

IPST 2013 Schedule at a Glance

Thursday 18 July	Friday 19 July	Saturday 20 July
Breakfast 7:00-8:00 SUB Cafeteria and Totem Park Cafeteria	Breakfast 7:00-8:00 SUB Cafeteria and Totem Park Cafeteria	Breakfast 7:00-8:00 SUB Cafeteria and Totem Park Cafeteria
Opening & Keynote 8:30-10:15 Forest Sciences Centre	Concurrent Sessions 8:30-10:15 Forest Sciences Centre	Concurrent Sessions 8:30-10:15 Forest Sciences Centre
Coffee Break 10:15-10:30	Coffee Break 10:15-10:30	Coffee Break 10:15-10:30
Concurrent Sessions 10:30-12:15 Forest Sciences Centre	Concurrent Sessions 10:30-12:15 Forest Sciences Centre	Concurrent Sessions 10:30-12:15 Forest Sciences Centre
Lunch 12:30-1:50 Totem Park Cafeteria	Lunch & Excursion to Grouse Mountain 12:30-11:00 PM	Lunch 12:30-1:50 Totem Park Cafeteria
Concurrent Sessions 2:00-3:45 Forest Sciences Centre		Concurrent Sessions 2:00-3:45 Forest Sciences Centre
Coffee Break 3:45-4:00		Coffee Break 3:45-4:00
Concurrent Sessions 4:00-5:45 Forest Sciences Centre		Concurrent Sessions 4:00-5:45 Forest Sciences Centre
Welcome Reception 6:30-9:30 Cecil Green Park House		Closing Ceremony 5:45-6:15 Forest Sciences Centre
		Closing Reception 6:30-9:30 Museum of Anthropology

Paper Sessions and Chairs

Day	Time	Session, Room	Session Title	Session Chair	Papers
Thursday, 18 July	8:30-9:15	Room F1005	Opening Ceremony		
	10:30-12:10	1A, F1(1221)	Integration of Renewables I	Carlo Alberto Nucci	60, 117, 163, 175, 195
		1B, F2(1003)	Switching and Fault Transients I	Mustafa Kizilcay	17, 22, 77, 78, 52
		1C, F3(1001)	Transformers and Reactors I	Hermann W. Dommel	273, 31, 35, 296, 53
		1D, F4(1222)	Control Systems	Brian Johnson	283, 284, 86, 111, 144
	14:00-15:40	2A, F1(1221)	Integration of Renewables II	Jean Mahseredjian	297, 302, 335, 193, 208
		2B, F2(1003)	Switching and Fault Transients II	Stephan Pack	85, 92, 101, 108, 174
		2C, F3(1001)	Transformers and Reactors II + TRV	Alain Xemard	286, 309, 55, 336, 194
		2D, F4(1222)	Lightning Surges and Insulation Coordination I	Bjørn Gustavsen	29, 51, 61, 68, 103
		16:00-17:40	3A, F1(1221)	Power Conversion, HVDC I	Aniruddha M. Gole
	3B, F2(1003)		Switching and Fault Transients III	Marjan Popov	181, 188, 192, 212, 219
	3C, F3(1001)		Transmission Line and Cables	Akihiro Ametani	256, 30, 62, 76, 244
	3D, F4(1222)		Lightning Surges and Insulation Coordination II	Ivo Uglešić	276, 294, 130, 152, 207
Friday, 19 July	8:30-10:10	4A, F1(1221)	Power Conversion, HVDC II	Sebastien Dennetiere	46, 306, 65, 67, 135
		4B, F2(1003)	Switching and Fault Transients IV	Fernando Moreira	262, 265, 269, 278, 223
	4C, F3(1001)	Real-time Simulators I	Jose Luis Naredo	4, 24, 73, 113	
	4D, F4(1222)	Simulation Tools I	Mario Paolone	18, 38, 41, 82, 95	
	10:30-12:10	5A, F1(1221)	Inrush Currents, Ferroresonance	Bruce Mork	15, 45, 131, 182, 234
5B, F2(1003)		Switching and Fault Transients V	Pablo Gómez	282, 288, 311, 3442	
5C, F3(1001)		Real-time Simulators II	Mazana Armstrong	323, 325, 347, 229, 246	
Saturday, 20 July	8:30-10:10	5D, F4(1222)	Simulation Tools II	Akihiro Ametani	156, 191, 228, 231, 236
		6A, F1(1221)	Circuit Breakers	Marjan Popov	263, 341, 351, 121, 209
		6B, F2(1001)	System Protection, Fault Location I	Murari Mohan Saha	14, 33, 40, 80, 83
	10:30-12:10	6C, F3(1003)	System Dynamics I	Bruce Mork	3, 63, 116, 170, 238
		7A, F1(1221)	Solution Methods I	Taku Noda	23, 50, 75, 88, 118
