harshal Sheth, Tucker Moses

Student Awards

2025	Alex Huang (Yale), YSEA Award for Outstanding Undergraduate Achievement in Computer Science
2025	George Neville-Neil (Yale), Honorable Mention, NSF Graduate Research Fellowship Program
2023	Aiden Evans (Yale), YSEA Award for Outstanding Undergraduate Achievement in Computer Science
2022	Kaarthik Alagappan (UCF), Most Novel Non-Networking Use of P4 - Honorable Mention at P4 Workshop
2021	Daniel Bittman (UCSC), Runner-up Best Presentation Award at HotNets 2021
2021	Adam Wolnikowski (Yale), Deptartment of Computer Science Undergraduate Prize for Research
2017	Pietro Bressana (USI), SNF Mobility Fellowship

Teaching

University Courses

Spring 2026	*CPSC 4050/5050, Great Debates in Computer Systems*[*,†], Yale University, Enrollment: 5, 2 lectures/week
Spring 2026	*CPSC 4371/5371, Advanced Databases*[*,†], Yale University, Enrollment: 29, 2 lectures/week
Fall 2024	*CPSC 440/540, Advanced Databases*[*,†], Yale University, Enrollment: 12, 2 lectures/week
Spring 2024	*CPSC 435/535, Building an Internet Router*[*,†], Yale University, Enrollment: 22, 2 lectures/week
Fall 2023	*CPSC 440/540, Advanced Databases*[*,†], Yale University, Enrollment: 12, 2 lectures/week
Spring 2023	*CPSC 440/540, Advanced Databases*[*,†], Yale University, Enrollment: 4, 2 lectures/week
Fall 2022	*CPSC 435/535, Building an Internet Router*[*,†], Yale University, Enrollment: 7, 2 lectures/week
Spring 2021	*CPSC 421/521, Compilers and Interpreters*[*,†], Yale University, Enrollment: 12, 2 lectures/week
Fall 2020	*CPSC 435/535, Building an Internet Router*[*,†], Yale University, Enrollment: 7, 2 lectures/week
Spring 2020	*CPSC 421/521, Compilers and Interpreters*[*], Yale University, Enrollment: 30, 2 lectures/week
Fall 2019	*CPSC 634, Building an Internet Router*[*,†], Yale University, Enrollment: 4, 2 lectures/week
Spring 2019	*Advanced Networking*[*,†], MSc, Università della Svizzera italiana
Fall 2016	*Advanced Networking*[*,†], MSc, Università della Svizzera italiana
Fall 2016	*Data Management*[*,†], BSc, Università della Svizzera italiana
Spring 2016	*Data Management*[*,†], BSc, Università della Svizzera italiana
Spring 2016	*Logic*[*,†], PhD, Università della Svizzera italiana
Fall 2015	*Advanced Compilers*[*,†], MSc, Università della Svizzera italiana
Fall 2015	*Network Programming Languages*[*,†], PhD, Università della Svizzera italiana and Politecnico di Milano
Spring 2015	*Data Management*[*,†], BSc, Università della Svizzera italiana
Fall 2014	*Domain Specific Languages*[*,†], MSc, Università della Svizzera italiana
Spring 2014	*Data Management*[*,†], BSc, Università della Svizzera italiana
Fall 2013	*Scripting Languages*[*], MSc, Cornell University

[*] indicates that I was the primary instructor. [†] indicates that I was the course designer.

Service

Service to Professional Societies

2025 - *present*	Editor of SIGCOMM Computer Communications Review (**CCR**)
2025 - *present*	Member of SIGCOMM Executive Committee

Steering Committee

2026	ACM Workshop on Hot Topics in Networks (**HotNets '26**)
2022	P4 Workshop in Europe (**EuroP4 '22**)
2021	P4 Workshop in Europe (**EuroP4 '21**)

General Chair

2020	P4 Workshop in Europe (**EuroP4 '20**)
2019	P4 Workshop in Europe (**EuroP4 '19**)

TPC Chair

2018	P4 Workshop in Europe (**EuroP4 '18**)
2017	P4 Developer Day Fall
2016	Workshop on Networking and Programming Languages (**NetPL '16**)
2016	Workshop on Dependability Issues on SDN and NFV description (**DISN '16**)
2015	Workshop on Networking and Programming Languages (**NetPL '15**)

