



# 8<sup>TH</sup> International Conference on Control, Automation, and Diagnosis



for more information, Check us out at:  
[www.iccad-conf.com](http://www.iccad-conf.com)

May 15-17, 2024  
Paris, France

May 15-17, 2024  
Paris, France

## CALL FOR PAPERS SPECIAL SESSION ON

### Visual Servoing in Robotics: Bridging Perception and Control

for ICCAD'24

May 15-17, 2024, Paris-France

#### Session Co-Chairs:

Pr. Hassen MEKKI, [hassen.mekki@eniso.u-sousse.tn](mailto:hassen.mekki@eniso.u-sousse.tn), University of Sousse, Tunisia

Dr. Khaled KAANICHE, [kkaaniche@ju.edu.sa](mailto:kkaaniche@ju.edu.sa), Jouf University, Saudi Arabia

#### Session description:

Visual servoing in robotics is the integration of computer vision and control systems, resulting in enhanced precision and adaptability. Visual servoing is a technique that enables robots to effectively navigate and manipulate their surroundings through the use of real-time visual feedback. The utilization of a dynamic approach empowers robots to promptly and precisely adapt to alterations in their environment. This is achieved by effectively utilizing data obtained from cameras or other vision sensors. The integration of perception and control plays a crucial role in the overall functioning of visual servoing algorithms. These algorithms rely on the interpretation of visual data to make well-informed decisions, effectively guiding the robot towards its intended objectives. Visual servoing is a critical component in improving the functionalities of robotic systems, spanning across various applications such as industrial automation, autonomous vehicles, and delicate manipulation tasks in research settings. The enhancement of individual's perception and comprehension of the world is not the only benefit provided by this technology. It also empowers them to perform tasks with a higher degree of precision and effectiveness, surpassing the limitations often encountered by conventional approaches. Visual servoing is a technique that enables robots to perceive their environment through visual sensors and utilize this information to navigate and interact with their surroundings. This capability allows robots to mimic human-like intuition and opens up a wide range of possibilities of their applications.

The goal of this session is to explore the most recent advancements, challenges, and innovations in the intersection of computer vision and robotic control.

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

- Visual servo control algorithms.
- Camera calibration and hand-eye coordination.
- Object tracking and pose estimation.
- Visual-based navigation and obstacle avoidance.
- Human-robot interaction with visual feedback.

- Applications in industrial automation, drones and autonomous vehicles.
- Vision-based control in augmented reality and virtual reality.

---

## **SUBMISSION**

Papers must be submitted electronically for peer review by: **December 15, 2023**

<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).