Call for Contributions

Submission:
1. Inform the Chairs about the Title of your Contribution
2. Submission URL:
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=UBICOMM+2025+Special
Please select Track Preference as **ROAM D2DIoT**

Special track

ROAM D2DIoT: Resource Optimization Allocation and Management in Device-to-Device Internet of Things

Chair

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along with

UBICOMM 2025, **The Nineteenth International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies**
September 28 – October 2, 2025 - Lisbon, Portugal
https://www.iaria.org/conferences2025/UBICOMM25.html

To ensure Quality of Service (QoS) and fairness in communication networks, scalable Resource Optimization Allocation and Management (ROAM) are crucial. However, resource optimization, allocation and management challenges are unique in every communication network paradigm. Every new paradigm such as the Internet of Things (IoT) creates opportunities for new network deployment scenarios that introduce new complexities. These use-case scenarios include remote surgery, virtual medical visit, cloud gaming, real-time inventory, autonomous driving etc. Consequently, new challenges are presented to the models utilized for performing ROAM. A one-size-fits-all model cannot be applied. Mostly these complexities are unique to each network paradigm and must be integrated into the design of ROAM models as applicable. Therefore, it is desirable to develop ROAM models and algorithms that are tailored and caters for the uniqueness presented. In short, it is important that ROAM models evolve to cater for the changes in communication network paradigms.

Moreover, most devices that will operate in the IoT will be unconventional and AI-enabled, thus adding to the complexities. It is envisaged that most D2D communication in the IoT will be wireless in nature. D2D communication has the potential to facilitate ubiquitous and intelligent connection of everything and everyone. The inherent benefits of D2D communication include but are not limited to enabling capacity expansion, seamless interworking for ubiquitous connectivity in 5G, 6G+ cellular networks and non-terrestrial networks (NTN). Moreover, D2D communication can contribute to the ease and low cost of setup and tear down for remote, mission-critical, emergency communication in humanly unreachable scenarios/situations that require ultra-reliable low latency. However, D2D communication standards are also evolving, and new ones are developed. Thus, it is essential to pay attention to the design of ROAM models for D2D communication to ensure robust ubiquitous connectivity and QoS in the IoT.

These ROAM models and algorithms will be leveraged for the design of new network layer communication protocols that will be utilized by D2D communication standards operating in IoT. These ROAM models will facilitate low latency, high throughput and reliable communication.

ROAM D2DIoT seeks research contributions that are developing or have developed models and algorithms for solving Resource Optimization Allocation and Management challenges in D2D communication within the Internet of Things. Contributions may be in the following area (**but not limited to these areas**).

- IoT in Healthcare Services/Medical Wearables
- IoT in Power Grid
- Vehicle-to-Vehicle communication
- IoT for Industrial/Home Automation
- IoT in Cellular network
- IoT for Intelligent Transportation Systems.
- Underwater IoT
- Satellite IoT/IoT in Non-Terrestrial Networks (NTN)
- AI-powered resource optimization allocation and management for IoT

These are only suggestions; we welcome papers discussing other issues related to digital accessibility

Important Datelines
Inform the Chair, as soon as you decide to contribute.
- Submission: August 9
- Notification: August 29
- Registration: September 10
- Camera-ready: September 10

Note: The submission deadline is somewhat flexible, providing arrangements are made ahead of time with the chair.

Contribution Types
- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Paper Format
- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules: http://www.iaria.org/editorialrules.html

Publications
- Extended versions of selected papers will be published in IARIA Journals: http://www.iariajournals.org
- Print proceedings will be available via Curran Associates, Inc.: http://www.proceedings.com/9769.html
- Articles will be archived in the free access ThinkMind Digital Library: http://www.thinkmind.org

Papers Submission
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Registration
- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at http://www.iaria.org/registration.html

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