

## Special Issue

# Physiological Sound Processing for Medical Diagnostics: Innovations, Challenges, and Applications

### Message from the Guest Editors

The scope of this Special Issue includes, but is not limited to, the following topics:

- Heart Sounds: AI-driven auscultation techniques for detecting arrhythmias, murmurs, and valvular diseases.
- Lung Sounds: Advanced signal processing methods for diagnosing asthma, COPD, pneumonia, and other respiratory conditions.
- Cough Analysis: Automated tools for differentiating between viral, bacterial, and chronic respiratory diseases, including tuberculosis and COVID-19.
- Sleep Apnea and Snoring: Acoustic analysis for detecting and characterizing sleep-related breathing disorders.
- Wearable Devices: The development and validation of mobile and wearable technologies for capturing and processing physiological sounds.
- Explainability and Ethical AI: Designing explainable AI models for sound diagnostics and addressing ethical challenges in clinical deployment.
- Standardization and Clinical Validation: Efforts to standardize datasets, protocols, and clinical trials for sound-based diagnostics.

### Guest Editors

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### Deadline for manuscript submissions

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## Diagnostics

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## About the Journal

### Message from the Editor-in-Chief

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