



**CALL FOR PAPERS
SPECIAL SESSION ON**

Intelligent Indoor Localization in Smart and Adaptive Environments

for ICCAD 2026

July 7-9, 2026, Lisbon, Portugal

Session Co-Chairs:

Dr. Somayeh Bazin, Lancaster University, United Kingdom, s.bazin@lancaster.ac.uk

Session description:

This special session deals with the problem of **accurate and reliable indoor localization in complex and dynamic environments**, with a particular emphasis on **smart and adaptive environments enabled by intelligent system design**.

Indoor localization is a key enabler for many **control, automation, and diagnostic applications**, including autonomous systems, industrial automation, smart buildings, and healthcare. However, achieving robust performance indoors remains challenging due to multipath propagation, environmental dynamics, and uncertainty. Recent advances in **smart environments**, adaptive infrastructures, and **learning- and optimization-based methods** provide new opportunities to actively enhance indoor localization performance and system awareness.

This session focuses on **methodological advances and practical solutions** that integrate indoor localization, intelligent environment design, and data-driven decision-making within the broader context of **control, automation, and diagnosis**.

The goal is to provide a **focused forum for researchers and practitioners working on indoor localization and smart environments** to present recent advances, identify open challenges, and discuss future research directions relevant to ICCAD themes.

The session aims to:

- bridge indoor localization techniques with **control and automation frameworks**,
- highlight the role of **smart and adaptive environments** in improving sensing, estimation, and diagnostic capabilities,
- and promote contributions addressing both **theoretical foundations and real-world implementation challenges**.

The topics of interest include, but are not limited to:

- ✓ indoor localization and positioning systems
- ✓ Smart and adaptive environments for indoor localization
- ✓ Localization-assisted control, automation, and diagnosis
- ✓ Optimization-based and learning-based indoor localization methods
- ✓ Robust localization under uncertainty and dynamic indoor conditions

- ✓ Joint sensing, localization, and decision-making frameworks
- ✓ Scalability, complexity, and real-time implementation issues
- ✓ Applications in smart buildings, healthcare, and industrial automation

SUBMISSION

Papers must be submitted electronically : <https://www.iccad-conf.com/submission/>

All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).