



IEEE 4th Global Power, Energy and Communication Conference

Cappadocia/TURKEY

June 14-17, 2022

Special Session on **5G/6G Applications and Enabling Technologies to Realise the Net-zero Carbon Target**

For years, the fight against climate change has been a huge task, and the focus has now shifted to meeting the 2050 net-zero carbon target. To achieve net-zero emissions, the amount of greenhouse gas removed from the atmosphere must be equal to the amount produced/released. As a result, the reliance on newly emerged disruptive mobile and wireless technologies will be indispensable to achieve the aforementioned target. Although 5G is still being deployed, and attempts are being made to persuade policymakers to speed up deployment and adoption, researchers have already begun to envisage how the 6th Generation of mobile networks (6G) can enhance the benefits of 5G. Thereby, this special session will call on innovative contributions devoted to principles, design, modelling, applications and analysis of the potential of 5G/6G technologies in enabling sustainability and help achieve the net-zero carbon target.

Topics of interest include, but are not limited to:

- **5G/6G-enabled use cases and applications.**
- **The role of 5G/6G mobile communication networks in enabling sustainability.**
- **Utilisation of 5G/6G networks for energy harvesting.**
- **Integrated Satellite and Terrestrial Networks (ISTN).**
- **Energy-Efficient Terahertz transmission.**
- **Long distance wireless power transfer.**
- **UAV-based 5G/6G communications for Net-Zero targets.**
- **Novel signal processing techniques for sustainable 5G/6G networks.**
- **Role of AI and machine learning in sustaining mobile networks.**
- **IoT-enabled fine-grained energy monitoring supported by 5G/6G**
- **Energy-efficient multiple access techniques.**
- **Reconfigurable intelligent surfaces for green communications.**
- **Energy-efficient channel estimation techniques.**
- **Network privacy-preserving mechanisms with enhanced energy efficiency.**
- **Energy-efficient network slicing mechanisms.**
- **Energy-efficient mobile edge computing approaches.**

Organizer(s):

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Deadlines of the special session:

Full paper submission (maximum 6 pages):	April 25th, 2022
Notification of acceptance:	May 05th, 2022
Final submissions due:	May 15th, 2022

All the instructions for paper submission are included at the conference website. <https://gpecom.org/2022/guidelines>