TPC Member

2027	USENIX Symposium on Operating Systems Design and Implementation (**OSDI '27**)
2027	European Conference on Computer Systems (**EuroSys '27**)
2026	USENIX Symposium on Networked Systems Design and Implementation (**NSDI '26**)
2025	Asia-Pacific Workshop on Networking (**APNet'25**)
2025	USENIX Symposium on Operating Systems Design and Implementation (**OSDI '25**)
2024	Workshop on Disruptive Memory Systems (**DIMES '24**)
2024	ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communications (**SIGCOMM '24**)
2024	P4 Workshop in Europe (**EuroP4 '23**)
2023	ACM SIGCOMM Workshop on Future of Internet Routing & Addressing (**FIRA '23**)
2023	P4 Workshop
2022	P4 Workshop
2022	ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communications (**SIGCOMM '22**)
2022	USENIX Symposium on Operating Systems Design and Implementation (**OSDI '22**)
2022	Asia-Pacific Workshop on Networking (**APNet'22**)
2021	P4 Workshop in Europe (**EuroP4 '21**)
2021	ACM SIGCOMM Symposium on SDN Research (**SOSR '21**)
2020	ACM SIGCOMM Workshop on Network-Application Integration/CoDesign (**NAI '20**)
2020	P4 and Programmable Forwarding Summit
2020	Asia-Pacific Workshop on Networking (**APNet'20**)
2020	ACM SIGCOMM Symposium on SDN Research (**SOSR '20**)
2019	Stanford Workshop on Buffer Sizing

2019	ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communications (**SIGCOMM '19**)
2019	Symposium on SDN Research (**SOSR '19**)
2019	European Conference on Computer Systems (**EuroSys '19**)
2018	ACM International Conference on Distributed and Event-Based Systems (**DEBS '18**)
2018	ACM SIGCOMM Symposium on SDN Research (**SOSR '18**)
2017	ACM SIGCOMM Symposium on SDN Research (**SOSR '17**) (Posters and Demos)
2017	ACM Symposium on Principles of Distributed Computing (**PODC '17**)
2017	International Workshop on High Performance Computing for Big Data (**HPC4BD '17**)
2016	International Conference on Reconfigurable Computing and FPGAs (**ReConFig '16**)
2016	International Conference on Principles of Distributed Systems (**OPODIS '16**)
2016	ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communications (**SIGCOMM '16**) (Posters and Demos)
2016	ACM International Conference on Emerging Networking Experiments and Technologies (**CoNEXT '16**)
2016	ACM SIGPLAN Conference on Programming Language Design and Implementation (**PLDI '16**) (ERC)
2016	European Conference on Object-Oriented Programming (**ECOOP '16**) (ERC)
2016	European Conference on Computer Systems (**EuroSys '16**) 2016
2016	International Workshop on High Performance Computing for Big Data (**HPC4BD '16**)
2016	ACM/IEEE Symposium on Architectures for Networking and Communications Systems (**ANCS '16**)
2016	ACM/IFIP Middleware conference (**Middleware '16**)
2015	ACM Conference on Object-oriented Programming, Systems, Languages, and Applications (**OOPSLA '15**)
2015	ACM/IFIP Middleware conference (**Middleware '15**)
2015	International Workshop on High Performance Computing for Big Data (**HPC4BD '15**)
2014	ACM/IFIP Middleware conference (**Middleware '14**)