		7B, F2(1001)	System Protection, Fault Location II	Maria Cristina Tavares	291, 128, 145, 154, 250
		7C, F3(1003)	System Dynamics II	Brian Johnson	326, 123, 143, 176
	14:00-15:40	8A, F1(1221)	Solution Methods II	Washington Neves	136, 184, 185, 196, 214
		8B, F2(1001)	System Protection, Fault Location III	Unnur Stella Gudmundsdottir	226, 240, 200, 247, 224
		8C, F3(1003)	Harmonics and Power Quality	Neville Watson	36, 42, 57, 100, 159, 230
		16:00-17:40	9A, F1(1221)	Solution Methods III	Jean Mahseredjian
	9B, F2(1001)		System Protection, Fault Location IV	Chul-Hwan Kim	317, 320, 349, 137, 138
	9C, F3(1003)		Parameter Identification	Juan A. Martinez-Velasco	290, 324, 340, 155, 234
17:45-18:15	Room F1005	Closing Ceremony			

Thursday July 18

8:00	<i>Authors/Chair Meeting (F1221)</i>	<i>Authors/Chair Meeting (F1003)</i>	8:00
8:30	Opening Ceremony (F1005)		8:30
8:50	Technical Committee Report		
9:15	<ul style="list-style-type: none"> Keynote 1: The Power Grid: Its Evolution into a Complex System of Systems. <i>Presenter: Prof. José R. Martí, The University of British Columbia</i> Keynote 2: Challenges to Simulation Technology Imposed by the Emerging Grid. <i>Presenter: Prof. Aniruddha Gole, The University of Manitoba</i> 		
10:15	Coffee Break	Coffee Break	10:15
	F1 (1221)	F2 (1003)	
	Integration of Renewables I	Switching and Fault Transients I	
	<i>Chair: Carlo Alberto Nucci</i>	<i>Chair: Mustafa Kizilcay</i>	
10:30	EMTP Model of Grid Connected PV System. <i>V. Sood, P. Bhalla</i>	EHV single-pole switching: It is not only a Matter of Secondary Arc Extinction. <i>B. Khodabakhchian</i>	10:30
10:50	Real-Time Simulation of Large-Scale AC System with Offshore DC Grid. <i>P. Le-Huy, P. Giroux, J.C. Soumagne</i>	Analysis of Switching Transient Overvoltages in the Power System of Floating Production Storage and Offloading Vessel. <i>H. Xue, M. Popov</i>	10:50
11:10	Effect of Voltage Stabilizer in Microgrids with PV Resources. <i>M. Mahzarnia, A. Sheikholeslami</i>	Analysis of the Statistical Distribution of Energization Overvoltages of EHV Cables and OHLs. <i>T. Ohno, A. Ametani, C. L. Bak, W. Wiechowski, T. Sorensen</i>	11:10
11:30	Modeling and Analysis of Harmonic Resonance Involving Renewable Energy Sources. <i>J. Sun</i>	Identification of the Sources of Transient Disturbances. <i>N. Watson, A. Farzanehrafat</i>	11:30
11:50	Modeling of Doubly Fed Induction Machine based Wind Turbines in ATP: challenges and experiences. <i>G. Calzolari, C. Saldaña</i>	Transient Recovery Voltage Analysis on a Series Reactor Power Flow Control Device. <i>L. Trevisan, G. Cappai, G. Alvarez-Cordero, M. Márquez-Asensio</i>	11:50
12:10	Session Ends	Session Ends	12:10
12:30	Lunch (Totem Park Cafeteria)	Lunch (Totem Park Cafeteria)	12:30
1:30	<i>Authors/Chair Meeting (F1221)</i>	<i>Authors/Chair Meeting (F1003)</i>	1:30
	Integration of Renewables II	Switching and Fault Transients II	
	<i>Chair: Jean Mahseredjian</i>	<i>Chair: Stephan Pack</i>	
2:00	Investigation of Resonant Overvoltages in Offshore Wind Farms-Modeling and Protection. <i>A. H. Soolot, H. Bahirat, H. K. Høidalen, B. Gustavsen, B. A. Mork</i>	Recommended Configuration for High Voltage Shunt Capacitor Banks. <i>M. Alawie, Y. Filion, L. Gérin-Lajoie</i>	2:00
