



Announcement of Joint Session on “Corrosion issues of electric vehicles and e-mobility systems”

Electric mobility is a strong evolving trend in the automotive industry that offers increasing growth prospects for hybrid, electrical and fuel cell vehicles. Electrification of the vehicles and e-mobile systems suffer from special corrosion issues related to the electronics parts, electrical systems but also issues related to durability of different designs of battery casing or new generations of fuel cells systems. Although, some level of electronics is always part of an automotive, and therefore suffer from humidity related reliability issues due to corrosion, electrification brings new corrosion challenges due to the higher power, and associated power electronics and control systems.

Additionally, electrical parts, battery components can also undergo corrosion under external exposure conditions. As an example, the working principle of a Fuel cell is under strong corrosion environment since the materials selected for the Fuel cell need to be resistant to concentrated H_2SO_4 environments. Efficiency of control systems including power management can be compromised due to humidity effects causing stray currents, loss of power from the battery, and failure due to corrosion.

This joint session focus on bringing together this interdisciplinary area as a common platform to discuss these issues. Joint session will focus on corrosion issues of electric vehicles and e-mobility systems, specifically covering:

- Corrosion reliability issues of electronic control systems and other devices
- Designed solutions to meet anti-corrosion requirements of battery casing, battery components (e.g. how to secure high voltage battery systems from corrosion while also ensuring safety integrity of this component in the car)
- Corrosion issues and new developments in Fuel cell systems (materials for bipolar plates, corrosion resistive coatings for Fuel cell applications...)
- Corrosion issues related to electrical parts such as cables, connectors etc.

Please submit your abstract online via www.eurocorr.org before January 19, 2021.

Looking forward to your contribution and participation in EUROCORR 2020 “Materials science and advanced technologies for better corrosion protection” on September 19-23, 2021, in Budapest, Hungary.

Organized jointly by:

Elizabeth Szala, Chair WP17: Automotive corrosion

Rajan Ambat, Chair WP23: Corrosion reliability of electronics

Expected duration: 1/2 day

Expected audience: 30-40 attendees