Refereed Tutorials and Hackathons

2022	Noa Zilberman, Fernando Ramos, Sándor Laki, Damu Ding, Salvatore Signorello, and Robert Soulé. P4PI Hackathon: P4 on Raspberry PI for Networking Education. In *2021 ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communications* (**SIGCOMM '22**).
2022	Noa Zilberman, Robert Soulé, Fernando Ramos, and Damu Ding. P4PI: P4 on Raspberry PI for Research and Education In *2022 IEEE International Conference on Network Softwarization* (**NETSOFT '22**).
2021	Sándor Laki, Noa Zilberman, and Robert Soulé. P4PI Hackathon: P4 on Raspberry PI for Networking Education. In *2021 ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communications* (**SIGCOMM '21**).
2019	Noa Zilberman and Robert Soulé. Full-Day Hackathon on P4. In *The 16th USENIX Symposium on Networked Systems Design and Implementation* (**NSDI '19**).
2018	Nate Foster, Noa Zilberman, and Robert Soulé. Full-Day Tutorial on Programming the Network Data Plane. In *2018 ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communications* (**SIGCOMM '18**).

Professional Activities

10/2020 - 01/2023	Member, P4 Technical Steering Team
10/2021 - *present*	Primary Contact for Yale, Open Networking Foundation
02/2020 - *present*	Primary Contact for Yale, Chips Alliance
10/2019 - *present*	Member, Network Programming Initiative
05/2018 - 08/2021	Chair, P4 Education Working Group
07/2007 - *present*	Senior Member, ACM
03/2007 - *present*	Member, USENIX
02/2021 - *present*	Senior Member, IEEE

University Activities

2026 - *present*	*SEAS Technology Faculty Advisory Committee*, Yale University
2026 - *present*	*FAS/SEAS Faculty Senate*, Yale University
2025 - *present*	*Co-Organizer Computer Systems Reading Group*, Yale University
2025 - *present*	*Advisory Committee for Yale College Entrepreneurship Certificate*, Yale University
2024 - 2025	*STEM Undergraduate Fellowship Research Committee*, Yale University
2023 - 2024	*STEM Undergraduate Fellowship Research Committee*, Yale University
2023 - 2024	*STEM Undergraduate Fellowship Research Committee*, Yale University
2022 - 2023	*STEM Undergraduate Fellowship Research Committee*, Yale University
2021 - 2022	*STEM Undergraduate Fellowship Research Committee*, Yale University
2020 - 2021	*STEM Undergraduate Fellowship Research Committee*, Yale University
2019 - *present*	*Benjamin Franklin College First-Year Adviser*, Yale University
2019 - *present*	*Fellow of Benjamin Franklin College*, Yale University

Department Activities

2024 - 2024	*Computer Science Faculty Search Committee*, Yale University
2023 - 2024	*Computer Science Lecturer Review Committee*, Yale University
2022 - 2023	*Computer Science Lecturer Search Committee*, Yale University
2022 - 2023	*Computer Science Faculty Reappointment Committee*, Yale University
2024 - 2025	*Computer Science Undergraduate Class Advisor*, Yale University
2023 - 2024	*Computer Science Undergraduate Class Advisor*, Yale University
2022 - 2023	*Computer Science Undergraduate Class Advisor*, Yale University
2021 - 2022	*Visibility and Publicity Committee Chair*, Yale University
2021 - 2022	*Social Activities Committee Chair*, Yale University
2020 - 2021	*Social Activities Committee Chair*, Yale University
2019	*Graduate Admission Committee*, Yale University

Publications

Journal Articles

1. Noa Zilberman, Eve Schooler, Uri Cummings, Rajit Manohar, Dawn Nafus, Robert Soulé, and Rick Taylor. Toward Carbon-Aware Networking. In *ACM SIGENERGY Energy Informatics Review* (**EIR**), 3(3), October 2023.

2. Pietro Bressana, Noa Zilberman, and Robert Soulé. PTA: Finding Hard-to-Find Data Plane Bugs. In *IEEE/ACM Transactions on Networking (***ToN***)*, October 2022.

3. Theo Jepsen, Ali Fattaholmanan, Masoud Moshref, Nate Foster, Antonio Carzaniga, and Robert Soulé. Forwarding and Routing with Packet Subscriptions. In *IEEE/ACM Transactions on Networking (***ToN***)*, April 2022.

4. Sándor Laki, Radostin Stoyanov, Dávid Kis, Robert Soulé, Péter Vörös, and Noa Zilberman. P4Pi: P4 on Raspberry Pi for Networking Education. In *SIGCOMM Computer Communication Review* (**SIGCOMM CCR**), 51(3), July 2021.

