Message from the Guest Editors

Weather directly affects every phase of flight and type of aviation operation, ranging from air carriers to general aviation. Weather hazards and wind patterns directly affect the safety and economic efficiency of air carriers, including both airfield and en-route operations. GA shows a poor safety record (>60 fold higher accident rate than air carriers), with weather-related mishaps constituting the largest fraction of fatal accidents. Notably, 72% of crashes involving unintended flight from visual to instrument meteorological conditions are fatal. Importantly, the rate of GA weather-related fatal accidents shows little evidence of abating. This lack of progress provides an opportunity for improving aviation weather forecast and analysis products, as well as better understanding the human factors related to proper interpretation/usage. This special issue seeks papers encompassing all aspects of aviation meteorology, from advancements in aviation forecasting to improved product design and usage. We also welcome papers looking forward and investigating the potential impacts of climate change on aviation operations.