SIMS 58 - PROGRAM
THE 58TH CONFERENCE ON SIMULATION AND MODELLING

Location: National Energy Authority, Orkugarður, Grensasvegur 9, 108 Reykjavik, Iceland

Monday September 25th

Time	Presenter	Title
08:00 Registration		
08:30 Opening	Prof. Sigurður Magnús Garðarsson, Dean of School of Engineering and Sciences	
08:40 Keynote I	Prof. Guðni A. Jóhannesson, Director General National Energy Authority	**Taming of the supercritical shrew**
09:20 Keynote 2	Prof. Lars Eriksson, Vehicular Systems, Linköping University	**Model-Based Development - The Prosperous Life, Evolution, & Impact of a Diesel Engine Model**
10:00 Coffee		

		Presenter	Title			Presenter	Title
10:30 Session V11				Session A11			
	10:30	Shobhana Singh	Numerical investigation of conjugate heat transfer and flow performance of a fin and tube heat exchanger with vortex generators		10:30	Lars Erik Øi	Modeling N/S ratio and temperature effects in simultaneous biological denitrification and sulfide oxidation
	10:55	Liubomyr Vytvytskyi	Comparison of elastic vs. inelastic penstock model using OpenModelica		10:55	Jesús Zambrano	Microalgae Activated Sludge: Process Modelling and Optimization
	11:20	Prasanna Welahettige	Computational fluid dynamics study of flow depth in an open Venturi channel for Newtonian fluid		11:20	Janitha Bandara	Analysis of the effect of steam-to-biomass ratio in fluidized bed gasification with multiphase particle-in-cell CFD Simulation
	11:45	Lilja Magnusdottir	A Deepened iTOUGH2 Model of Reykjanes for IDDP		11:45	Janitha Bandara	Analyzing the effects of particle density, size, size distribution and shape for minimum fluidization velocity with Eulerian-Lagrangian CFD simulation
12:10			Lunch				
13:30 Session V12				Session A12			
	13:30	Jairo Rúa Pazos	Simulation of Starting and Stopping Vortices of an Airfoil		13:30	Kjell-Arne Solli	Evaluation of drag models for CFD simulation of fluidized bed biomass gasification
	13:55	Chameera K. Jayarathnaa	Validation of results from Barracuda® CFD modelling to predict the minimum fluidization velocity and the pressure drop of Geldart A particles		13:55	Kristian Thorsen	Passivity-based analysis of biochemical networks displaying homeostasis
	14:20	Amila Chandra Kahawalagea,	Numerical modeling of the calcination process in a cement kiln system		14:20	Sanjay Shah	Methane from Syngas by Anaerobic Digestion
	14:45	Asanthi Jinasena	Use of Orthogonal Collocation Method for a Dynamic Model of the Flow in a Prismatic Open Channel: For Estimation Purposes		14:45	Turo Välikangas	Effect of natural convection and radiation inside of a hollow beam in a standard fire
15:10			Coffee				
15:30 Session V13				Session A13			
	15:30	Prasanna Welahettige	Study of Fluidization Regimes using OpenFOAM Computational Fluid Dynamics		15:30	Joachim Lundberg	Simulation of burning velocities in gases vented from thermal run-a-way lithium ion batteries
	15:55	Susantha Dissanayake	CFD Study of Particle Flow Patterns in a Rotating Cylinder Applying OpenFOAM and Fluent		15:55	Joachim Lundberg	Detonation propagation in stratified reactant layers
	16:20	Sumudu S. Karunarathne	Model uncertainty of interfacial area and mass transfer coefficients in absorption column packings		16:20	Joachim Lundberg	Using Image Processing for Flame Diagnostics
	16:45	Sumudu S. Karunarathne	Comparison of the influence of drag models in CFD simulation of particle mixing and segregation in a rotating cylinder		16:45	Samee Maharjan	OPEN ACTIVE CONTOUR MODEL FOR FRONT TRACKING OF DETONATION WAVES
17:10			SIMS Annual Assembly				

