

Special Session on

**“Wireless and In-Motion Charging Methods of on-board
batteries in electric mobility applications”**

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Call for Papers

Electric vehicles, such as passenger cars or public transport buses, are typically destined for stationary charging applications. Examples of this are overnight depot or home charging, or opportunity charging during the day.

However, such charging strategies require relatively high charging powers, an allocated charging session during the operational schedule, and a relatively large battery size. The high charging powers and battery SOC swings in these operations have a significant, detrimental effect on the battery lifetime. Additionally, solutions such as depot charging require investments in real estate and complex logistics.

This special session aims to focus on two established non-stationary battery-charging methods, namely wireless charging and the in-motion-charging of trolleybuses. These solutions promise a reduction in battery size, lower charging power due to the extended charging time, and longer lifetime of the batteries with reduced depth of discharge and charging c-rates. However, more research is still ongoing, and invited in this session, on the power electronics, system design, and optimal charging powers of these solutions.

Submissions Procedure:

All the instructions for paper submission are given at the conference website:
<https://taltech.ee/en/PEMC2026/paper-submission>

Topics of interest include but are not limited to

1	Wireless Charging of electric vehicles
2	Dynamic Wireless Charging
3	In-Motion-Charging of trolleybuses
4	Hybrid charging strategies for trolleybuses
5	Optimal battery charging of electric vehicles
6	Charging infrastructure design of dynamic and in-motion-charging fleets
7	Power electronics for wireless and in-motion battery charging