

David Bouquain – Fuel Cell System

Date

Wednesday 08/06: 9h45 – 10h45: Modelling Basics 2 Fuel Cells

Position: Full Professor

Institution: UFC and Femto-ST/Sharpac

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Biography and expertise:

David Bouquain was graduated from the University of Franche-Comté (UFC) in 1999. In 2002 he was recruited as teacher-researcher at University of Technology of Belfort-Montbéliard (UTBM) where he received a PhD in electrical engineering in 2008. He became an associate professor at UTBM in 2009 and was head of the Control and Conversion of Energy research team. From 2012 to 2019 he has been a member of FCLAB. In 2016 he joined the CNRS FEMTO-ST Institute. His research activity focuses on electric and hybrid powertrains as well as fuel cell systems dedicated to transport and stationary applications. In September 2020 he became a Full Professor at UFC. Since January 2020, he is Deputy Director of FCLAB, Center for Service and Research on hydrogen energy systems. Since December 2021 he is also vice-president of UFC in charge of relations with companies.

Presentation:

Fuel Cell Systems are an interesting solution for energy storage as the energy stored is proportional to the hydrogen stored. Therefore, they are promising solutions for mobile and stationary applications with the potential for seasonal storage and combined heat and power production.

At the same time the fuel cell system modelling and design can be quite complex as they involve so many aspects. Hence this presentation will give a short introduction of best practice in fuel cell system design and modelling.