

SS@AQTR2026

Title: Bridging Research and Industry in Hydrogen Technologies

Organizers:

Petru Dobra, Technical University of Cluj-Napoca, Technical University of Cluj-Napoca, Faculty of Automation and Computer Science, Cluj-Napoca, Romania

Dorin Petreus, Technical University of Cluj-Napoca, Faculty of Electronics, Telecommunications and Information Technology, Cluj-Napoca, Romania

Contact: dobra@aut.utcluj.ro

Motivation and Relevance:

The transition toward a climate-neutral, resilient, and competitive energy system places hydrogen and advanced energy technologies at the core of future industrial and societal development. Achieving this transition requires not only technological breakthroughs, but also effective collaboration between academia and industry, capable of accelerating innovation from fundamental research to large-scale deployment.

Academic institutions play a critical role in advancing scientific knowledge, materials science, system modeling, and process optimization for hydrogen technologies, while industry provides market insight, engineering scale-up, operational validation, and commercialization pathways. However, fragmentation between these two spheres often slows innovation, limits technology transfer, and reduces the impact of publicly funded research.

By highlighting best practices, successful case studies, and future collaboration models, this session contributes to building a coherent hydrogen innovation ecosystem, capable of supporting sustainable economic growth, industrial transformation, and the achievement of national and European decarbonization objectives.

This session is organized within the framework of the Romanian Hydrogen and New Energy Technologies Hub (project [RO-HYDROHUB](#), MySMIS number 351358).

Proposed titles

1. Active Disturbance Rejection Control opportunity in DC micro-grids (P. Dobra)
2. Mathematical and simulation model of a grid connected fuel cell system (D. Petreus)