A SERIES OF VOICES SHAPING SUSTAINABLE CHANGE

Meet the STEP-CHANGErs

Guido Carlo Masotti: **Development of a techno-economic methodology for the analysis of flexible nuclear hybrid energy systems**
Growing shares of variable renewables and the decarbonisation of industrial processes require policies that value flexible low-carbon energy supply. This PhD develops a holistic methodological framework for Nuclear Hybrid Energy Systems (NHES) integrating Small Modular Reactors with other energy sources, storage devices, and non-electric applications. It links design and operations modelling with safety-relevant transient analysis, techno-economic optimisation, and long-term energy planning. The framework is applied to identify policy and regulatory barriers and enabling factors that could shape the assessment and integration of cost-competitive systems into decarbonisation strategies, providing technically grounded recommendations for the deployment of such systems.

Nithya Dhamodharasamy Sundarraj**: A simulation based flight testing methodology to determine wind disturbance levels for the safe and sustainable realization of Urban Air Mobility (UAM)**
Urban Air Mobility (UAM) is a new air transportation system concept that is meant to carry passengers and goods in and around cities using electric Vertical Take-off and Landing aircraft (eVTOLs). These aircraft are intended to operate in low altitudes, above densely populated cities, where wind conditions are turbulent. These characteristics enhance the complexity in physically flight testing these aircraft for certification and introduce operational safety risks such as trajectory deviation and increased energy consumption when flown in turbulent regions. Thus, this research focuses on providing a simulation-based flight testing methodology to quantify the wind disturbance levels for the safe and sustainable realization of UAM.

The event will be followed by a networking aperitif.

POLITECNICO MILANO 1863

20th January 2026
5:00 - 6:00 pm
Sala Consiglio,
EN:lab, Building 31,
Department of Energy
Campus Bovisa

Register here

www.phd-stepchange.polimi.it