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Machine Learning for Solar Radiation Estimation

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Deadline for manuscript submissions:
closed (5 February 2021)

Message from the Guest Editor

Dear Colleagues,

The interest in solar radiation prediction has increased greatly in recent times as a direct consequence of the exponential grow in the use of renewable energies. In this regard, a large number of different techniques have been developed to predict solar (global, direct, and/or diffuse) radiation: empirical models, numerical weather models, satellite-based schemes, etc. Among all of them, machine learning techniques have proven their capacities as a reliable and cost-efficient alternative to the more traditional approaches, showing their high capacity for obtaining robust results in solar radiation estimation problems using different sets of input variables.

This Special Issue deals with machine learning methods in solar radiation prediction, at any time horizon and in any part of the world. Articles discussing novel machine learning-based predictive approaches, original works using innovative input data as predictive variables, new algorithms or revisited algorithms providing good solutions to difficult problems in solar radiation estimation are welcome.

Dr. Carlos Casanova-Mateo
Guest Editor

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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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