

Marie-Cécile Péra – FCLAB

Date

Tuesday 07 June: 11h00 – 12h30: Welcome to FCLAB
15:30 – 17:45: Visit of FCLAB

Position: Full Professor

Institution: UFC and Femto-ST/Sharpac



Email: marie-cecile.pera@univ-fcomte.fr

Biography and expertise:

Marie-Cécile Péra received a PhD in electrical engineering from the Institut National Polytechnique de Grenoble, in 1993. From 1994 to 1999, she was an Associate Professor at the University of Reims Champagne Ardennes, where she studied non-linear dynamics of electrical systems, based on chaos theory. Since 1999, she has joined the University of Franche-Comte (UFC) where she launched the activities on Fuel Cell Systems. In September 2008, she became a full Professor and joined the FEMTO-ST Institute. From 2008 to 2012, she was the deputy Head of the Energy Department of FEMTO-ST. From 2012 to 2019, she was the deputy Director of the FEMTO-ST Institute (750 members). Since 2020, she is the Director of FCLAB, Center for Service and Research (140 members). She is the chair of the board of the CoNRS, National Council of CNRS, for photonics and electrical engineering. She works on energy management of hybrid electric power generation systems (fuel cells, PEMFC and SOFC, supercapacities, batteries), their control, diagnosis and prognostics. She has contributed to more than 275 publications in peer-reviewed international journals and international conferences. She's the co-founder of the start-up H2SYS, supplying hydrogen power generator for mobility and stationary applications.

Presentation:

Hydrogen is a key vector for the deployment of carbon-free energy. Beyond the storage of the renewable energy, it can provide flexibility to the grid for a better balance between production and consumption and above all be the basis for an ecosystem optimized for energy fluxes (heat, cold, electricity, biofuels, syngas,...), low emission industrial processes, buildings and transportation.

FCLAB is a center for service and research on hydrogen energy systems with more than 20 years of experience in the field. It is a unit of the CNRS, the University of Bourgogne Franche-Comte, the University of Franche-Comte, the University of Technology of Belfort-Montbéliard and the National School of Mechanics and Microtechnics, which federates the activities of more than 140 researchers and engineers in net of collaborations. Its service offer covers engineering and feasibility studies for projects and installation, testing of hydrogen systems up to 120kW, taking into account environmental constraints in a controlled atmosphere (temperature and humidity) and vibration as well as national and international research partnership activities.