

Tentative Outline

Special Thematic Issue for the journal Recent Advances in Computer Science and Communications

Title of the Thematic Issue: "Security and privacy in 5G communication networks and multimedia"

Guest Editor: Dr. Shengqing Li

- **Scope of the Thematic Issue:**

5G has revolutionized the entire world from academia to industries. 5G is a new type of mobile communication network with the characteristics of high speed, low delay and large connection. It is the network infrastructure to realize man-machine interconnection. In order to meet the requirements of diverse 5G application scenarios, the key performance indicators of 5G are more diversified. It provides users with augmented reality, virtual reality, high-definition video and other more immersive acme business experience, more to solve the people and things, and communication problems, mobile medical, networking, intelligent household, industrial control, environmental monitoring, Internet of things application requirements. Ultimately, 5G will penetrate into all industries and sectors of the economy and society, and become a key new infrastructure to support the digitalization, networking and intelligent transformation of the economy and society.

And also, some of the security issues that are possible in 5G and beyond networks are eavesdropping, unauthorized access, and demolishing integrity. Traditional techniques such as cryptography can be used to provide security services.

The special issue aims to present the state-of-the-art research in utilizing 5G network for security and privacy technologies on the multimedia applications and to offer a forum for experts to publish their recent advances and views on future perspectives in 5G communication networks.

Keywords: 5G; communication network; mobile medical; intelligent household; digitalization; man-machine interconnection

Sub-topics:

The sub-topics to be covered within the issue should be provided:

- Machine Vision in 5G network.
- 5G in Remote control
- Cloud Computing in 5G Radio Access Networks
- 5G in the electric power field
- 5G+smart grid
- 5G+smart room
- Intelligent household in 5G
- AI image analysis and GIS
- 5G Telemedicine systems and their applications

- 5G+ emergency rescue applications
- Machine Learning in 5G Multimedia Communications
- 5G in auto-direction vehicle
- Enabling integrated 5G and networks to deliver intelligent security services
- Public key cryptography-based authentication for 5G network
- 5G-based data transfer techniques for AR

Tentative titles of the articles:

- Application Research of IICA Algorithm in Limited-buffer Scheduling Problem
- Fault Diagnosis Knowledge Reasoning of Switching Network in Smart Substation
- Large scale data center deployment scheme based on enhanced artificial ant colony optimization
- Coupled Power Transfer System for Automated Guided Vehicle
- Metro wheel set size measurement method based on AI image recognition
- VLSI implementation of a multi-mode turbo/LDPC decoder architecture
- Cross-Layer Protocol for Chain-Type Wireless Sensor Network : C-XLM

Schedule:

- Thematic issue submission deadline:
 - Submission dead line: October 10, 2022
 - First Round of Reviews: October 30, 2022
 - First revision deadline: November 30, 2022
 - Second Round of Reviews: December 20, 2022
 - Second revision deadline: January 20, 2023
 - Accept/Reject notification: January 30, 2023

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