Call for Papers

IEEE Real Time Communications Conference 2023

The functions and scope of real-time mixed media applications are expanding as these applications are integrated with IoT, ML/AI, blockchain, voice- and financial technologies, and more. While there are conferences devoted to each of these technologies separately, and to the underlying networks and platforms that support them, the RTC Conference Technical Program is specifically interested in exploring the issues, opportunities and challenges associated with the integration of these disparate technologies. The online version of this Call for Papers can be found at Call for Papers (https://www.rtc-conference.com/2023/research-track-cfp/).

The RTC Research Track invites paper submissions in the area of interactive multimedia communications describing architectures, design, theoretical results, experiments, innovative systems, prototyping efforts and case studies. Papers that are accepted and presented at the conference will be submitted for publication in IEEE Xplore.

We are in particular interested in works at the intersection of multimedia interactive communications with technologies in the area of internet of things, vehicular networking, confidential computing, machine learning, network management, programmable network services, security, privacy, machine learning, voice technologies, blockchain, gaming, and robotics. The Technical Program inherits the 14-year legacy of the IPTComm Conference which evolved from a focus on Voice over IP to include some topics listed above. The archive of IPTComm publications is located at archive (http://iptcomm.org/archive.html).

We invite paper and poster submissions including but not limited to the following topics of interest:

- **Evolving Technologies and their impact on- and use within RTC Applications**
  - Innovations in WebRTC applications and algorithms
  - Programmable networks and edge computing
  - 5G/6G networks – applications and research
  - IoT networks
  - Video / audio codecs
  - Augmented and virtual reality, gaming, and robotics
  - Automated driving and autonomous transportation
  - Vehicular and other transportation networking
  - Industrial communication networks
  - Innovative applications to sectors including finance, energy, healthcare, education and social services
  - Cloud native evolution
  - Network functions running on hyperscalers
- **Network Management and Resilience methods and their effect on RTC applications**
  - Scaling, monitoring and management
  - Reliability engineering
  - GPU computing
  - Performance benchmarking
  - Quality of Experience (QoE)
  - Network Function Virtualization (NFV) and Software Defined Networks (SDN)
  - Autonomous network management
- **Impact of Security and Privacy methods on RTC**
  - Identity management and privacy
  - IoT security and privacy models
  - Privacy-aware computation

    - Intrusion detection and prevention
    - Forensics and diagnostics
    - Watermarking and steganography
    - Autonomous security operations
    - Blockchains in communication
    - Disinformation: challenges and models

- **AI/ML in RTC Applications and Services**
    - Natural language engines: optimizations & explanation
    - Voice/Video biometrics and authentication
    - Network threat detection and intelligence
    - Adversarial ML attacks and countermeasures
    - ML Operations
    - Large language models & conversational AI frameworks

Submission Guidelines

Paper submissions must describe original research, not published nor currently under review for another conference or journal. The program committee will referee all papers. At least one author of each paper must be registered and present their paper at the conference.

- All paper submissions must be done through EDAS (https://edas.info/N30764)
- Regular paper submissions should follow the guidelines and use the formatting tools available at the IEEE Manuscript Templates page.
- Regular papers are limited to 8 pages, double-column IEEE format, including figures, references and appendices.
- Work-in-progress papers should have no more than 4 pages in IEEE double-column format, including figures, references and appendices. Work-in-progress papers must include "Work in Progress" in the title.

Important Dates

- **Paper submission deadline:** Sunday, July 16 - 1800 EDT
- **Notification of acceptance:** Sunday, August 13 - 1800 EDT
- **Final camera-ready submission:** Sunday, September 10 - 1800 EDT
- **Conference Dates:** October 2-5, 2023

Conference Chairs

- Carol Davids (Illinois Institute of Technology & School of Applied Technology, USA)
- Vijay K Gurbani (Vail Systems, Inc. & Illinois Institute of Technology, USA)

Technical Program Committee Chairs

- Ronald Marx (Huawei German Research Center, Germany)
- Jose Aguerre (Evercast & Universidad de la República, Uruguay)

Technical Program Committee

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- Eric Burger, Georgetown University
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- Damien Stolarz, Evercast
- Jin Tang, AT&T Labs, Warrenville, Illinois
- Dieff Vital, The University of Illinois Chicago
- Florian Volk, Provadis School of International Management and Technology
- Hannan Xiao, King's College London