2:20	Examination of Fault Ride-Through Methods for Off-Shore Wind Farms with VSC-Based Multi-terminal HVDC. <i>U. Karaagac, J. Mahseredjian, H. Saad, S. Jensen, L. Cai</i>	Methods of Performance Assurance for SF6 Circuit-breakers at Switchings of Compensated 500-1150 kV Overhead Power Lines. <i>I. Naumkin, V. Podyachev, L. Sarin, D. Kochura</i>	2:20
2:40	Feasibility Study Of The Installation Of Distributed Generation For Improving Voltage Stability. <i>L. N. Ballester, J. Castillo, J. Durán, M. Dávila, J. Hernández</i>	Analysis of Electromagnetic Transients in Secondary Circuits due to Disconnect Switching in 400 kV Air-Insulated Substation. <i>I. Uglešić, B. Filipović-Grčić, V. Milardić, D. Filipović-Grčić</i>	2:40
3:00	Real-Time Simulation of a Fully Detailed Type-IV Wind Turbine. <i>O. Tremblay, R. Gagnon, M. Fecteau</i>	Transients following the energizing of high voltage ac cables with shunt compensation. <i>S. Wijesinghe, A. Kariyawasam, M. Chowms, D. Muthumuni, B. Jayasekera</i>	3:00
3:20	Transient Studies performed by RTE for the connection of offshore wind farms. <i>S. Deschanvres, Y. Vernay</i>	EMTP-ATP Modeling of a Resistive Superconducting Fault Current Limiter. <i>E. Egorova, H. Bahirat, B. Mork, W. Perger, M. Holcomb</i>	3:20
3:40	Session Ends	Session Ends	
3:45	Coffee Break	Coffee Break	3:45
	Power Conversion, HVDC	Switching and Fault Transients III	
	<i>Chair: Aniruddha M. Gole</i>	<i>Chair: Marjan Popov</i>	
4:00	Modeling of Modular Multilevel Converters for the France-Spain link. <i>S. Denetiere, S. Nguéfeu, H. Saad, J. Mahseredjian</i>	Electromagnetic Transients Studies Related to Energization of a Half-Wavelength Transmission Line. <i>C. Machado Jr, M. Maia, E. Carvalho Jr., M. C. Tavares, J. B. Gertrudes, E. G. Costa, W. Freitas, M. A. Paz</i>	4:00
4:20	Assessment of Saturable Reactor Replacement Options. <i>D.T.A Kho, K.S. Smith</i>	Transmission lines energization: Relevant factors on statistical evaluation of transient overvoltages. <i>P. Mestas, M. C. Tavares</i>	4:20
4:40	Transient Analyses of a Shore-to-Ship Connection System. <i>M. M. Ion, M. Megdiche, S. Bacha, D. Radu</i>	Interaction of capacitor bank inrush current limiting reactor and medium voltage vacuum circuit breakers. <i>G. Gajjar, A. Kulkarni, S. Soman</i>	4:40
5:00	Unified Modeling and Simulation Approach for Modular Multilevel Voltage Source Converters. <i>P. Le-Huy, S. Casoria, O. Saad</i>	Overvoltage Issues associated with De-energization of 345 kV Variable Shunt Reactors: Parametric Analysis and Mitigations. <i>J. Hu, E. McGann</i>	5:00
5:20	Average-Value Modeling of Synchronous Machine Line-Commutated Converter Using a Constant Parameter Voltage-Behind-Reactance Interfacing Circuit. <i>H. Atighechi, S. A. Akbarabadi, F. Therrien, J. Jatskevich</i>	Effect of Trapped Charges on Cable SVL Failure. <i>F. Ghassemi</i>	5:20
5:40	Session Ends	Session Ends	5:40
6:30	Welcome Reception (Cecil Green Park House)	Welcome Reception (Cecil Green Park House)	6:30
9:30	Reception Ends	Reception Ends	9:30

Thursday July 18

8:00	<i>Authors/Chair Meeting (F1001)</i>	<i>Authors/Chair Meeting (F1222)</i>	8:00
8:30	Opening Ceremony (F1005)		8:30
8:50	Technical Committee Report		
9:15	<ul style="list-style-type: none"> Keynote 1: The Power Grid: Its Evolution into a Complex System of Systems. <i>Presenter: Prof. José R. Martí, The University of British Columbia</i> Keynote 2: Challenges to Simulation Technology Imposed by the Emerging Grid. <i>Presenter: Prof. Aniruddha Gole, The University of Manitoba</i> 		
