Call for Selection for the award of no. 2 research contracts pursuant to art. 22 of Law no. 240/2010, Scientific-Disciplinary Sector CEAR-06/A – Mechanics of Solids and Structures, at the facilities of the Research Unit of Theoretical and Computational Biomechanics and of Departmental Faculty of Engineering of the Campus Bio-Medico University of Rome.

Competition code: CDR/04_25

Departmental Faculty/Research Unit of affiliation	Departmental Faculty of Engineering/ Theoretical and Computational Biomechanics
Place of activity	Campus Bio-Medical University of Rome Via Giacomo Dina, 36 – Roma Via Alvaro del Portillo, 21 – Roma
Scientific Disciplinary Group	08/CEAR-06 - Mechanics of Solids and Structures
Scientific-Disciplinary Sector	CEAR-06/A – Mechanics of Solids and Structures
Profile of the researcher to be recruited	PhD with international research experience and solid skills in theoretical-computational modeling and data analysis of electrophysiology of active biological tissues, with particular reference to cardiac tissue and gastrointestinal tissue. It is necessary that the candidate has carried out a research period abroad during the PhD of at least two months.
Project title	Theoretical and computational modeling gastrointestinal wall contractility.
Description of the research project	The research program aims at formulating and implementing advanced constitutive models of gastrointestinal wall motility. The development of multi-field theories capable of predicting the electromechanical behavior of the organ is expected starting from the spatiotemporal electrophysiological dynamics. Specific study objectives will concern: - development of open source codes based on FEM approaches - development of contact theories in finite elasticity for microstructured and electro-active biological tissues - development of numerical simulations of gastrointestinal motility - temperature-dependent optical mapping data analysis
Scientific Supervisor	Prof. Alessio Gizzi
Maximum number of publications	12
Language knowledge and skills	Knowledge of the English language
Date, time and place of interview	**September 24, 2025, 11:00 a.m.** Remote candidates on **Microsoft** platform

Funding body	European Research Council
Funding programme/call	ERC Consolidator
Grant agreement number	101170592
CUP	C83C25000140006

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