The form of Introduction of the educational workshops in AREE 2024

Workshop title: An introduction of industrial monitoring systems based on IoT (case study: Smart Street lighting system and battery and power supply monitoring system)
Explanations about the Workshop subject: This workshop is presented in 7 sections: • Part1 : introduction, objectives, basic topics regarding the IoT and the fourth industrial revolution • An overview of successful world businesses in the field of IoT • Application of IoT in smart networks (Smart Grid) • Difference between IoT and Industrial Internet of Things • Part2: More details about the various implementation structures of the IoT • 7-layer architecture and 3-layer architecture of IoT • Part4: Introduction to IIOT protocols and standards • MQTT protocol • CoAP protocol • Part3: The basics of security in the IoT • Security challenges of the IoT • Solutions to enhance security • Part 5: Example 1: Smart street lighting system based on IoT • Part 6: Example 2: Battery and power supply monitoring system based on IoT • Part7: Conclusions
Presenters and their affiliations: S. Majid Shariatzadeh, Eng. Mehdi Monadi, PhD
Date: 14 Feb. 2024
Workshop chair and committee members:
Duration: 4 Hrs.

Other explanations:
In this workshop, in the examples section, a practical example of IoT-based systems is shown and will be explained that how to transfer information from the equipment to the server (and vice versa).