5. Atul Pokharel, Robert Soulé, and Avi Silberschatz. A Case for Location-based Contact Tracing. In *Health Care Management Science Special Issue on COVID-19 (***HCMS***)*, June 2021. Acceptance rate: 12% (12 / 100)

6. Huynh Tu Dang, Pietro Bressana, Han Wang, Ki Suh Lee, Noa Zilberman, Hakim Weatherspoon, Marco Canini, Fernando Pedone, and Robert Soulé. P4xos: Consensus as a Network Service. In *IEEE/ACM Transactions on Networking (***ToN***)*, 28(4), August 2020.

7. Robert Soulé, Shrutarshi Basu, Parisa Jalili Marandi, Fernando Pedone, Robert Kleinberg, Emin Gün Sirer, Nate Foster. Merlin: A Language for Provisioning Network Resources. In *IEEE/ACM Transactions on Networking (***ToN***)*, 26(5), October 2018.

8. Martin Hirzel, Robert Soulé, Buğra Gedik, and Scott Schneider. Stream query optimization. *Encyclopedia of Big Data Technologies*, April 2018.

9. Huynh Tu Dang, Marco Canini, Fernando Pedone, and Robert Soulé. Paxos Made Switch-y. In *SIGCOMM Computer Communication Review* (**SIGCOMM CCR**), 46(2), February 2016.

10. Robert Soulé and Buğra Gedik. RailwayDB: Adaptive Storage of Interaction Graphs. In *Very Large Data Bases Journal* (**VLDBJ**), 25(2), pp. 151-169 March 2016.

11. Robert Soulé, Martin Hirzel, Buğra Gedik, Robert Grimm. River: An Intermediate Language for Stream Processing. In *Software: Practice and Experience* (**SP&E**), 2015.

12. Martin Hirzel, Robert Soulé, Scott Schneider, Buğra Gedik, and Robert Grimm. A Catalog of Stream Processing Optimizations. *ACM Computing Surveys* (**CSUR**). 46(4), April 2014.

13. Martin Hirzel, Henrique Andrade, Buğra Gedik, Gabriela Jacques da Silva, Rohit Khandekar, Vibhor Kumar, Mark Mendell, Howard Nasgaard, Scott Schneider, Robert Soulé, Kun-Lung Wu. IBM Streams Processing Language: Analyzing Big Data in Motion. *IBM Journal on Research and Development* (**JRD**), pp. 1-11, 57(3), May 2013.

Conference Publications

14. Alex Huang, Amirmohammad Nazari, Robert Soulé, Rajit Manohar. An Energy-Proportional, High-Speed Serial Link. In *Proceedings of the 30th International Symposium on Asynchronous Circuits and Systems,* (**ASYNC '26**), June 2026. Acceptance rate: 39% (13 / 33).

15. Achilles Benetopoulos, Peter Alvaro, Andi Quinn, Robert Soulé. Yield Not Thy Core. In *Proceedings of the 2026 European Conference on Computer Systems* (**EuroSys '26**), April 2026. Acceptance rate: 18% (59 / 325).

16. Amirmohammad Nazari, Rajit Manohar, Robert Soulé. Accio: Rethinking OS-Architecture Co-Design for Next-Gen I/O. In *Proceedings of New Ideas in Networked Systems,* (**NINeS '26**), February 2026. Acceptance rate: 48% (28 / 58).

17. Nenad Milosevic, Robert Soulé, Fernando Pedone. The Case for Synchronous Distributed Protocols in Public Clouds. In *Proceedings of the 16th ACM Symposium on Cloud Computing,* (**SoCC '25**), November 2025. Acceptance rate: 27%.

