Computers & Graphics Special Section
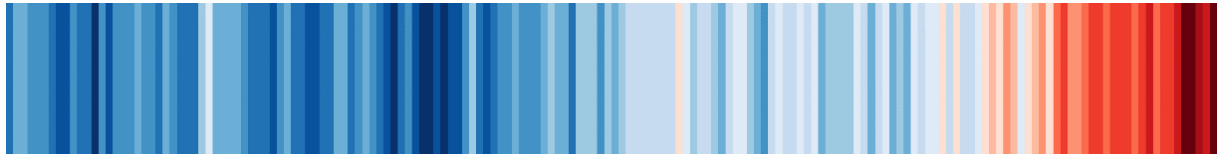# Visualization in Environmental Sciences

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Warming Stripes for the entire globe, showing average temperatures for the years 1850-2019, as an example for an expressive method of visualizing global warming. (Source: Ed Hawkins, University of Reading, https://showyourstripes.info/)

Scope and Context

Research in environmental sciences is becoming increasingly important, as we are faced with problems concerning climate change, water scarcity, environmental pollution, or biodiversity changes – topics that affect the entire population of the globe, from small to large scales. With the growing significance of research into this direction, both size and complexity of the underlying data are becoming larger and larger. At the same time, datasets are highly heterogeneous, with differences in structure, spatio-temporal resolution, scale, quality, and uncertainty.

For researchers, visualization is a vital component in the process of exploring and understanding phenomena described by such complex data. Visualization can also support practitioners and stakeholders to make informed decisions, or help to inform the general public about environmental topics. However, due to the amount and the heterogeneous nature of the data, target-oriented visualization remains a complex task that requires state-of-the-art techniques to convey complex information in a comprehensible manner.

Topics and Themes

This special issue invites contributions addressing the challenge of integrating and visualizing environmental data for research, operations, or outreach. Our goal is to raise awareness to the importance of visualization for the environmental sciences and to establish a forum for interdisciplinary discussions. Application areas include, but are not limited to

- Climate research, Meteorology
- Atmosphere modelling
- Geology, geography, geophysics
- Soil and groundwater research

- Energy resources
- Waste management
- Land use research
- Biodiversity and ecosystem services

Articles can be submitted starting February 1, 2021, but should be submitted no later than July 30, 2021.

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