


BIOMAT International Doctoral Summer School 2023. Multiscale Methods at the Frontier Between Data and Mathematical Models

◦ [Biomat International Summer School Website](#)

Descripción de la actividad

 The poster for the BioMat International Summer School 2023 features a large stylized 'S' logo with '2023' inside. Text includes 'INTERNATIONAL DOCTORAL SUMMER SCHOOLS', 'UNIVERSIDAD DE GRANADA', 'BioMat International Summer School on Modeling Nature (MNat)', 'June 12-16, 2023', and contact information: 'For specific queries please email: kinetic@ugr.es ', 'Escuela Internacional de Posgrado Universidad de Granada', and 'ugr.es/summerschools'. It also includes an 'OR CODE HERE' box and the 'UNIVERSIDAD DE GRANADA' logo.	<p>The understanding of complex systems in Biology and Health Sciences is one of the main scientific endeavours nowadays. The determination of the chemical interactions that control tissue dynamics is a current hot topic with lots of interesting implications for modern societies, including cancer prognosis and developmental biology, just to name a few. It can be surprising to discover that those mechanical interactions taking place in tissue dynamics can have an important effect on the aforementioned chemical interactions. The proper understanding of such complex phenomena demands a combination of different perspectives on the subject, ranging from physical and mathematical fundamentation to computational simulation and data analysis. We feel that this is the right time to set up a summer school focused on the recent developments in the field.</p> <p>The courses will cover multiscale modeling techniques, biomechanics, deep learning, networks, topological data analysis, numerical simulation and specific applications to tissue dynamics and cancer prognosis. From the point of view of PhD training, a sensible balance between theory and practice will be promoted, while fostering multidisciplinary approaches. Interactions between attendees and speakers will be encouraged on a lively environment and in several social events.</p>
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Dirigido a

Master students with an interest on quantitative modeling techniques and their applications in Biology and Health Sciences. PhD students and early postdocs working on specific topics in Biomathematics or Biophysics. In general, researchers interested in the development of interdisciplinary collaborations connecting Mathematics, Physics, Data Science, Biology and/or Medicine will surely profit from this summer school.

Fecha

- March 23-24
- May 22-26
- June 12-16

Número de plazas ofertadas

60 (might be extended depending on the number of early registrations); at least 24 are reserved for foreign students.

Lugar de celebración

- Universidad de Granada, sala de conferencias Fisymat: March 23-24 and May 22-26
- Centre de Recerca Matemàtica, Bellaterra, Barcelona: June 12-16

Responsable

Juan Soler (Universidad de Granada)

Comité organizador

Fuente: https://escuelaposgrado.ugr.es/doctorado/escuelas/escuelasdeverano/2023/idss_2023/biomat2023_multiscale_methods

- Tomás Alarcón (Centre de Recerca Matemática)
- Juan Calvo (Universidad de Granada)
- David Poyato (Universidad de Granada)
- Isabel Reche (Universidad de Granada)
- Juan Soler (Universidad de Granada)

Grupo/s implicados/profesorado

Grupos implicados:

- FMQ-316 Ecuaciones de Evolución en Derivadas Parciales
- Mathematical and Computational Biology group
- Research Unit MNat
- Máster Fisymat

Profesorado:

- Marino Arroyo (Universitat Politècnica de Catalunya)
- Nicola Bellomo (Universidad de Granada)
- Katie Bentley (Francis Crick Institute & King's College, London)
- Vicent Calvez (Université Claude Bernard Lyon 1)
- Martina Conte (Politecnico di Torino)
- Dagmar Iber (ETH Zurich)
- Jean-François Joanny (Collegue de France, París)
- Ana Paula Millán (Universidad de Granada)
- Giovanni Petri (CENTAI Institute, Italy)
- Bernadette Stolz-Pretzer (EPF Lausanne)
- Xavier Trepas (IBEC Barcelona)
- Alfonso Valencia (Centro Nacional de Supercomputación de Barcelona)

Patrocinadores

- MICINN
- Junta de Andalucía
- European Commission
- Centre de Recerca Matemàtica
- MNat

Universidades de la Alianza Arqus implicadas, en su caso

- Université Claude Bernard (Lyon 1)
- Universidad de Granada