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System Applications and Methods Based on Sound Processing: AI Based and Conventional Approaches

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Message from the Guest Editors

Sound is an essential component of nature. Any activity that involves the mediation of mechanical energy produces sounds. The sound characteristics determine the operating state of the system in question. When an abnormality occurs, the produced sound is modulated accordingly. This differentiation can be used to diagnose possible damages. This approach for diagnosis is well known and quite reliable and corresponding electronic systems have been developed for a multitude of applications. The exploitation of sounds is achieved either by using signal processing algorithms or by using artificial intelligence.

The topics of the Special Issue include but are not limited to:
Methods and systems using sound signals for:

- Leak detection and localization in pipelines
- Defect detection in materials and machines
- Classification of ground vehicles
- Applications of bioacoustics in animal ecology
- Identification in music
- Machine learning and deep learning approaches based on acoustic signals
- Acoustic signal applications on embedded systems
- Hardware for processing acoustic signals

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Message from the Editor-in-Chief

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