

Digital Systems for Humans Graduate School

**2023 PhD Subject Proposition**

Proposition de Sujet de Thèse 2023

**The Acceptance of Artificially Intelligent Technologies in the Medical Field**

**Doctoral School:** Doctoral School in Law, Political Science, Economics and Management (ED DESPEG)

**Thesis supervisor:** Zakaria BABUTSIDZE, GREDEG, Université Côte d'Azur, zakaria.babutsidze@skema.edu

**Host laboratory:** CNRS GREDEG (UMR 7321)

**Subject description:**

Medical patients are prone to resist the use of AI-based technologies in healthcare (Longoni et al. 2019). Research shows that patients are more suspicious of treatments and diagnoses delivered by AI compared to humans. Humans prefer to deal more with human health-care providers compared to automated machines since they trust humans more and believe they have unique needs which AI cannot accurately understand. However, this conclusion holds up to scrutiny only under the condition when historical performance of both human and AI health-providers is equal (Pezzo and Beckstead 2020). Under the circumstances when AI is perceived to be more accurate than human health-care provider, patients do prefer more accurate – AI health-care providers. At the same time, parallel research demonstrates that the resistance to medical AI is due to inherent difficulty patients have understanding the reasoning behind decisions made by AI systems (Cadario et al. 2021). Patients often display large gaps in understanding of human, as well as AI decision-making, leading them to mistakenly believe humans possess more insight when making medical decisions. Thus, patients tend to feel more comfortable working with human healthcare providers rather than AI ones.

This project will investigate how the interaction with artificially AI-based technologies affects patients' decision-making process. It will particularly scrutinize the role of trust and perceived risk in patients' resistance to medical AI. The role of moral emotions in the process of generating and interpreting trust and risk perceptions will constitute the core of the research agenda. Conditions under which resistance to medical AI is easier to overcome will be sought after. In this respect the present work will pave the way to the efficient design of educational and informational campaigns targeted to increasing social welfare by accelerating acceptance of high-performance medical AI.

## References

Cadario, R., Longoni, C., and Morewedge, C. K. (2021). Understanding, explaining, and utilizing medical artificial intelligence. *Nature Human Behaviour*, 5(12), 1636–1642.

Longoni, C., Bonezzi, A. and Morewedge, C.K. (2019) “Resistance to medical artificial intelligence,” *Journal of Consumer Research*, 46(4), pp. 629–650.

Pezzo, M. V., and Beckstead, J. W. (2020). Patients prefer artificial intelligence to a human provider, provided the AI is better than the human: A commentary on Longoni, Bonezzi and Morewedge (2019). *Judgment and Decision Making*, 15(3), 443–445.

[Candidater / Apply](#)