



Association for  
Computing Machinery

## NEWS RELEASE

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### **ACM PUBLISHES NEW JOURNAL OF *PROCEEDINGS OF THE ACM ON NETWORKING***

*Protocols in Public and Private Networks, Machine Learning, and Network Management  
Among Topics to Be Covered*

**New York, NY, September 6, 2023** – ACM, the Association for Computing Machinery, has announced the publication of the first issue of [Proceedings of the ACM on Networking](#) (PACMNET), a new peer-reviewed journal. Issued quarterly, PACMNET publishes original research papers on new technologies, novel experimentation, creative use of networking technologies, and new insights into network management. The journal features articles on system design and performance evaluations of computer networks, experience learned from deployments, traffic engineering, and network programmability from academic experts as well as practitioners working in public or private settings.

PACMNET seeks contributions on a wide variety of networking topics including policy, security and privacy, performance, and energy efficiency. The editors also welcome experimental results and papers offering additional artifacts such as code and datasets.

“This new journal will present informative and high-quality research authored and edited by members of the ACM Special Interest Group on Communications and Computer Networks (SIGCOMM),” said PACMNET Co-Editor-in-Chief Marco Mellia, Professor of Control and Computer Engineering at the Politecnico di Torino, Italy. “We first welcomed submissions for the inaugural issue back in December 2022 and received 41 articles. We are very pleased with the responses thus far. The Associate Editors selected three papers for publication in this issue following a rigorous review process.”

Explaining more about the history behind the new journal, Co-Editor-in-Chief Peter Steenkiste, Professor of Computer Science and Electrical and Computer Engineering at Carnegie Mellon University, added, “We started discussing creating PACMNET in 2019. One of our goals was to start a new journal that would be attractive for networking researchers from regions where conference publications are

undervalued. We encourage researchers to submit to PACMNET and become a part of this growing community.”

All papers included in the first PACMNET issue will be presented at the [CoNEXT 2023](#) conference (December 5-8, 2023) in Paris, France.

Articles featured in the inaugural issue include:

**[“PACMNET V1, N1, June 2023 Editorial,”](#)** by Marco Mellia, Peter Steenkiste, Lili Qiu and Olivier Bonaventure

The editors introduce the first issue of the *ACM Proceedings of the ACM on Networking* (PACMNET) journal and discuss their goals for the publication.

**[“Yarrpbox: Detecting Middleboxes at Internet-Scale,”](#)** by Fahad Hilal and Oliver Gasser

The end-to-end principle is one of the foundations of the original Internet architecture. Middleboxes are devices which change important parts of a packet in transit, such as a lower handshake time, but also make it more difficult to deploy newly developed protocols, such as TLS 1.3 and QUIC. It is important to have a good understanding of the middlebox ecosystem within the Internet. In this paper, the authors present results from a multi-faceted middlebox analysis study. This paper describes Yarrpbox, a tool to efficiently perform middlebox detection measurements on an Internet-scale.

**[“Flock: Accurate Network Fault Localization at Scale,”](#)** by Vipal Harsh, Tong Meng, Kapil Agrawal and Phillip Brighten Godfrey

Inferring the root cause of failures among thousands of components in a data center network is challenging, especially for “gray” failures that are not reported directly by switches. Faults can be localized through end-to-end measurements, but past localization schemes have been either too slow for large-scale networks or sacrifice accuracy. This paper describes Flock, a network fault localization algorithm and system that achieves both high accuracy and speed at datacenter scale.

**[“Dependent Misconfigurations in 5G/4.5G Radio Resource Control,”](#)** by Zhehui Zhang, Yanbing Liu, Qianru Li, Zizheng Liu, Chunyi Peng and Songwu Lu

This paper discusses the unexplored problem of configuration dependencies in 5G/4.5G radio resource control (RRC). 5G/4.5G allows more than one cell to serve a mobile device, resulting in more configuration dynamics and complexity that vary with all the serving cells. This paper analyzes inter-dependency among configurations, categorizes dependent misconfigurations, uncovers their root causes, and quantifies negative performance impacts.

In addition to joint EICs Mellia and Steenkiste, the PACMNET editorial team is drawn from countries around the world including Belgium, Brazil, China, Germany, Hong Kong, Italy, Korea, The Netherlands, Pakistan, Spain, Sweden, Switzerland, Taiwan, the United Kingdom, and the United States. The editorial board also includes two Managing Editors, one Advisory Board Member, 47 Editors (drawn from leading companies and academic institutions), two Associate Editors, and one Information Director.

ACM publishes more than 60 scholarly peer-reviewed journals in dozens of computing and information technology disciplines. Available online through the ACM Digital Library, ACM’s high-impact journals constitute a vast and comprehensive archive of computing innovation, covering emerging and

established computing research for both practical and theoretical applications. ACM journal editors are thought leaders in their fields, and ACM's emphasis on rapid publication ensures minimal delay in communicating exciting new ideas and discoveries.

**About ACM**

[ACM, the Association for Computing Machinery](#) is the world's largest educational and scientific computing society, uniting computing educators, researchers, and professionals to inspire dialogue, share resources, and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

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