

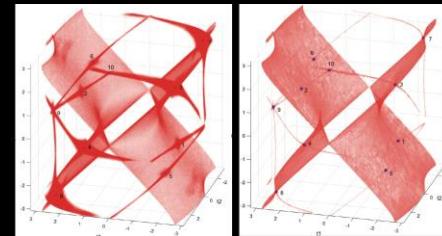
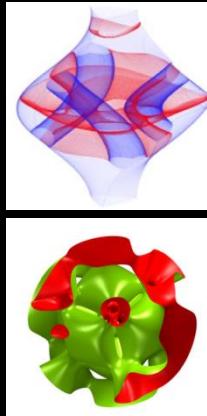


2025

5th Summer School on Singularities of Mechanisms and Robotic Manipulators

<http://www.simero.org/>

The purpose of this school is to introduce key methods, milestone results, and main problems involving singularities of mechanisms and robotic manipulators.



LECTURERS

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TOPICS

Generalized singularity analysis: definition, classification, and interpretation
- Topological and geometric analysis of singularities and mobility with
Screw Theory and Lie Group Theory - Mechanism constraints and
singularities, algebraic formulation - Physical singularities and relevant
numerical methods - Monodromy for solving polynomial equations - Pure
conditions - Clifford algebras for kinematics and geometry - Identification,
classification and trajectory planning of cuspidal robots - Continuum parallel
robots, kinemato-static modeling and singularities.

SIMERO 2025 will take place **September 15-19, 2025** in the city of **Barcelona**, near the famous Las Ramblas walkway, in the Gothic Quarter.

The **registration fee** includes coffee breaks, welcome reception, social event and gala dinner.

IFToMM attendees: 425 € 475 € after July 31

Non-IFToMM attendees: 475 € 525 € after July 31



UNIVERSITAT POLITÈCNICA
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Institut de Robòtica i
Informàtica Industrial



Institut für Robotik



Ajuntament de
Barcelona

Amb el suport
de l'Ajuntament
de Barcelona

Organizing Committee: Andreas Müller, Alba Pérez Gracia, Federico Thomas

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