

**DAY 1, 13 th August in Hall Alfa**

1	13:30-14:10	SIMS Introduction - history and future (Esko Juuso and Erik Dahlquist)	
2	14:10-15:50	Session Control (Chair Bernt Lie)	
	14:10-14:30	S-22	Bernt Lie. Surrogate and Hybrid Models for Control
	14:30- 14:50	S-5	Itsaso Menchacatorre, Roshan Sharma, Beathe Furenes and Bernt Lie. Flood Management of Lake Toke: MPC Operation under Uncertainty
	14:50-15:10	S-3	Liubomyr Vytvytskyi and Bernt Lie. Structural analysis in Julia for dynamic systems in OpenModelica
	15:10-15:30	S-9	Maths Halstensen, Joachim Lundberg, Per Ivan Januschas and Hans-Petter Halvorsen. On-line Monitoring of Viscous Properties of Anti-icing Fluid Based on Multivariate Regression Modeling
	15:30-15:50	S-36	Torbjörn Trosten, Erik Dahlquist, Henrik Mosskull, Daniel Jansson and Maher Azaza. Comparison and analysis magnetic noise and drive losses using different PWM methods

15:50-16:20 BREAK

3	16:20-18:00	Session Buildings (Chair Bernt Lie)	
	16:20-16:40	S-19	Marius Salen and Dietmar Winkler. Impact of distributed power generation at the customer
	16:40-17:00	S-21	Nils-Olav Skeie and Jørund Martinsen. Building occupation modelling using motion sensor data
	17:00-17:20	S-1	Ole Magnus Brastein, Roshan Sharma and Nils-Olav Skeie. Sensor placement and parameter identifiability in grey-box models of building thermal behaviour
	17:20-17:40	S-4	Casper Amandus Johansen, Bernt Lie and Nils-Olav Skeie. Models for control of thermal energy in buildings
	17:40-18:00	S-34	S. Firouzifar, E.Dahlquist : The optimization of a distribution and over distribution lines structure
		S-33	S. Firouzifar, E.Dahlquist: ELECTRICAL CHARACTERISTIC OF NEW CALCULATION IN sub-TRANSMISSION LINE with simulation
	18:00-21:00	panel (+ dinner on own expense)	

**DAY 2, 14th August in Hall Alfa**

4	8:20-10:00	Session Measurement and properties (Chair Lars Öi)	
	8:20-8:40	S-12	Sumudu Karunaratne and Lars Øi. Density and Viscosity Correlations for Aqueous 3-Amino-1-propanol and Monoethanol Amine Mixtures
	8:40-9:00	S-13	Sumudu Karunaratne, Dag Eimer and Lars Øi. Uncertainty Comparison of Viscosity Measurements of CO <sub>2</sub> Loaded MEA and Water Mixtures in a Coaxial Rheometer Using Monte Carlo Simulation and GUM Method
	9:00-9:20	S-14	Sumudu Karunaratne and Lars Øi. Applicability of NRTL Model for Prediction of the Viscosity of MEA + H <sub>2</sub> O and AMP + MEA + H <sub>2</sub> O Mixtures
	9:20-9:40	S-31	Ingrid Bokn Haugland, Jana Chladek and Maths Halstensen. Monitoring of Erosion in a Pneumatic Conveying System by Non-intrusive Acoustic Sensors – A Feasibility Study
	9:40-10:00	S-28	Madeleine Martinsen, Erik Dahlquist, Anders Lönnermark and Örjan Säker. GAS SENSORS FOR EARLY DETECTION OF FIRE HAZARDS CAUSED BY VEHICLES IN UNDERGROUND MINES
BREAK			
5	10:30-11:10	Session oil production (Chair Lars Öi)	
	10:30-10:50	S-2	Christian Berg, Jon Åge Stakvik, Bernt Lie, Knut Vaagsaether and Glenn-Ole Kaasa. Pressure wave propagation in Managed Pressure Drilling- model comparison with real life data
	10:50-11:10	S-26	Simon Salvesen Holte, Jan Vidar E. Knutsen, Roy Sømme Ommedal and Britt Margrethe Emilie Moldestad. Simulation of enhanced oil recovery with CO <sub>2</sub> injection
6	11:10-14:50	Session Bio-processes (Chair Esko Juuso)	
	11:10-11:30	S-30	Erik Dahlquist, Christian Wallin, Eva Nordlander, Anders Avelin and Eva Thorin. Control of waste water treatment combined with irrigation
	11:30-11:50	S-10	Terje Bråthen, Lars Erik Øi and Jon Hovland. Simulation of Dew Points in Raw Biogas Using PR and SRK Equations of State
	11:50-12:10	S-23	Evgheni Ermolaev, Erik Dahlquist, Cecilia Lalander, Björn Vinnerås and Eva Thorin. Model selection for waste conversion efficiency and energy demands in a pilot for large-scale larvae treatment

