Climate Change and Computing: Facts, Perspectives and an Open Discussion

Antoine Amarilli
Télécom Paris
Palaiseau, France
a3nm@a3nm.net

Christophe Claramunt
Naval Academy Research Institute
Brest, France
christophe.claramunt@ecole-navale.fr

Demetrios Zeinalipour-Yazti
University of Cyprus
Nicosia, Cyprus
dzeina@ucy.ac.cy

ABSTRACT

The rise of temperatures on Earth have alerted communities around the globe to devise immediate solutions to help curb the severe effects of Climate Change, which is attributed to greenhouse gas emissions caused by human activities. Even though the Computing field is a cause of emissions in its own right, it also has the potential to increase the efficiency of human workflows in all sectors, such as transportation, buildings, energy & heat production, industry, agriculture, and livestock, etc. In this panel discussion, we start out with a general overview of terminology, factors, metrics, and objectives related to climate change, and then survey: (i) Green Conferences; (ii) Green Mobility; (iii) Green Cities and (iv) Green Smart Spaces. The participants are expected to bring into the discussion their own perspectives from the academic, governmental, and industrial sector to report on how they perceive the future of the Computing Field in a future shaped by Climate Change, and how we can all help achieve the goals of the Paris Agreement.

CCS CONCEPTS

• **Applied computing**; • **Information systems**;

ACM Reference Format:
Antoine Amarilli, Christophe Claramunt, and Demetrios Zeinalipour-Yazti. 2022. Climate Change and Computing: Facts, Perspectives and an Open Discussion. In *The 16th ACM International Conference on Distributed and Event-based Systems (DEBS '22), June 27–30, 2022, Copenhagen, Denmark.* ACM, New York, NY, USA, 1 page. https://doi.org/10.1145/3524860.3544831

PANEL MODERATORS

Antoine Amarilli

He is Associate Professor in Computer Science at Télécom Paris in the DIG team. His research topics focus on data management and theoretical computer science. He is a maintainer of the TCS4F initiative on the climate crisis and of the 'No free view? No review!' manifesto on open access to scientific publications. More: `https://a3nm.net/`

Christophe Claramunt

He is a professor in computer science at the French Naval Academy. His research is oriented towards theoretical, pluri-disciplinary and practical aspects of geographical information science (GIS). His main research interests are oriented to environmental, maritime and and urban GISs. He has long contributed to the development of computing and GIS systems in developping countries and actively orientates his research on the development of green and environmental friendly computing applications. More: `http://christophe.claramunt.free.fr/`

Demetrios Zeinalipour-Yazti

He is an Associate Professor of Computer Science at the University of Cyprus. His primary research interests include Data Management in Computer Systems and Networks. He actively engages in activities to help curbing the climate crisis, including research and practice on green planning systems for self-consumption of renewable energy and development of virtual conference and tourism platforms to tackle the climate, COVID-19, energy crises. More: `https://www.cs.ucy.ac.cy/~dzeina/`

DEBS '22, June 27–30, 2022, Copenhagen, Denmark

ACM ISBN 978-1-4503-9308-9/22/06.
https://doi.org/10.1145/3524860.3544831