Special Issue

Intelligent Structural Fire Safety Monitoring: AIoT, Digital Twins, and Advanced Sensing Technologies

Message from the Guest Editors

Fire safety is a growing challenge, worsened by urbanization and climate change. Traditional methods often fail due to delayed alerts and high false alarms. New technologies like AIoT, digital twins, and advanced sensing offer solutions. AIoT enables real-time decision-making via sensor networks. Digital twins simulate fire spread and structural integrity. Advanced sensors capture crucial parameters like temperature and toxic gases.

We invite submissions to the Special Issue of Fire, titled "Intelligent Structural Fire Safety Monitoring: AIoT, Digital Twins, and Advanced Sensing Technologies." This issue compiles recent advances in applying these technologies for fire safety monitoring and alerting in various infrastructures.

Topics include:

- Intelligent monitoring and alerting.
- AI/ML/DL applications.
- Database preparation and validation.
- Integration of AI and IoT.
- Digital twin architecture.
- Advanced sensor networks.
- Structural safety during fire events.

Guest Editors

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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

Fire is an international open-access journal about the science, policy, and technology of fires and how they interact with communities and the environment. *Fire* seeks to provide a forum to help the fire science community convey how we can live with fire in a changing world. *Fire* seeks submissions from interdisciplinary studies that take a pyrogeography perspective of fires occurring in natural, cultural, and industrial landscapes and how they interact with communities in the science-policy interface. *Fire*'s Editorial Board are widely recognized international leaders. The journal emphasizes quality and innovation and has a rigorous peer-review process. I strongly recommend *Fire* for the rapid publication of your innovative research publications and case studies.

Editor-in-Chief

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