

## Workshop

# Numerical Optimization of the PEM Fuel Cell Bipolar Plate

### March 20<sup>th</sup>, 2018

Location: Zentrum für Solarenergie- und Wasserstoff-Forschung (ZSW) Ulm,  
Helmholtzstr. 8, 89081 Ulm, Seminar room 707

Time		Speaker	Title (all talks in English)
09:00	09:10	<b>Karsten Urban</b> (Univ. Ulm)	Welcome
09:10	09:40	<b>Mohammad J. Kermani</b> (Amirkabir University) <b>Joachim Scholta</b> (ZSW Ulm)	Introduction of DFG project, physical model, aims and scope
09:40	10:10	#1: <b>Arnulf Latz</b> (Helmholtz-Institut Ulm)	Simulation of PEM fuel cells
10:10	10:30	<i>Coffee Break</i>	
10:30	11:00	#2: <b>Katharina Becker-Steinberger</b> (Helmholtz-Institut Ulm)	Numerical simulation of solid electrolyte cells
11:00	11:30	#3: <b>Manuel Landstorfer</b> (WIAS Berlin)	Modeling Electrochemical Systems with Homogenisation techniques
11:30	12:00	#4: <b>Annegret Glitzky</b> (WIAS Berlin)	Electrothermal feedback in organic LEDs
12:00	13:00	<i>Lunch Break with sandwiches</i>	
13:00	13:30	#5: <b>Jürgen Fuhrmann</b> (WIAS Berlin)	Computational assessment of the derivation of the Butler-Volmer kinetics as a limit case of the Nernst-Planck equations with surface reactions
13:30	14:00	#6: <b>Stefan Volkwein</b> (Univ. Konstanz)	Numerical Optimization in Estimation and Control
14:00	14:30	<i>Coffee Break</i>	
14:30	15:00	#7: <b>Mario Ohlberger</b> (Univ. Münster)	Localized model reduction and electrochemical applications
15:00	15:30	#8: <b>Bernard Haasdonk</b> (Univ. Stuttgart)	Reduced Basis Methods for Evolution Problems and Application in Optimization and Control
15:30	16:00	#9: <b>Ali Madadi</b> (Amirkabir University)	Application of modern optimization methods to some mechanical engineering problems
16:00	16:30	<b>Discussion / Short Communications</b>	
16:30	17:00	Mohammad J. Kermani, Joachim Scholta, Karsten Urban	GoodBye / private discussions

20:15	<i>Joint dinner at a restaurant in Ulm</i>
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