

Monday, Sep 21

Tuesday, Sep 22

**MORNING** - for CEST and East from CEST

User Meeting	Image Processing Image Analysis		Filtration	
8:00-8:05	Welcome & Introduction		Welcome & Introduction	
8:05-8:25	Innovations in GeoDict® 2021 <i>(Math2Market GmbH)</i>		Innovations in GeoDict® 2021 <i>(Math2Market GmbH)</i>	
8:25-8:50	Advanced and AI-based Image Segmentation methods in GeoDict® 2021 <i>(Math2Market GmbH)</i>		Complete filter simulation and some highlighted new features related to filtration applications in GeoDict® 2021 <i>(Math2Market GmbH)</i>	
8:50-9:15	Visualization is Key: Images and Animations with GeoDict® 2021 <i>(Math2Market GmbH)</i>		Catalyst Simulation: from Nano to Micro to Macro <i>(Math2Market GmbH)</i>	
9:15-9:30	Break		Break	
9:30-9:55	Dynamic micro-CT to visualize flow dynamics in the lab <i>(Tescan XRE, Belgium)</i>		Multi-point Image Analysis and Correlation for each test condition to improve the Accuracy of Filtration Simulation <i>(FITI Testing &amp; Research Institute, South Korea)</i>	
9:55-10:20	Validating Machine Learning Permeability Prediction <i>(Carl Zeiss X-ray Microscopy, USA and Germany)</i>		Time-Lapse Scanning Electron Microscopic Visualization of Trapping and Oxidation of Soot and Agglomeration of Ash in Particulate Filters <i>(Tokyo Institute of Technology, Japan)</i>	
10:20-10:30	Conclusion and Farewell		Conclusion and Farewell	
10:30-11:00	Break		Break	
<b>Workshops</b>	Image Processing Image Analysis	GeoPython Beginners	Filtration	GeoPython Advanced
11:00-13:00				

**AFTERNOON** - for CEST and West from CEST

User Meeting	Filtration		Image Processing Image Analysis	
14:00-14:05	Welcome & Introduction		Welcome & Introduction	
14:05-14:25	Innovations in GeoDict® 2021 <i>(Math2Market GmbH)</i>		Innovations in GeoDict® 2021 <i>(Math2Market GmbH)</i>	
14:25-14:50	Complete filter simulation and some highlighted new features related to filtration applications in GeoDict® 2021 <i>(Math2Market GmbH)</i>		Advanced and AI-based Image Segmentation methods in GeoDict® 2021 <i>(Math2Market GmbH)</i>	
14:50-15:15	Catalyst Simulation: from Nano to Micro to Macro <i>(Math2Market GmbH)</i>		Visualization is Key: Images and Animations with GeoDict® 2021 <i>(Math2Market GmbH)</i>	
15:15-15:30	Break		Break	
15:30-15:55	A Multi-scale study of the permeability of compressed Nonwoven Filter Media <i>(Fraunhofer Institute for Industrial Mathematics, Germany)</i>		Dynamic micro-CT to visualize flow dynamics in the lab <i>(Tescan XRE, Belgium)</i>	
15:55-16:20	Multi-scale Modelling and Simulation of Liquid Aerosol Filtration <i>(Hochschule Heilbronn, Germany)</i>		Validating Machine Learning Permeability Prediction <i>(Carl Zeiss X-ray Microscopy, USA and Germany)</i>	
16:20-16:30	Conclusion and Farewell		Conclusion and Farewell	
16:30-17:00	Break		Break	
<b>Workshops</b>	Filtration	GeoPython Beginners	Image Processing Image Analysis	GeoPython Advanced
17:00-19:00				

