

Giuliano C Premier



Giuliano Premier is a Professor in Low Carbon Systems Engineering and senior member of the Sustainable Environment Research Center (SERC) and its subunits, the Hydrogen Research Unit (HRU) and Wastewater Treatment Research Unit (WWTRU) at the University of Glamorgan. His research activities cover renewable energy systems, biological wastewater treatment, wider technical and socio-economic implications of a transition to a hydrogen based economy, biohydrogen production, and bioelectrochemical systems (BES), in particular microbial fuel cells. His Ph.D. concerned the modelling and automatic control of anaerobic digestion (AD) processes and he has since been mainly involved with research into anaerobic processes including AD, Microbial Fuel Cells and the biological production of hydrogen by dark fermentation. His research also includes industrial computer aided control system design and instrumentation for soil and groundwater bio-activity monitoring. He is currently involved in collaborative projects with universities and industrial partners: EU FP6 REMOVALS project, during which hydrogen has been generated from sewage sludge; EPSRC SUPERGEN Sustainable Hydrogen Energy Consortium, considering the production of hydrogen from crops; SUPERGEN Biological Fuel Cells Consortium in which he leads the Microbial Fuel Cells Theme, NERC (with funding also from other Research Councils) TSEC BioSys project, modelling of biological conversion; a Carbon Trust project in which dark fermentative hydrogen and methane from an industrial co-product are considered, EU ERDF which has established The Hydrogen Research and Demonstration Centre at Baglan Bay in South Wales, where research into the technical and socio-economic implications of a transition to a hydrogen economy continue.

His presentation on: **Bioelectrochemical systems: Which way forward in this evolving family of technologies?**