18. Nenad Milosevic, Daniel Cason, Zarko Milosevic, Robert Soulé, Fernando Pedone. Message Size Matters: AlterBFT's Approach to Practical Synchronous BFT in Public Clouds. In *Proceedings of the 26th ACM/IFIP International Middleware Conference* (**Middleware '25**), December 2025. Acceptance rate: 20%

19. Anita Buckley, Pavel Chuprikov, Rodrigo Otoni, Robert Soulé, Robert Rand, and Patrick Eugster. A Language for Quantifying Quantum Network Behavior. In *Proceedings of the 2025 ACM International Conference on Object-Oriented Programming Systems, Languages, and Application* (**OOPSLA '25**), October 2025. Acceptance rate: 36% (210 / 590).

20. Robert Soulé, George Neville-Neil, Stelios Kasouridis, Alex Yuan, Avi Silberschatz, and Peter Alvaro. OSDB: Exposing the Operating System's Inner Database. In *Proceedings of the 2025 Conference on Innovative Data Systems Research* (**CIDR '25**), January 2025. Acceptance rate: *N/A*.

21. Anita Buckley, Pavel Chuprikov, Rodrigo Otoni, Robert Soulé, Robert Rand, and Patrick Eugster. An Algebraic Language for Specifying Quantum Networks. In *Proceedings of the 2024 ACM SIGPLAN Conference on Programming Language Design and Implementation* (**PLDI '24**), June 2024. Acceptance rate: 28% (89 / 321).

22. Fernando Pedone, Enrique Fynn, Robert Soulé, Zarko Milosevic, and Ethan Buchman. Robust and Fast Blockchain State Synchronization. In *Proceedings of the 26th International Conference on Principles of Distributed Systems* (**OPODIS '22**), December 2022. Acceptance rate: 34% (25 / 76).

23. Ali Fattaholmanan, Mario Baldi, Antonio Carzaniga, and Robert Soulé. P4Weaver: Supporting Modular and Incremental Programming in P4. In *Proceedings of the 7th Symposium on SDN Research* (**SOSR '21**), September 2021. Acceptance rate: 32% (12 / 37).

24. Theo Jepsen, Alberto Lerner, Fernando Pedone, Robert Soulé, and Philippe Cudré-Mauroux. In-Network Support for Transaction Triaging. In *Proceedings of the 47th International Conference on Very Large Data Bases* (**VLDB '21**), August 2021. Acceptance rate: 23% (157 / 692).

25. Eric Campbell, William Hallahan, Priya Srikumar, Carmelo Cascone, Jed Liu, Vignesh Ramamurthy, Hossein Hojjat, Ruzica Piskac, Robert Soulé, Nate Foster. Avenir: Managing Data Plane Diversity with Control Plane Synthesis. In *Proceedings of the 18th USENIX Symposium on Networked Systems Design and Implementation* (**NSDI '21**), April 2021. Acceptance rate: 16% (40 / 255).

26. Christopher Leet, Robert Soulé, Y. Richard Yang, and Ying Zhang. Flow Algebra: Towards an Efficient, Unifying Framework for Network Management Tasks. In *Proceedings of the 2021 IEEE International Conference on Computer Communications* (**INFOCOM '21**), May 2021. Acceptance rate: 20% (252 / 1266).

27. Theo Jepsen, Ali Fattaholmanan, Masoud Moshref, Nate Foster, Antonio Carzaniga, and Robert Soulé. Forwarding and Routing with Packet Subscriptions. In *Proceedings of the 16th International Conference on Emerging Networking Experiments and Technologies* (**CoNEXT '20**), December 2020. Acceptance rate: 24% (40 / 168). ***Best Paper Award.***

28. Pietro Bressana, Noa Zilberman, and Robert Soulé. Finding Hard-to-Find Data Plane Bugs with a PTA. In *Proceedings of the 16th International Conference on Emerging Networking Experiments and Technologies* (**CoNEXT '20**), December 2020. Acceptance rate: 24% (40 / 168).

29. Daniele Rogora, Antonio Carzaniga, Amer Diwan, Matthias Hauswirth, Robert Soulé. Analyzing System Performance with Probabilistic Performance Annotations. In *Proceedings of the 2020 European Conference on Computer Systems* (**EuroSys '20**), April 2020. Acceptance rate: 18% (43 / 234).