10:15	Coffee Break	Coffee Break	10:15
	F3 (1001)	F4 (1222)	
	Transformers and Reactors I	Control Systems	
	<i>Chair: Hermann W. Dommel</i>	<i>Chair: Brian Johnson</i>	
10:30	Wide band characterization of wind turbine reactors. <i>A. Holdyk, I. Arana, J. Holboell</i>	Design of the Control Algorithms for Photovoltaic Grid-Connected Renewable Agents using the hardware-in-the-loop simulation technique. <i>N. F. Guerrero-Rodríguez, A. B. Rey-Boué, S. de Pablo-Gómez</i>	10:30
10:50	Extension of a capacitance model for inductive medium voltage transformers. <i>C. Buchhagen, H. Däumling, L. Hofmann</i>	On fixed-point iterations for the solution of control equations in power systems transients. <i>C. F. Mugombozi, J. Mahseredjian, O. Saad</i>	10:50
11:10	Modeling and Simulation of the Multi-stage Saturable Magnetically Controlled Reactor with Very Low Harmonics. <i>X. Chen, B. Chen, C. Tian, J. Yuan</i>	Decentralized Model predictive control of Electrical Power Systems. <i>M. Kahl, T. Leibfried</i>	11:10
11:30	Modeling of Wind Turbine Transformers for the Analysis of Resonant Overvoltages. <i>A. H. Soloot, H. K. Høidalen, B. Gustavsen</i>	Fuzzy logic direct torque control with space vector modulation for asynchronous motor. <i>J. L. Azcue, A. J. S. Filho, E. Ruppert</i>	11:30
11:50	Time-domain distributed-parameter modeling of transformer windings for fast front transients. <i>P. Gómez, J. C. Escamilla, P. Moreno</i>	Set Point Adjustment Strategy for Mitigating Transients in a Microgrid. <i>C. Stone, A. Mehrizi-Sani</i>	11:50
12:10	Session Ends	Session Ends	12:10
12:30	Lunch (Totem Park Cafeteria)	Lunch (Totem Park Cafeteria)	12:30
1:30	<i>Authors/Chair Meeting (F1001)</i>	<i>Authors/Chair Meeting (F1222)</i>	1:30
	Transformers and Reactors II + TRV	Lightning Surges and Insulation Coordination I	
	<i>Chair: Alain Xemard</i>	<i>Chair: Bjørn Gustavsen</i>	
2:00	Comprehensive Study on Magnetization Current Harmonics of Power Transformers due to GICs. <i>S. A. Mousavi, C. Carrander, G. Engdahl</i>	FDTD Computations of Lightning-Induced Voltages in the Presence of Corona. <i>H. T. Tran, Y. Baba, N. Nagaoka, A. Ametani, N. Itamoto, V. A. Rakov</i>	2:00
2:20	Five-leg transformer model for GIC studies. <i>N. Chiesa, A. Lotti, H. K. Høidalen, B. Mork, Ø. Rui, T. Ohnstad</i>	Lightning Induced Overvoltages in Mixed 380 kV OHL-Cable-OHL connections. <i>G. Hoogendorp, M. Popov, L. van der Sluis</i>	2:20
2:40	Non-Intrusive Monitoring of Power Transformers based on Transient Signals Analysis using Wavelet Transform. <i>E. Gomez-Luna, G. Aponte, J. Pleite, C. Duarte, K. Goossen</i>	Cable Protection against Earth Potential Rise due to Lightning on a Nearby Tall Object. <i>U. S. Gudmundsdottir, C. F. Mieritz</i>	2:40
3:00	Control of unsymmetrical overvoltages during open pole condition on overhead transmission lines compensated at one end. <i>G. Gutiérrez</i>	Transient analysis of an earthing system during lightning strike exposure. <i>J. Liu, S. Madsen</i>	3:00
3:20	Analysis of Temporary Over-Voltages from Self-Excited Large Induction Motors in the Presence of Resonance - Case Studies. <i>T. Martinich, M. Nagpal, A. P. Bimbhra</i>	Computation of Lightning Electromagnetic Pulses Using the Constrained Interpolation Profile Method. <i>K. Kajita, Y. Baba, N. Nagaoka, A. Ametani</i>	3:20
