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FROM BASIC TO APPLIED RESEARCH TOWARDS DURABLE AND RELIABLE FUEL CELLS

Focus on accelerated stress tests, degradation phenomena, fault modelling, advanced monitoring, diagnostics, prognostics and control of SOC and PEMFC

Workshop jointly organized by H2020 Projects AD ASTRA and RUBY

5 July 2022 – Lucerne (CH) – European Fuel Cell Forum 2022

venue: University of Lucerne | Frohburgstrasse, Lucerne (CH) | Conference Room n. 5
www.efcf.com/2022/conference/highlights/venue

registration deadline: 17 June 2022

registration: www.rubyproject.eu/dissemination/workshop1/#registration

info: workshop@rubyproject.eu

PROGRAM

Time	Topic	Speaker
9:00-9:05	Welcome	D. Pumiglia (ENEA) C. Pianese (UNISA)
9:05-9:15	Improving FCs performance from basic phenomena to management	S. J. McPhail – C. Pianese (UNISA) – D. Pumiglia (ENEA)
9:15-9:25	Description of project AD ASTRA	D. Pumiglia (ENEA)
9:25-9:35	Description of project RUBY	P. Polverino (UNISA)
9:35-9:55	How cells and metal interconnects respond to operating parameters up to 40000 h	P. Piccardo (UNIGE)
9:55-10:15	Degradation assessment in solid oxide cell operated in electrolysis mode	A. Leon (EIFER)
10:15-10:25	Q&A	
10:25-10:40	Coffee break & networking	
10:40-11:00	Online THDA for rSOC diagnostic: Illustration for reactants depletion	H. Moussaoui (EPFL)
11:00-11:20	AST: The effect of pressure on the interconnect ageing	R. Spotorno (UNIGE)
11:20-11:40	SOFC degradation studies through a multiscale modelling approach	F. Bianchi (UNIGE)
11:40-12:00	Development of mathematical transfer functions for AST design	P. Polverino (UNISA)
12:00-12:20	Modeling the impact of electrode degradations on the SOC response	E. Da Silva (CEA)
12:20-12:30	Q&A	
12:30-13:30	Lunch at the Canteen of the University of Lucerne	
13:30-13:50	Robust diagnosis of PEMFC based on Artificial Intelligence and EIS	D. Chanal (UBFC)
13:50-14:10	Active and passive diagnosis of SOFC cells and stacks	D. Juricic (IJS)
14:10-14:30	Data-driven and model-based diagnosis of PEMFC & SOFC Balance of Plants	A. Pandolfi (UNISA)
14:30-14:50	Validation of performance of RUBY-tool for SOFC μ -CHP	A. Nieminen (VTT)
14:50-15:00	Q&A	
15:00-15:20	Coffee break & networking	
15:20-15:40	Enforcing optimal operation of FCS despite degradation via real-time optimization	T. De Avila Ferreira (HES-SO)
15:40-16:00	Degradation-aware energy management of fuel cell-based VPPs	M. Sorrentino (UNISA)
16:00-16:20	EU project REACTT-Advanced Field Diagnostics of SOEC & rSOC	D. Juricic (IJS)
16:20-16:40	Hardware for on-field EIS: state of the art, solutions and issues	G. Spagnuolo (UNISA)
16:40-16:50	Q&A	
16:50-17:00	Feedback from Q&A sessions, discussion – Closure	D. Pumiglia (ENEA) C. Pianese (UNISA)

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