Special Issue

The Smart Carbon Footprint Revolution—Examining Interdisciplinary Progress

Message from the Guest Editors

In this Special Issue, original research articles and reviews are welcome. Research areas may include (but not limited to) the following:

- AI and data science for carbon intelligence:
  - NLP/sentiment analysis of social media to predict emission trends;
  - Agent-based simulations or graph neural networks (GNNs) to quantify hidden cascading effects in urban and industrial systems.
- Computational infrastructure for low-carbon systems:
  - Malmquist index-based benchmarking of data center energy productivity;
  - Algorithms to minimize AI/cloud computing footprints (e.g., sparse training);
- Communication technologies for emission mitigation:
  - Applications of remote sensing and IoT for high-resolution emission mapping and real-time monitoring;
  - Novel network protocols that prioritize low-latency climate monitoring data;
  - Digital twin cities with 5G/6G-enabled traffic/energy flow simulations.
- Policy informatics and human-centric computing:
  - Causal inference models to quantify ICT-driven vs. policy-driven carbon reductions;
  - Generative AI for synthesizing cross-disciplinary climate policy scenarios;
  - VR/AR interfaces to visualize personal carbon footprints via mobile apps;

We look forward to receiving your contributions.

Guest Editors

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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