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www.fch-ju.eu



www.pemfc.health-code.eu

## One Day Workshop on Monitoring, Diagnostics and Control for Fuel Cells

Improving fuel cells performance through innovative diagnosis and control

4 July 2017 – Lucerne (CH)

KKL - European Fuel Cell Forum 2017

venue: [www.efcf.com/SE](http://www.efcf.com/SE)

registration: [www.efcf.com/MDCreg](http://www.efcf.com/MDCreg)

info: [MDC@efcf.com](mailto:MDC@efcf.com)

### PROGRAM

9.00 – 9.10	<b>Welcome</b>	
9.10 – 9.30	Diagnostics and Control for FC – motivations, challenges and main issues	C. Pianese, UNISA
9.30 – 9.50	Description of project DIAMOND	R. Makkus, HYG
9.50 – 10.10	Description of project HEALTH-CODE	C. Pianese, UNISA
10.10 – 10.30	EIS Characterization of O <sub>2</sub> -fed PEMFC under fault operations	M.C. Péra, UFC
10.30 – 10.50	Influence of operating and faulty conditions on the EIS spectra of PEMFC-based $\mu$ -CHP systems	S. Araya, AAU; P. Moçotéguy, EIFER
10.50 – 11.10	Scaling-up technique for PEMFC EIS, from single cell to stack	P. Polverino, UNISA
11.10 – 11.30	Operation results for DIAMOND advanced configuration, Standard control versus Advanced control	R. Makkus, HYG
11.30 – 11.50	Testing and validation of advanced control and diagnostics for SOFC - not quite business as usual	A. Pohjoranta, VTT
11.50 – 12.10	Model-based design of diagnostic tools for conventional and advanced SOFC systems	D. Marra, UNISA
12.10 – 12.30	Total Cost of Ownership reduction of fuel cell systems thanks to diagnosis and prognosis algorithms	T. Habermacher, H2SYS
12.30 – 14.00	<b>Lunch break</b>	
14.00 – 14.20	Health-based control and optimisation of SOFC stack operation	Đ. Juričić, IJS
14.20 – 14.40	State-of-health estimation and prognosis of the remaining useful life in SOFC systems	B. Dolenc, IJS
14.40 – 15.00	EIS and soft computing techniques for the diagnosis of O <sub>2</sub> -feed PEMFC	M.C. Péra, UFC
15.00 – 15.20	Equivalent Circuit Model-based diagnosis of PEMFC via EIS	P. Polverino, UNISA
15.20 – 16.00	Hardware/software design for on-board fuel cell EIS	G. Petrone, W. Zamboni, UNISA; E. Bianconi, BIT
16.00 – 16.20	Advanced control, diagnostics and monitoring for SOFC, the industry perspective	S. Pofahl, AVL
16.20 – 16.40	<b>Discussion among guests, partners, participants</b>	

Affiliation: AAU, Aalborg University (DK); AVL, AVL List GmbH (A); BIT, Bitron Industrie S.p.A. (I); EIFER, European Institute for Energy Research (D); H2SYS, Hydrogen to System (F); HYG, Hygear (NL); IJS, Jožef Stefan Institute (SI); UFC, University of Franche-Comté (F); UNISA, University of Salerno (I); VTT, technical Research Centre of Finland (FI).

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