



3D Slicer



SOFA

uc3m

# Welcome to the Workshop



BSEL



Cofinanciado por  
la Unión Europea



# The team



## Organizers



Dr. Javier Pascau  
Full Professor



Dr. Alicia Pose Díez de la Lastra  
Postdoctoral researcher



## Instructors



Dr. Mónica Sevilla García  
Assistant Professor



Dr. Lucía Cubero Gutiérrez  
Postdoctoral researcher



Mr. Sergio Carreras Salinas  
PhD. Student

# IGT research areas



- Treatment Planning for Intraoperative Radiation Therapy
- Image Guided Treatments
  - Registration, navigation, Surface scanning...
  - UPM, Queens Univ. (Canada), Children's National (Washington DC), SPL (Boston)...
- 3D Printing
  - UPAM3D HGUGM (R. Pérez-Mañanes y J.A. Calvo)
- Medical Image Processing
  - Deep Learning segmentation in RT, Enphisea detection, Digital Pathology...
  - Toxicity prediction in RT
  - BWH (Boston), Arrate Muñoz (UC3M), Univ. Rennes I...
- Clinical translation of our results
  - Oncologic surgery, maxilofacial, obstetrics, sacral neurostimulation...
  - Several hospitals in Madrid: HGUGM, FJD, CUN, HULaPaz



# Collaborations

Arrate Muñoz  
UC3M



Juan José Vaquero  
UC3M



Rubén Pérez-Mañanes. HGUGM



Jose A. Calvo. HGUGM



Juan de León. HGUGM



Oscar Riquelme. HGUGM



Santiago Ochandiano.  
HGUGM



Santiago Lizarraga. HGUGM



Enrique Ramón. HGUGM



Felipe Calvo. CUN



Inés Rubio. HLaPaz



Damián Gª Olmo. FJD



Esperanza Naredo. FJD



Javier Serrano. FJD



María Jesús Ledesma. UPM



Juan Ruiz Alzola. ULPGC



Raúl San José. BWH  
Boston



Gabor Fichtinger. Queens  
Univ.



Tina Kapur. BWH Boston



Marius Lingurar. Children's  
H. DC



Henar Miguelez. UC3M



Oscar Acosta. U. Rennes I



Tiziana Rancati. INT  
Milan.



Laura Cella. CNR.



Claudio Fiorino. H. San  
Raffaele



Renaud de Crevoisier. C. E.  
Marquis

# Invited speakers



**Dr. Erik Pernod**  
CEO InfinyTech3D,  
France



**Dr. Rafael Palomar**  
Senior Research Scientist  
Oslo University Hospital  
(OUH), Norway



**Dr. Antonio Porras**  
Assistant Professor  
Colorado School of  
Public Health, USA



**Dr. Miguel Marco**  
Associate Professor  
Universidad Carlos III  
de Madrid, Spain

# About the workshop

- 3-day intensive workshop
- 3D Slicer and SOFA framework
- Aimed at
  - Undergraduate students
  - Master's students
  - Early-career researchers
- No prior experience is required



# What's on the agenda?

- Introduction to 3D Slicer and AI-based segmentation
- Fundamentals of biomechanical simulation with SOFA
- Hands-on hackathon and AR/VR integration
- Demos with immersive technology and flash talks from guest institutions

# Workshop: 3D Slicer - SOFA

Dates:

18-20th June 2025

Location:

Campus Puerta de Toledo, UC3M - Room 1.A.03

**DAY 1**

**DAY 2**

**DAY 3**

Introduction to 3D Slicer

Introduction to SOFA

Outreach talks - Applications

9:30 - 10:00	Registration and badge pickup		
10:00 - 10:30	Welcome and Introduction to the workshop	Introduction to SOFA	Invited talk - Colorado School of Public Health
10:30 - 11:00	Introduction to 3D Slicer		Invited talk - Biomechanics group, Universidad Carlos III de Madrid
11:00 - 11:30			Virtual and Augmented Reality
11:30 - 12:00	Coffee break	Coffee break	Coffee break
12:00 - 13:30	Segmentation with AI	SOFA in 3D Slicer	Demo VR and AR
13:30 - 15:00	Lunch	Lunch	
15:00 - 17:00	Design your own module in 3D Slicer	SOFA hackathon	



3D Slicer



SOFA

## Schedule



# Workshop information

- All materials and information related to the workshop are publicly available at:  
[https://github.com/BSEL-UC3M/Workshop\\_3DSlicer-SOFA](https://github.com/BSEL-UC3M/Workshop_3DSlicer-SOFA)
- You will find:
  - 📅 The workshop schedule
  - 📋 A detailed description of the program
  - 👤 Biographical information of the speakers, instructors, and organizers
  - 📄 All presentations given during the event
  - 📁 Data for the practical sessions





# What about you?

Let's start with a quick round of introductions.