3:40	Session Ends	Session Ends	
3:45	Coffee Break	Coffee Break	3:45
	Transmission Line and Cables	Lightning Surges and Insulation Coordination II	
	<i>Chair: Akihiro Ametani</i>	<i>Chair: Ivo Uglešić</i>	
4:00	Application of the MoM-SO Method for Accurate Impedance Calculation of Single-Core Cables Enclosed by a Conducting Pipe. <i>U. Patel, B. Gustavsen, P. Triverio</i>	Insulation Coordination for Lightning Transients Based on Energy Spectral Density. <i>J. L. Reis, A. B. Fernandes, J. G. Rolim</i>	4:00
4:20	A method for the evaluation of the Sea Return Impedance and application of the Stochastic Collocation Technique to take into account the uncertainty of input parameters. <i>A. Pagnetti, A. Xemard, P. Bonnet, F. Paladian, C. A. Nucci</i>	Lightning transient analysis in wind turbine blades. <i>A. C. Garolera, J. Holboel, S. F. Madsen</i>	4:20
4:40	Proximity effect in fast transient simulations of an underground transmission cable. <i>U. S. Gudmundsdottir</i>	Designing Insulation Coordination for Ultra High Voltage AC System by Analyzing Over Voltages using Frequency Dependent Line Modeling. <i>H. Tailor, S.K Joshi</i>	4:40
5:00	Field Measurement and Simulation of 132 kV Oil-Filled Submarine Cables. <i>B. Gustavsen, H. K. Høidalen, T. Ohnstad</i>	Study on Transient Magnetic Field in an Vehicle Body Caused by Nearby Lightning. <i>J. Kanata, A. Ametani, K. Yamamoto</i>	5:00
5:20	Accurate time domain simulation of frequency dependent transmission line models for large time steps. <i>H.M.J.S.P. De Silva, K.K.M.A. Kariyawasam, A. M. Gole, J. E. Nordstrom</i>	A Study on Lightning Surges due to Back Flashovers at Multiple Towers. <i>Y. Yamamoto, A. Ametani, O. Sakai, H. Yuasa</i>	5:20
5:40	Session Ends	Session Ends	5:40
6:30	Welcome Reception (Cecil Green Park House)	Welcome Reception (Cecil Green Park House)	6:30
9:30	Reception Ends	Reception Ends	9:30

Friday July 19

<p>8:00 <i>Authors/Chair Meeting (F1221)</i></p> <hr style="border: 1px solid red;"/> <p>F1 (1221)</p> <hr style="border: 1px solid red;"/> <p>Power Conversion, HVDC II</p> <hr style="border: 1px solid red;"/> <p><i>Chair: Sebastien Denetiere</i></p> <hr style="border: 1px solid green;"/> <p>8:30 Time-Domain Model of a Bidirectional Distribution Electronic Power Transformer. <i>S. Alepuz-Menéndez, F. González-Molina, J. Martín-Arnedo, J. A. Martínez-Velasco</i></p> <p>8:50 High frequent modelling of a modular multilevel converter using passive components. <i>W. Z. El-Khatib, J. Holbøll, T. W. Rasmussen</i></p> <p>9:10 Analysis of Transient Fault Currents in Multi-Terminal HVDC Networks during Pole-to-Ground Faults. <i>M. Bucher, C. Franck</i></p> <p>9:30 The Effect of Grid Topology on Transient Fault Currents in Multi-Terminal VSC-HVDC Offshore Networks. <i>M. Pfeiffer, M. Bucher, C. Franck</i></p> <p>9:50 Development of Reduced-Intensity Computer Models for Resonant Converters. <i>A. F. Darbandi, S. Filizadeh</i></p> <p>10:10 Session Ends</p> <hr style="border: 1px solid blue;"/> <p>10:15 Coffee Break</p> <hr style="border: 1px solid red;"/> <p>Inrush Currents, Ferroresonance</p> <hr style="border: 1px solid red;"/> <p><i>Chair: Bruce Mork</i></p> <hr style="border: 1px solid green;"/> <p>10:30 765 kV Power Transformer Losses Upon Energizations: A Comparison Between Field Test