Special Issue

Atmospheric Turbulence Processes and Wildland Fires

Message from the Guest Editor

Accurately predicting wildland fire behavior and the dispersion of smoke from wildland fires are two important issues that confront fire- and air-quality managers in their efforts to minimize the potential adverse impacts of wildland fires. The purpose of this Special Issue is to highlight recent research on atmospheric turbulence regimes and processes in wildland fire environments through theoretical investigations, field measurements, and/or numerical modeling. Manuscripts addressing any aspect of atmospheric turbulence as it relates to wildland fires are welcome, including but not limited to the following: * The effects of complex terrain and forest vegetation on fire-induced turbulence;
* Turbulence effects on smoke-plume dynamics;
* Correlations of fire behavior with the spatial and temporal variability of turbulence in the fire environment;
* Recent advances in turbulence parameterizations for operational fire behavior and smoke dispersion systems;
* Turbulent heat and momentum flux variability in the fire environment;

Guest Editor

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Deadline for manuscript submissions

closed (10 November 2020)

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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!

Editor-in-Chief

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