2025 IFIP/IEEE Network Operations and Management Symposium (NOMS 2025)
12-16 May, 2025, Honolulu, HI, USA
"Managing the Wave to Global Connectivity"

Second IEEE Workshop on Generative AI for Network Management (GAIN)

• • • CALL FOR WORKSHOP PAPERS • • •

The 2025 edition of GAIN will again bring together academic researchers from various disciplines (communication networks, data science, operational research) and practitioners from industry. The workshop welcomes scientific papers as well as industrial use case papers. The considered topics in GenAI for network management are initially structured along the well-accepted FCAPS model for network and network service management. However, the workshop is not limited to these topics, and novel contributions on using Generative AI in the operation and management of networks and services are welcome.

Fault Management
- Predictive Maintenance: Using generative AI for proactive network management
- Network Troubleshooting using Generative AI, incl. root cause analysis and resolution
- Monitoring using Generative AI: Using generative AI for efficient monitoring of network resources

Configuration Management
- Network Configuration Automation with Generative AI
- Automated Network Design and Deployment using Generative AI
- Generative AI for Traffic Management: Optimizing network traffic engineering through AI

Accounting
- Ethical Considerations: Addressing Privacy and Security Concerns in AI-Based Network Management
- Ensuring fairness between network users using generative AI for optimal resource allocation

Performance
- Network Optimization with AI: Leveraging generative algorithms for network efficiency
- Dynamic Resource Allocation: Leveraging generative AI for efficient network resource management
- Efficient Network Data Analysis using Generative AI

Security
- AI-Based Security Protocols: Developing next-generation network security strategies
- Anomaly Detection and Response: Utilizing generative AI for enhanced network security

Use Cases
- Generative AI for management of IoT, Wireless/RAN, or Core, and Cloud-to-Edge networking

General
- Prompt Engineering for Network Management Using LLMs
- Robustness and Reliability of Generative AI for net. management (incl. benchmarks and datasets)
- Scalability Orchestration, Testing and Validation of Generative AI for Network Management

Submission and Important Dates:

Submission site:
GAIN 2025 full papers: https://jems3.sbc.org.br/events/224/355/submit
GAIN 2025 short papers: https://jems3.sbc.org.br/events/224/356/submit
Paper Submission Deadline: **Jan. 17, 2025**
Notification of Acceptance: **Feb. 28, 2025**
Final Camera Ready: **Mar. 14, 2025**

Workshop organisers:

- Alberto Leon-Garcia, Univ. of Toronto, CA *(alberto.leongarcia@utoronto.ca)*
- Pal Varga, Budapest Univ. of Technology and Economics, HU *(pvarga@tmit.bme.hu)*
- Kurt Tutschku, Blekinge Inst. of Technology, SE *(ktt@bth.se)*