2024 IEEE Network Operations and Management Symposium (NOMS 2024)
6-10 May 2024 Seoul, Korea
Towards intelligent, reliable, and sustainable network and service management

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

• • • CALL FOR WORKSHOP PAPERS • • •

The GAIN workshop aims to systematically investigate and discuss the application of Generative AI in network management. It will bring together academic researchers from various disciplines (communication networks, data science, operational research) and practitioners from industry. Both scientific papers and industrial use case papers are welcomed. The considered topics in Generative AI for network management can initially be structured along the well-accepted FCAPS models in network management. This is a call for papers – example topics are as follows.

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: https://jems3.sbc.org.br/noms_gain2024
Paper Submission Deadline: **Jan. 19, 2024**
Notification of Acceptance: **Mar. 1, 2024**
Final Camera Ready: **Mar. 15, 2024**

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)