



FORUM ACUSTICUM EURONOISE 2025

Hot topic 4. Acoustic holograms: drawing with sound

Organizer: Noé Jiménez

About:

Training flow:

Day 1:

- Theory: Wavefront shaping and focused beams (1.5 h)
- Theory: Holograms and the angular spectrum method (1 h)
- Hands-on: Designing your own acoustic holograms (1.5 h)
- Hands-on: Building your own acoustic hologram (1 h)

Day 2:

- Application: Holograms for biomedical ultrasound (1.5 h)
 - Application: Contactless particle trapping with sound (1 h)
 - Hands-on: Validation techniques (1.5 h)
 - Hands-on: Generating your own sound images (1 h)
-

Organizers and Key Trainers:



Noé Jiménez Noé Jiménez is a Senior Scientist at the CSIC since 2024. He develops his work at the Institute of Instrumentation for Molecular Imaging, a joint centre of the Universitat Politècnica de València (UPV) and the CSIC. He is a Telecommunications Engineer, holds a Master's degree in acoustics and a PhD (2015) from the UPV. He has been a Ramón y Cajal senior researcher, Juan de la Cierva - Incorporation, Juan de la Cierva - Training, has worked at the CNRS (France) as a postdoctoral researcher for two years, and has made stays at Columbia University



FORUM ACUSTICUM EURONOISE 2025

(NYC, USA), the University of Salford (UK), and the University of Le Mans (France). He has over 15 years' experience in developing imaging and therapeutic ultrasound systems, wavefront shaping techniques and acoustic metamaterials. His recent research interest ranges from the application of acoustic metamaterials for biomedical ultrasound applications, novel therapeutic ultrasound techniques, acoustic holograms, and acoustic vortices.