

Special Issue

Explainable AI in Medical Imaging: Toward Transparent and Trustworthy Diagnostic Systems

Message from the Guest Editors

Artificial intelligence (AI) can be readily integrated into medical imaging to vastly improve diagnostics; however, the black box nature of many AI models, particularly deep learning systems, hinders clinical adoption. The field of explainable AI (xAI) represents an important area of both research and application that offers routes toward transparency, interpretability, and trust in automated decision-making systems. This Special Issue will cover new methods, frameworks, and applications that improve the interpretability of AI systems in medical imaging. Contributions that focus on theoretical foundations, algorithmic developments, evaluation strategies, and clinical validations of xAI techniques are welcomed. We are particularly interested in submissions which achieve a compromise of high performance along with important insights for clinicians, radiologists, and medical professionals.

Guest Editors

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Deadline for manuscript submissions

closed (20 November 2025)



Applied Sciences

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CiteScore 5.5



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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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