ICIRA 2024 Special Session Proposal

Title of the Proposal: AI Robot Technology for Healthcare as a Service

Technical Outline of the Session and Topics:

Outline of the Session: Recently, we have to pay much attention to the aging society all over the world. Especially, healthcare monitoring and support services are very important to enhance Quality of Life (QoL) of elderly people. Furthermore, we should also consider the problem of a severe shortage of professional caregivers. In order to solve the above problems, we have to integrate information and communication technology, sensing and monitoring technology, artificial intelligence technology, and robot technology. Internet of Everything (IoE) including Internet of Data or Digital (IoD), Internet of things (IoT), and Internet of Human (IoH) has known as an advanced fundamental technology to realize Healthcare as a Service (HaaS) based on cyber-physical-human systems. Rehabilitation robots, assistive robots, and communication robots are used to improve human physical and cognitive abilities. Therefore, this special session focuses on artificial intelligence and Robot Technology for Healthcare as a Service, and discuss the current state of arts and future direction on the research field.

Topics of the Session:

- Healthcare as a Service
- Rehabilitation Robots and Assistive Robots
- Musculoskeletal Modeling and Simulation
- Measurement and Estimation of Activities of Daily Living
- Multi-scopic Simulation and Analysis for Healthcare
- Communication Robots for Healthcare
- Physical, Cognitive, and Mental Evaluation Technology
- Motivation and Self-efficacy Estimation for Healthcare
- Distributed Systems for Healthcare Sensing and Monitoring

- *Healthcare Information Support and Visualization Systems*

Contact details of the Session Organizers

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