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Tuesday September 26th

Time	Presenter	Title	Time	Presenter	Title
08:00 Registration					
08:30 Session V21			Session A21		
08:45	Ramesh Timsina	Modeling and simulation of light oil production using inflow control devices	08:45	Laura Marcano	Towards Effective Automatic Feedback for Simulator Training
09:10	Sveinung Sund / Magnus Hansen	Simulation of Oil Production from Homogenous North Sea Reservoirs with Inflow Control using OLGA/Rocx	09:10	Jaroslav Cibulka	Augmented and Virtual Reality for Engineering Education
09:35	Magnus Hansen / Thomas B. Iversen	Simulation of Oil Production from Heterogeneous North Sea Reservoirs with Inflow Control using OLGA/Rocx	09:35	Esko Juuso	Smart Integration of Energy Production
10:00			Coffee		
Session V22			Session A22		
10:30	W.K. Hiromi Ariyaratne	Euler-Granular approach for modelling of dilute phase pneumatic conveying in a vertical pipe	10:30	Dietmar Winkler	Electrical Power System Modelling in Modelica – Comparing Open-source Library Options
10:55	Shobhana Singh	Concrete thermal energy storage for steam generation: A numerical investigation	10:55	Roshan Sharma	Comparison of control strategies for a 2 DOF helicopter
11:20	Jairo Rúa Pazos	Dynamic Modeling and Simulation of an Offshore Combined Heat and Power (CHP) Plant	11:20	Roshan Sharma	Covering the Gap Between Advanced Control Theory Design and Real Time Implementation Using Simulink
11:45	Inés Encabo Cáceres	THERMODYNAMIC OPTIMIZATION OF AN ORGANIC RANKINE CYCLE FOR POWER GENERATION FROM A LOW TEMPERATURE GEOTHERMAL HEAT SOURCE	11:45	Kristian Thorsen	Physiological based modeling and control of an industrial tank process
12:10			Lunch		
Session V23			Session A23		
13:30	Lars Erik Øi	Optimization of gas velocity and pressure drop in CO2 absorption column	13:30	Samee Maharjan	Wave Front Tracking using Template Matching and Segmented Regression
13:55	Lars Erik Øi	Simulation and Economic Optimization of Vapour Recompression Configuration for Partial CO2 capture	13:55	Alice Bittante	A multi-period optimization model for the design of new LNG supply chains
14:20	Olov Holmer	Modelling and Validation of Hybrid Heavy Duty Vehicles with Exhaust Aftertreatment Systems	14:20	Geir Risvoll	The impact of signalling kinetics on controller motif performance
14:45	Kristoffer Ekberg	Optimal Control ofWastegate Throttle and Fuel Injection for a Heavy-Duty Turbocharged Diesel Engine During Tip-In Throttle and Wastegate Developed for Optimal Control	14:45	Bikram Kawan	Data-driven Modeling of Ship Motion Prediction Based on Support Vector Regression
15:10			Coffee		
Session V24			Session A24		
15:30	Jagath Manjula V.P. Edirisinghe	Transient stability of fault ride through capability of a transmission system of a distributed hydropower system	15:30	Magnus Komperød	Numerical Calculation of Stresses in Helical Cable Elements subject to Cable Bending and Twisting
15:55	Liubomyr Vytvytskyi	Flood Control of Lake Toke: Model Development and Model Fitting	15:55	Håkon Viumdal	Online Drilling Fluid Flowmetering in Open Channels with Ultrasonic Level Sensors using Critical Depths
16:20	Valentyna Splavska	Hydropower Systems: Comparison of Mechanistic and Table Look-up Turbine Models	16:20	Gunnar Skúlason Kaldal	Structural Analysis of the Casings in Deep Geothermal Wells
16:45			16:45	Heimir Tyggvason	Modeling and simulation in the design process of a prosthetic foot
			17:10		
19:00		Conference Dinner: Bryggjan Brugghús, Bruggsalurinn			

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Wednesday September 27th

Excursion to Reykjanes GEOPARK

10:00 Bus from Orkugarður, Grensasvegur 9, 108 Reykjavik

11:00 Exhibition: Resource Park in the Reykjanes peninsula

12:15 Dinner

13:00 Visit to Svartsengi Power Plant

15:00 The conference excursion ends at Orkugarður