Wednesday, Sep 23

Thursday, Sep 24

Friday, Sep 25

Digital Material R&D	Electrochemistry	Digital Rock Physics
Welcome & Introduction	Welcome & Introduction	Welcome & Introduction
Innovations in GeoDict® 2021 <i>(Math2Market GmbH)</i>	Innovations in GeoDict® 2021 <i>(Math2Market GmbH)</i>	Innovations in GeoDict® 2021 <i>(Math2Market GmbH)</i>
GeoDict® 2021 new Features for the Digital Design of Foams, Composites and Ceramics <i>(Math2Market GmbH)</i>	Developing Battery and Fuel Cell Materials with GeoDict® 2021 <i>(Math2Market GmbH)</i>	Digital Rock Physics with GeoDict® 2021 <i>(Math2Market GmbH)</i>
Parametric Optimization of the Conductivity Properties of Granular Microstructures for application in Electromobility <i>(ZF Friedrichshafen AG, Germany)</i>	Highlights in BatteryDict: Faster and More Accurate Battery Simulations <i>(Math2Market GmbH)</i>	Evaluation of residual Gas Saturation with modified Pore Morphological Approach – a Case Study on Clastic Reservoir <i>(OMV AG, Austria)</i>

Break

Break

Train your own Network – Custom Machine Learning-based Segmentation <i>(Math2Market GmbH)</i>	Screening Microstructures for Advanced Battery Materials <i>(Volkswagen AG, Germany)</i>	Digital Rock Evaluation of the Petrophysical Properties of Source Rocks <i>(Aramco Services Company, USA)</i>
GeoDict® in the Cloud: Capabilities and Vision <i>(KaleidoSim Technologies AG and ZHAW, Switzerland)</i>	Microstructure Simulation and Virtual Material Design of Electrospun Gas Diffusion Layers for Polymer Electrolyte Membrane Fuel Cells <i>(DHBW Mannheim, Germany)</i>	Pore-scale Simulations of Hydraulic Properties during Biomass Accumulation <i>(Montanuniversität Leoben, Austria)</i>
Conclusion and Farewell	Conclusion and Farewell	Conclusion and Farewell

Break

Break

Break

Digital Material R&D	Visualization	Electrochemistry	GeoPython Beginners	Digital Rock Physics	GeoPython Advanced	Visualization
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Electrochemistry	Digital Rock Physics	Digital Material R&D
Welcome & Introduction	Welcome & Introduction	Welcome & Introduction
Innovations in GeoDict® 2021 <i>(Math2Market GmbH)</i>	Innovations in GeoDict® 2021 <i>(Math2Market GmbH)</i>	Innovations in GeoDict® 2021 <i>(Math2Market GmbH)</i>
Developing Battery and Fuel Cell Materials with GeoDict® 2021 <i>(Math2Market GmbH)</i>	Digital Rock Physics with GeoDict® 2021 <i>(Math2Market GmbH)</i>	GeoDict® 2021 new Features for the Digital Design of Foams, Composites and Ceramics <i>(Math2Market GmbH)</i>
Highlights in BatteryDict: Faster and More Accurate Battery Simulations <i>(Math2Market GmbH)</i>	Digital Rock Evaluation of the Petrophysical Properties of Source Rocks <i>(Aramco Services Company, USA)</i>	Parametric Optimization of the Conductivity Properties of Granular Microstructures for application in Electromobility <i>(ZF Friedrichshafen AG, Germany)</i>

Break

Break

Break

Screening Microstructures for Advanced Battery Materials <i>(Volkswagen AG, Germany)</i>	Evaluation of residual Gas Saturation with modified Pore Morphological Approach – a Case Study on Clastic Reservoir <i>(OMV AG, Austria)</i>	Train your own Network – Custom Machine Learning-based Segmentation <i>(Math2Market GmbH)</i>
Microstructure Simulation and Virtual Material Design of Electrospun Gas Diffusion Layers for Polymer Electrolyte Membrane Fuel Cells <i>(DHBW Mannheim, Germany)</i>	Pore-scale Simulations of Hydraulic Properties during Biomass Accumulation <i>(Montanuniversität Leoben, Austria)</i>	GeoDict® in the Cloud: Capabilities and Vision <i>(KaleidoSim Technologies AG and ZHAW, Switzerland)</i>
Conclusion and Farewell	Conclusion and Farewell	Conclusion and Farewell

Break

Break

Break

Electrochemistry	Visualization	Digital Rock Physics	GeoPython Beginners	Digital Material R&D	GeoPython Advanced	Visualization
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