

SCOPE

The Workshop aims to highlight the contribution of engineering and computational methods in advancing biological and health sciences. It does so by bringing together top scientists to present their research in advanced genomics, bioinformatics, biomedical engineering and neuroscience along with short presentations from four of the ARCHER fellows.

The workshop is organized in the context of ARCHERS (<https://archers.iesl.forth.gr/>), a major project implemented by FORTH with the exclusive donation of the Stavros Niarchos Foundation (SNF). Through ARCHERS, over 100 young doctoral students and post-doctoral researchers have been supported over the past four and a half years and have carried out cutting-edge research in the Institutes of FORTH across a broad range of interdisciplinary thematics including preservation of cultural heritage and tackling of societal challenges such as environment, clean energy and health.

WORKSHOP PROGRAM [ALL TIMES ARE IN EASTERN EUROPEAN TIME (UTC+2)]

15:00 – 15:15	Opening Remarks Spiros Anastasiadis, Archers project coordinator Panayiota Poirazi, Iosif Klironomos, Workshop organizers
15:15 – 15:45	Specialization of brain cell types is encoded by specific 3D genome structures Ana Pombo, Deputy Scientific Director, BIMS, MDC, Professor, Humboldt University of Berlin
15:45 – 16:15	Automating Machine Learning for the Life Sciences with the JADBIO platform Ioannis Tsamardinos, Professor, University of Crete, CEO and Founder JADBIO
16:15 – 17:00	Discussion – break
17:00 – 17:30	Electromechanical wave imaging for noninvasive and direct mapping of arrhythmias in 3D Elisa Konofagou, Professor, Columbia University
17:30 – 18:00	Propagating spatiotemporal patterning in motor cortex during movement initiation and execution Nicho Hatsopoulos, Professor, University of Chicago
18:00-18:30	Discussion – break
18:30 – 19:30	Presentations by ARCHERS Fellows Tinkering a distorted α/β barrel <i>Alexis Molfetas, PhD student, Kokkinidis Lab, IMBB-FORTH,</i>

Mosquito malaria vectors cloak their legs to resist insecticides

Mary Kefi, PhD student, Vontas Lab, IMBB-FORTH,

Brain-like Energy Efficient Image Coding (BRIEFING)

Froso Doutsis, postdoctoral fellow, Signal Processing Lab Lab, ICS-FORTH

**Breast lesion quantification and characterization from Contrast Enhanced
Ultrasound Imaging data**

*Giorgos Ioannidis, postdoctoral fellow, Computational Bio-Medicine Laboratory
(CBML), ICS-FORTH*

19:30 – 20:30

Discussion – break