

1st International Workshop on Network Energy Efficiency in the Softwarization Era (GreenNet 2022)

Workshop co-located with the
IEEE International Conference on Network Softwarization (NetSoft 2022)
Milan, Italy, 27 June–1 July 2022

Call for Papers

The convergence of fixed and mobile networks toward softwarized programmable networking platforms based on functionalities implemented for the most part by Virtual Entities (VEs) running on a general-purpose hardware infrastructure is posing new challenges to the designer of control strategies that aim at optimizing the trade-off between performance and power consumption. In such environment, attributing the power consumed by the hardware to specific VEs becomes much more difficult than in networking architectures where the same functionalities are performed by dedicated equipment (e.g., routers or L2 switches). The strong integration between the mobile and fixed network segment, already present in 5G and further strengthened in 6G is going to increase the volume of traffic and applications' heterogeneity, along with the number of users, making network energy efficiency a full-fledged Key Performance Indicator (KPI) to be coped with.

The aim of the Workshop is to explore some of the issues that this evolution poses on finding suitable traffic and power models, as well as management and control strategies, along with Application Programming Interfaces (APIs) to be used for the lifecycle management and optimization of Virtual Network Functions (VNFs) and the creation and dynamic reconfiguration of network slices, to match as closely as possible the desired balance between sustainability in terms of energy efficiency and performance.

We solicit original papers on the following (and related) topics

- Analytical models of network power consumption
- Traffic modelling for performance and power representation
- Management and control mechanisms for the dynamic optimization of the trade-off between power and performance
- AI/ML techniques for power and performance management in virtualized environments
- AI/ML in network softwarization for slicing energy efficiency, fog/cloud MEC virtualization, self-x technologies, adaptation, automation, and zero-touch
- APIs for power management interfaces
- Architectural solutions toward network sustainability
- Power-aware network slicing
- Wired and wireless energy efficiency
- Energy-saving internet protocols
- Energy efficiency in the fog/MEC/cloud continuum
- Energy efficient internetworking of mobile backhaul/core and remote data centers
- Energy efficient 3D networks

Authors are invited to submit original contributions (written in English) in PDF format. Only original papers not published or submitted for publication elsewhere will be considered for the workshop.

Only PDF files will be accepted for the review process and all manuscripts must be electronically submitted through EDAS: <https://www.edas.info/newPaper.php?c=29269>

Important Dates

- Paper Submission: ~~February 28, 2022~~ March 21, 2022 (Extended, Firm)
- Notification of Acceptance: April 21, 2022
- Camera ready: May 5, 2022
- Workshop date: June 27, 2022 or July 1, 2022

Workshop Organizers and Co-Chairs:

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