30. Long Hoang Le, Enrique Fynn, Mojtaba Eslahi-Kelorazi, Robert Soulé, and Fernando Pedone. DynaStar: Optimized Dynamic Partitioning for Scalable State Machine Replication. In *Proceedings of the 39th IEEE International Conference on Distributed Computing Systems* (**ICDCS '19**), July 2019. (*N/A*)

31. Theo Jepsen, Daniel Alvarez, Nate Foster, Changhoon Kim, Jeongkeun Lee, Masoud Moshref, and Robert Soulé. Fast String Searching on PISA. In *Proceedings of the 5th Symposium on SDN Research* (**SOSR '19**), April 2019. Acceptance rate: 28% (15 / 53).

32. Yuta Tokusashi, Huynh Tu Dang, Fernando Pedone, Robert Soulé, and Noa Zilberman. The Case For In-Network Computing On Demand. In *Proceedings of the 2019 European Conference on Computer Systems* (**EuroSys '19**), March 2019. Acceptance rate: 22% (45 / 121).

33. Calin Cascaval, Nate Foster, William Hallahan, Jeongkeun Lee, Jed Liu, Nick McKeown, Cole Schlesinger, Milad Sharif, Robert Soulé, and Han Wang. p4v: Practical Verification for Programmable Data Planes. In *Proceedings of the 2018 ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communications* (**SIGCOMM '18**), August 2018. Acceptance rate: 18% (40 / 222).

34. Praveen Kumar, Yang Yuan, Chris Yu, Nate Foster, Robert Kleinberg, Petr Lapukhov, Chiun Lin Lim, and Robert Soulé. Semi-Oblivious Traffic Engineering: The Road Not Taken. In *Proceedings of the 15th USENIX Symposium on Networked Systems Design and Implementation* (**NSDI '18**), April 2018. Acceptance rate: 16% (40 / 252).

35. Xin Jin, Xiaozhou Li, Haoyu Zhang, Nate Foster, Jeongkeun Lee, Robert Soulé, Changhoon Kim, and Ion Stoica. NetChain: Scale-Free Sub-RTT Coordination. In *Proceedings of the 15th USENIX Symposium on Networked Systems Design and Implementation* (**NSDI '18**), April 2018. Acceptance rate: 16% (40 / 252). ***Best Paper Award***.

36. Theo Jepsen, Masoud Moshref, Antonio Carzaniga, Nate Foster, and Robert Soulé. Life in the Fast Lane: A Line-Rate Linear Road. In *Proceedings of the 4th Symposium on SDN Research* (**SOSR '18**), March 2018. Acceptance rate: 28% (18 / 63).

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55. Peter Alvaro, Matthew Adiletta, David Cheng, Adrian Cockcroft, Frank Hady, Ramesh Illikkal, Esteban Ramos, and Robert Soulé. Accelerating Microservices by Bypassing the Network. In *Proceedings of 15th ACM SIGOPS Asia-Pacific Workshop on Systems.* (**APSys '24**), Sep. 2024. Acceptance rate: 45% (20 / 44).

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70. Aidan Evans, Seun Omonije, Robert Soulé, and Robert Rand. MCBeth: A Measurement Based Quantum Programming Language. In *Quantum Physics and Logic* (**QPL '22**), June 2022.

71. Kaarthik Annamalai Alagappan, Paul Gazzillo, Ali Fattaholmanan, Mario Baldi, Antonio Carzaniga, and Robert Soulé. SuperP4: Preprocessor-Aware Syntax and Semantic Analysis for P4 Programs. In *P4 Workshop*, May 2022.

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73. Pietro Bressana, Noa Zilberman, and Robert Soulé. A Programmable Framework for Validating Data Planes. In *Proceedings of the 2018 ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communications* (**SIGCOMM '18**), August 2018. Acceptance rate: 43% (52 / 121).

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75. Theo Jepsen, Leandro Pacheco de Sousa, Huynh Tu Dang, Fernando Pedone, Robert Soulé. Gotthard: Network Support for Transaction Processing. In *Proceedings of the 3rd ACM Sigcomm Symposium on SDN Research* (**SOSR '17**), April 2017.

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