Call for Papers

# The 1st free5GC World Forum

## to be held in conjunction with ACM CCS 2025

October 13, 2025
Taipei, Taiwan
https://free5gc.org/forum/

We are pleased to announce the 1st free5GC World Forum, to be held in conjunction with ACM Conference on Computer and Communications Security (CCS) 2025 (https://www.sigsac.org/ccs/CCS2025/), one of the premier conferences in cybersecurity. This forum will bring together researchers, industry professionals, and open-source contributors to explore the challenges and recent advancements in 5G core networks, with a particular focus on security and the transformative role of free5GC, the leading open-source 5G Standalone (SA) core network.

free5GC (https://free5gc.org/), a project hosted by the Linux Foundation, is a fully 3GPP-compliant open-source 5G core network platform. It empowers researchers, developers, and businesses to drive innovation in 5G systems, providing a robust prototyping environment for next-generation connectivity solutions. Recent notable architectures such as $L^2$5GC+ (https://github.com/nycu-ucr/L25GC-plus), which aim to significantly reduce control plane latency while maintaining 3GPP compliance, exemplify how free5GC facilitates the development and testing of cutting-edge ideas on a production-grade 5G core.

The forum will provide a unique opportunity for participants to share insights, present innovations, and shape the future direction of free5GC and next-generation mobile networks.

Submissions will be evaluated based on technical rigor, novelty, and relevance to 5G core networks. Priority will be given to papers that demonstrate practical security implications, novel attack models, performance improvements, or defense mechanisms applicable to free5GC, $L^2$5GC+, and related platforms.

**Topics of Interest**

We invite original research papers, technical reports, and case studies in, but not limited to, the following areas:

- Security and Privacy in 5G Core Networks
- Threat Modeling and Attack Detection for free5GC
- Secure Network Slicing and Isolation
- Authentication and Access Control in 5G
- Zero Trust Architectures for 5G Core Networks
- AI/ML for Anomaly Detection in free5GC
- NFV and Container Security in 5G Deployments
- Denial-of-Service (DoS) Mitigation in 5G Core
- End-to-End Security in 5G and Beyond
- Post-Quantum Cryptography for 5G Core
- Security of Interoperability Between 5G and Legacy Networks
- Forensics and Incident Response in 5G Core Networks
- Low-Latency 5G Core Architectures (e.g., L$^2$5GC+)
- free5GC Development and Enhancements
- 5G Standalone (SA) Core Networks
- 5G Core Support for Private Cellular Networks
- 5G Core Support in Multi-Operator Network Scenarios
- Next-Generation Cellular Network Architectures
- Network Slicing and Virtualized Core Networks
- Edge Computing and MEC Integration
- AI/ML for Network Optimization
- 6G Vision and Future Core Networks
- Interoperability and Multi-Vendor Deployments
- Real-World Deployments and Use Cases of free5GC

**Submission Guidelines**

- Submitted papers must not substantially overlap with papers that have been published or are simultaneously submitted to a journal or a conference with proceedings.
- Long papers: Maximum 12 pages for review, with the final camera-ready version limited to 9 pages. Submissions should be no more than 12 pages in the ACM double-column format, excluding the bibliography and well-marked appendix. Committee members are not required to read the appendices, so the paper should be understandable without them. For accepted papers, the final camera-ready version may be limited to 9 pages, including the bibliography,

appendix, and all content.

- Short papers: 4 pages for both review and final camera-ready submission. The forum also welcomes short submissions of up to 4 pages for preliminary results or concise contributions that can be clearly described in a few pages.
- Authors of long-paper submissions may indicate in a footnote on the first page if they would like their paper to also be considered for publication as a short paper (4 pages in the proceedings).
- Submissions must be PDF files in the ACM double-column format (https://www.acm.org/publications/proceedings-template) using the "sigconf" template. Authors should not modify the font or margins of the ACM format. The CCS information such as concepts, keywords, or rights management data (e.g., DOI, ISBN) must be included. A teaser figure is optional. Please refer to sample-sigconf.tex and sample-sigconf.pdf in the ACM LaTeX package (https://www.overleaf.com/latex/templates/association-for-computing-machinery-acm-sig-proceedings-template/bmvfhcdnxfty) for formatting examples. Submissions not following the required format may be rejected without review.
- Submissions should not be anonymized.
- Submissions are to be made to the submission website at HotCRP (https://free5gc-2025.hotcrp.com/). Only PDF files will be accepted. Submissions not meeting these guidelines risk rejection without consideration of their merits.
- Authors of accepted papers must ensure that their paper will be presented at the forum by at least one of the authors.

**Important Dates**

- Paper Submission Deadline: July 5, 2025
- Notification of Acceptance: August 8, 2025
- Submission of Camera-Ready Papers to Publisher: August 22, 2025
- Forum Date: October 13, 2025

**Venue**

The 1st free5GC World Forum will take place in conjunction with ACM CCS 2025 in Taipei, Taiwan, offering opportunities for in-depth discussions and collaboration on securing 5G core networks.

**Visa**

Before traveling to Taiwan, please review the visa requirements and ensure that you have a valid visa. For detailed information, please visit: https://www.sigsac.org/ccs/CCS2025/visa/.

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