

# Call for Papers

## AlgoNomy Conference

**Algorithmic Regulation Before Medical Liability: Advancing Doctor-Patient Autonomy in AI-Driven Healthcare**

As artificial intelligence (AI) reshapes healthcare services, fundamental questions arise about preserving the delicate balance between technological advancement and human agency in medical decision-making. The AlgoNomy Conference invites researchers to explore the emerging phenomenon of “digital paternalism” in healthcare—where algorithmic decisions seem on the verge of revolutionising and replacing the traditional patient-physician collaborative process.

### Conference Theme

The conference focuses on the challenges posed by AI-driven healthcare systems that may inadvertently constrain both patients’ self-determination and physicians’ professional autonomy. Indeed, many AI systems offer optimal clinical solutions based on patient data, yet these solutions often lack transparency, contextual adaptability, and most importantly the ability to accommodate individual patient preferences. These dynamics introduce a new form of asymmetry in healthcare, which may be labeled digital paternalism, where AI assumes a central role overshadowing both the patient and the physician. In fact, patients may be left without meaningful ways to influence or contest AI-recommended treatments, which typically reflect a purely objective understanding of health as the absence of disease. Physicians, on the other hand, are constrained in their ability to deviate from or challenge algorithmic outputs, losing critical aspects of clinical autonomy, risking de-skilling and automation bias. Under these circumstances, there is a real risk of AI acting as a ‘third wheel’ between patients and physicians, leading to organizational, communicational and socio-relational issues referred to as decision paralysis, ‘confusion of the tongues’ and role ambiguity, respectively. Against this backdrop, we seek contributions that examine how to ensure AI systems enhance rather than diminish the therapeutic alliance, while addressing crucial questions of medical liability and algorithmic accountability. Most relevant ideas to the objectives of this project (initially to be submitted in the form of a structured abstract) will be selected by the AlgoNomy Scientific Committee.

## Research Topics

The AlgoNomy Conference invites researchers to explore innovative interdisciplinary solutions to safeguard the autonomy of both patients and healthcare professionals. We aim to foster a multi-disciplinary discussion on digital paternalism in medicine by integrating perspectives from law, medicine, and computer science. The ultimate goal is to reconcile the technological development and clinical implementation of AI-driven healthcare systems with the fundamental legal, ethical and professional values underpinning modern medicine.

We strongly encourage interdisciplinary and co-authored contributions that integrate insights from multiple disciplines to provide innovative and practical solutions.

Submissions should address one or more of the following focus areas:

1. Technical Design and Validation Development of transparent, explainable, and validatable AI methodologies for medical applications, with emphasis on autonomy-preserving features and robust bias detection standards;
2. Patient-Physician-AI Interaction Analysis of the impact of AI systems on clinical decision-making, including the integration of patient preferences and preservation of physician discretion in AI-driven healthcare environments.
3. Legal Framework and liability allocation in AI-driven medicine, including international dimensions, contractual relationships between healthcare and AI providers, and relevant intellectual property and privacy rights.
4. Healthcare Stakeholder Empowerment Development and assessment of educational initiatives to improve AI literacy among healthcare personnel, patients, and caregivers, with focus on informed decision-making and autonomy preservation.

## Submission Categories

We are pleased to announce this Call for Papers, which will select the most original and impactful contributions addressing the themes of digital paternalism in AI-driven healthcare.

Submissions are invited from two categories of contributors:

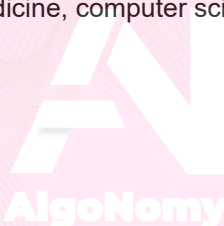
1. Doctoral Students in law, medicine, and computer science;
2. Senior Researchers in law, medicine, and computer science.

## Submission Requirements

1. Structured Abstract in English (containing, when appropriate, the following sections: Background or Objective; Methods; Results; Conclusion) (500 words)
2. Author short CV, ORCID ID and affiliation
3. Keywords from at least two of the three core disciplines (law, medicine, computer science)

## Important Dates

1. Abstract Submission Deadline: March 10 2025
2. Notification of Acceptance: April 10 2025
3. Conference Presentation: May 11 2025 (Pisa Festival of Robotics)
4. Full paper submission (for selected authors, see "Publication"): September



## Publication

Authors of exceptional contributions will be invited to submit a full-length paper (max. 20 pages, formatted according to guidelines that will be provided) for potential publication in a special issue of a prestigious international multidisciplinary journal, with an Impact Factor exceeding 3:

1. up to 6 papers from the Doctoral Track;
2. up to 4 papers from the Senior Researchers Track;

## Additional Opportunities

The best 10 selected doctoral abstract submissions will be invited to participate in a dedicated Summer Doctoral Workshop. This initiative will be held at King's College London, and aims to offer mentorship and guidance to the selected doctoral students by members of the Scientific Committee, to further develop the ideas presented at the AlgoNomy Conference.

## Submission Process

Submit structured abstracts to [algonomy2025@gmail.com](mailto:algonomy2025@gmail.com) in doc/docx format.

## Contact Information

For inquiries: [nicolo.amore@unipi.it](mailto:nicolo.amore@unipi.it)

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## About AlgoNomy

AlgoNomy is an interdisciplinary research initiative co-financed by Circle-U alliance, that brings together experts from law, medicine, and computer science to address the challenges of digital paternalism in healthcare while promoting AI systems that respect patient and physician autonomy. Participating universities: **Università di Pisa, King's College London, University of Belgrade, Universität Wien, Université Paris Cité, Humboldt-Universität zu Berlin**

Find out more at <https://algonomy.jus.unipi.it>