Measurements And EMTP-RV Simulations. <i>C. Morin, B. Khodabakhchian</i></p> <p>10:50 An EMTP - based analysis of the switching shift angle effect during energization/de - energization in the final ferroresonance state. <i>J. A. Corea-Araujo, F. González-Molina, J. A. Martínez-Velasco, J. A. Barrado-Rodrigo, L. Guasch-Pesquer</i></p> <p>11:10 Transformer Energization Studies with Uncertain Power System Configurations. <i>M. M. Duro, F. X. Zgainski, B. Caillaud</i></p> <p>11:30 Improvement of Transformer Saturation Modeling for Electromagnetic Transient Programs. <i>M. Salimi, A. M. Gole, R. P. Jayasinghe</i></p> <p>11:50 Ferroresonance phenomenon in CFE, its origin and effects. <i>E. Martínez, G. Antonova, M. Olguin</i></p> <p>12:10 Session Ends</p> <hr style="border: 1px solid blue;"/> <p>12:30 Pick Up Boxed Lunch at Walter Gage Commons Block</p> <hr style="border: 1px solid blue;"/> <p>1:15 Board Bus in front of Gage for Grouse Mountain Excursion and Banquet</p> <hr style="border: 1px solid blue;"/> <p>11:00 Excursion Ends</p>	<p><i>Authors/Chair Meeting (F1003)</i></p> <hr style="border: 1px solid green;"/> <p>F2 (1003)</p> <hr style="border: 1px solid red;"/> <p>Switching and Fault Transients IV</p> <hr style="border: 1px solid red;"/> <p><i>Chair: Fernando Moreira</i></p> <hr style="border: 1px solid green;"/> <p>Energization of the Half-Wavelength Transmission Trunk Considering the Occurrence of Single Phase Fault. <i>M. Paz, M. C. Tavares</i></p> <p>8:30 Electromagnetic Transients of On-board Passing Neutral Section in High-Speed Railway. <i>H. Li, Y. Fan, S. Yan, P. Ren, W. Wang, M. Wu, G. Li</i></p> <p>8:50 Measurement and simulation of the electromagnetic transients of lifting pantograph for an electric multiple units train. <i>D. Shi, M. Wu, H. Zhang, T. Li, H. Wang, K. Song</i></p> <p>9:10 Switching and Fault Transients of Unit Transformers of a Combined-Cycle Gas Turbine Generator. <i>M. Kizilcay, S. Demmig</i></p> <p>9:30</p> <p>9:50</p> <p>10:10 Session Ends</p> <hr style="border: 1px solid blue;"/> <p>10:15 Coffee Break</p> <hr style="border: 1px solid red;"/> <p>Switching and Fault Transients V</p> <hr style="border: 1px solid red;"/> <p><i>Chair: Pablo Gómez</i></p> <hr style="border: 1px solid green;"/> <p>Circuit Breaker TRV on a No-load AC Half-Wavelength Transmission Line. <i>J. B. Gertrudes, M. C. Tavares, E. G. Costa</i></p> <p>10:30 A Suitable Method for Line Controlled Switching. <i>K. Dantas, W. Neves, D. Fernandes Jr., L. Fonseca</i></p> <p>10:50 Sensor resonance and its influence on the measurement results of fast transients. <i>L. Kütt, M. Shafiq, M. Lehtonen, H. Mölder, J. Järvi</i></p> <p>11:30 Solving zero-miss with cable energisation at voltage peak, based on insulationcoordination study results. <i>U. S. Gudmundsdottir, P. B. Holst</i></p> <p>11:50</p> <p>12:10 Session Ends</p> <hr style="border: 1px solid blue;"/> <p>12:30 Pick Up Boxed Lunch at Walter Gage Commons Block</p> <hr style="border: 1px solid blue;"/> <p>Board Bus in front of Gage for Grouse Mountain Excursion and Banquet</p> <hr style="border: 1px solid blue;"/> <p>11:00 Excursion Ends</p>
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Friday July 19