	12:10-14:10	Lunch, SIMS Board meeting in R1-343	
	14:10-14:30	S-27	Zahra Nikbakhtkenarsari, Nirmal Ghimire, Rune Bakke and Wenche Hennie Bergland. Thermophilic Anaerobic Digestion Modeling of Lignocellulosic Hot Water Extract using ADM1
	14:30-14:50	S-32	Esko Juuso. Intelligent dynamic simulation of fed-batch fermentation processes
7	14:50 -17:00	Session Bio-processes (Chair Esko Juuso)	
	14:50 - 15:10	S-8	Eshetu Janka, Rune Bakke, Carlos Dinamarca, Vasan Sivalingam, Osama Ibrahim, Sergey Kukankov, Babafemi Omodara, Hildegunn Haugen and Shuai Wang. Chemical equilibrium model to investigate scaling in moving bed biofilm reactors (MBBR)
	15:10-15:30	S-15	Ramesh Timsina, Britt Moldestad, Marianne Sørflaten Eikeland and Rajan K Thapa. Simulation of air-biomass gasification in a bubbling fluidized bed using CPFD model
	15:30-15:50	S-7	Ramesh Timsina, Rajan K Thapa and Marianne Sørflaten Eikeland. Aspen Plus simulation of biomass gasification for different types of biomass
	15:50-16:20	BREAK	
8	16:20- 17:00	Session Fluid beds (Chair Britt Moldestad)	
	16:20-16:40	S-11	Cornelius Agu and Britt Margrethe Emilie Moldestad. Effect of Superficial Gas Velocity on Bubbling Fluidized Bed Behaviour in a Biomass Gasifier
	16:40-17:00	S-17	Rajan Jaiswal, Nora C.I. S. Furuvik, Rajan K. Thapa and Britt M.E. Moldestad. Investigation of the segregation and mixing behavior of biomass in a bubbling fluidized bed reactor using a CPFD model
	17:00-18:00	Annual SIMS meeting in R1-343	
	18:45-22:00	Conference banquet	

**DAY 3, 15th August in Hall Alfa**

	8:20-9:20	Session Fluid beds (Chair Britt Moldestad)	
	8:20-8:40	S-18	Rajan K. Thapa, Saroj Thapa, Rajan Jaiswal, Nora C.I.S. Furuvik and Britt M.E. Moldestad. Experimental and computational study on effect of ash deposition on fluid dynamic behavior in a bubbling fluidized bed gasifier
	8:40-9:00	S-24	Nora Cecilie Ivarsdatter Furuvik, Rajan Jaiswal, Rajan Thapa and Britt Margrethe Emilie Moldestad. Study of agglomeration in fluidized bed gasification of biomass using CPFDF simulations
	9:00-9:20	S-25	Janitha Bandara, Britt Moldestad and Marianne Eikeland. Analyzing the Effects of Geometrical and Particle Size Uncertainty in Circulating Fluidized Beds using CPFDF Simulation
9	9:20 -12:10	Session Electrical applications (Chair Erik Dahlquist)	
	9:20-9:40	S-6	Madhusudhan Pandey, Thomas Øyvang and Bernt Lie. State Estimation of a Thermal Model of Air-cooled Synchronous Generator
	9:40- 10:00	S-20	Prabesh Khakda, Dietmar Winkler and Thomas Øyvang. Online Monitoring of a Synchronous Generator's Capability with MATLAB
	10:00-10:30	BREAK	
	10:30-10:50	S-29	Anahita Davoodi, Peter Johansson, Myriam Aries and Thorbjörn Laike. Current use of lighting simulation tools in Sweden
	10:50-11:10	S-16	Helge Nordal and Idriss El-Thalji. Operations Dynamics of Gas Centrifugal Compressor: Process, Health and Performance Indicators
	11:10-11:30	S-37	Lukas Lundström*, Erik Dahlquist: : Uncertainty in hourly readings from district heat billing meters
	11:30-12:10	Panel discussion on future directions of SIMS	