

## Special Issue

# Recent Advances and Future Prospects of Machine Learning in Predictive Modeling of Atmospheric Sciences

### Message from the Guest Editors

ML algorithms have been implemented successfully in predictive modeling applications of atmospheric sciences in past research. The present issue invites researchers to submit their novel and unpublished research related to the current advancement of ML in predictive modeling research and applications of atmospheric sciences. The present issue will cover a broad range of topics related to applications of ML approaches in the analysis of atmospheric data with the following subtopics:

- Climate change modeling using machine learning
- Machine learning in meteorology and hydrology applications
- Role of machine learning in renewable energy
- Analysis of data of atmospheric events
- Big data in atmospheric sciences and its analysis
- Transfer and deep learning in predictive modeling in atmospheric sciences
- Intelligent forecasting in atmospheric sciences
- Reinforcement and ensemble learning uses in atmospheric sciences
- Predictive modeling in atmospheric sciences using evolutionary approaches
- Hybrid ML approaches in efficient modeling of events of atmospheric sciences
- Other advanced ML approaches and tools in atmospheric data modeling and applications.

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### Guest Editors

Dr. Sunil Kumar Jha

Dr. Xiaorui Zhang

Dr. Limao Zhang

Dr. Nilesh Patel

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### Deadline for manuscript submissions

closed (30 September 2021)



## Atmosphere

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## About the Journal

### Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

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### Editor-in-Chief

Dr. Daniele Contini

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