

Research Infrastructures and Tools for Reproducible Data Communication Research

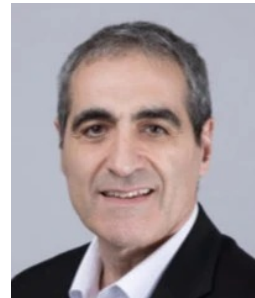
ACM SIGCOMM 2025 Non-Paper Session

17:30 — 18:15 | Tuesday, September 9th



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Agenda



Short statements

1. **Georg Carle** (TUM), Serge Fdida (Sorbonne University):
Introduction to the Non-Paper-Session
2. **Georg Carle** (TUM), Serge Fdida (Sorbonne University):
Outcomes of Dagstuhl Seminar 24462 “Research Infrastructures and Tools for Collaborative Networked Systems Research“
3. **Serge Fdida** (Sorbonne University):
Research instrument with experiment blueprints and data management
4. **Marie-José Montpetit** ((interim) Executive Director of SLICES-RI):
SLICES-RI: Research and Innovation
5. **Sebastian Gallenmüller** (TUM), **Damien Saucez** (INRIA):
SIGCOMM and CoNEXT artifact evaluation and infrastructure needs
6. **Ethan Katz-Bassett** (Columbia University):
PEERING testbed

Panel

Ellen Zegura (Georgia Tech, NSF) and the above

Communication and Computation Experimental Research

Large heterogeneity in Research Infrastructures

- Purpose-built setups
- Difficulty to extend experiments of others



Demo session @ 6G Platform Conference in Berlin

Reproducible Experiments



ACM SIGCOMM MoMeTools - Workshop on Models, Methods and Tools for Reproducible Network Research,
Georg Carle, Hartmut Ritter, Klaus Wehrle,
Karlsruhe, Germany, August 2003

ACM SIGCOMM Reproducibility Workshop
Olivier Bonaventure, Luigi Iannone, Damien Saucez
Los Angeles, USA, August 2017

Dagstuhl seminar 18412 “Encouraging Reproducibility in Scientific Research of the Internet”,
October 2018

Dagstuhl seminar 24462 “Research Infrastructures and Tools for Collaborative Networked Systems Research”,
November 2024

SLICES Research Infrastructure: opportunity for reproducibility
Blueprints, including 5G/6G RANs and cores
Reproducibility toolchain, including experiment orchestration
Experiment portability with pos
Data management components
Educational material

Panel



- Ellen Zegura (Georgia Tech & NSF)
- Serge Fdida (Sorbonne University)
- Marie-José Montpetit (SLICES-RI)
- Sebastian Gallenmüller (TUM)
- Ethan Katz-Bassett (Columbia University)
- Georg Carle – Panel Moderator



Question to the Panel: How far are we in supporting experimental networking research by research infrastructures that allow for

- Ease of use and low time to first experiment
- Reproducibility
- Availability of specific equipment
- Sustainability, energy-efficiency, and high utilization
- FAIR research data management
- Community building
- Evolvability/test of time
- Funding & staffing for maintenance over time