<p>8:00 <i>Authors/Chair Meeting (F1001)</i></p> <hr style="border: 1px solid red;"/> <p>F3 (1001)</p> <hr style="border: 1px solid red;"/> <p>Real-time Simulators I</p> <hr style="border: 1px solid red;"/> <p><i>Chair: Jose Luis Naredo</i></p> <hr style="border: 1px solid green;"/> <p>8:30 Methodologies for Power Protection Relay Testing : From Conventional to Real-Time Hardware-in-the-Loop (HIL) Simulation Approaches. <i>M. S. Almas, L. Vanfretti</i></p> <p>8:50 FPGA-based Implementation of Modular Multilevel Converter Model for Real-time Simulation of Electromagnetic Transients. <i>M. Matar, D. Paradis, R. Iravani</i></p> <p>9:10 Setup and Performance of the Real-Time Simulator used for Hardware-in-loop-Tests of a VSC Based HVDC scheme for Offshore applications. <i>O. Venjakob, R. Hibberts-Caswell, S. Kubera, P. Forsyth, T. Maguire</i></p> <p>9:30 Detailed Full-Bridge Modular Multilevel STATCOM Modeling for Real-Time Commissioning Studies. <i>P. Le-Huy, O. Tremblay, P. Giroux, J.C. Soumagne, D. McNabb</i></p> <p>9:50</p> <p>10:10 Session Ends</p> <hr style="border: 1px solid blue;"/> <p>10:15 Coffee Break</p> <hr style="border: 1px solid red;"/> <p>Real-time Simulators II</p> <hr style="border: 1px solid red;"/> <p><i>Chair: Mazana Armstrong</i></p> <hr style="border: 1px solid green;"/> <p>10:30 RTDS Studies for the Twenties OLC. <i>M. Erixon, J. Hidalgo, J. Martin, R. Rivas, C. Rodriguez, J. Soto, L.Wall</i></p> <p>10:50 Real-time Digital Simulation based on Sparse Transmission Line Model. <i>W. Boaventura</i></p> <p>11:10 Efficient Techniques for Real Time Simulation of MMC Systems. <i>T. Maguire, B. Warkentin, Y. Chen, J. P. Hasler</i></p> <p>11:30 Real-time electromagnetic and transient stability simulations for active distribution networks. <i>V. Jalili-Marandi, F. J. Ayres, C. Dufour, J. Belanger</i></p> <p>11:50 Real Time simulation of MMCs using the Combined State-Space Nodal Approach. <i>H. Saad, C. Dufour, J. Mahseredjian, S. Denetiere, S. Nguéfeu</i></p> <p>12:10 Session Ends</p> <hr style="border: 1px solid blue;"/> <p>12:30 Pick Up Boxed Lunch at Walter Gage Commons Block</p> <hr style="border: 1px solid blue;"/> <p>1:15 Board Bus in front of Gage for Grouse Mountain Excursion and Banquet</p> <hr style="border: 1px solid blue;"/> <p>11:00 Excursion Ends</p>	<p><i>Authors/Chair Meeting (F1222)</i></p> <hr style="border: 1px solid green;"/> <p>F4 (1222)</p> <hr style="border: 1px solid red;"/> <p>Simulation Tools I</p> <hr style="border: 1px solid red;"/> <p><i>Chair: Mario Paolone</i></p> <hr style="border: 1px solid green;"/> <p>Dynamic Model Reduction of Large Power Systems Based On Coherency Aggregation Techniques and Black-Box Optimization. <i>M. M. Bayoumi, N. Fernandopulle, A. Maria</i> 8:30</p> <p>Simplified Voltage-Behind-Reactance Saturable Synchronous Machine Model for State-Variable-Based Transient Simulation Programs. <i>F. Therrien, M. Chapariha, H. Atighechi, J. Jatskevich</i> 8:50</p> <p>Simulations for Validation of a Black Start Restoration Plan using PSCAD. <i>J. Hu, B. Bisewski</i> 9:10</p> <p>Implementation of Communication Network Components for Transient Simulations in PSCAD/EMTDC. <i>S. Menike, P. Yahampath, A. Rajapakse</i> 9:30</p> <p>Electromagnetic Transient Simulation of Large-Scale Electrical Power Networks Using Graphics Processing Units. <i>J. Debnath, A. Gole, W. K. Fung</i> 9:50</p> <p>Session Ends 10:10</p> <hr style="border: 1px solid blue;"/> <p>Coffee Break 10:15</p> <hr style="border: 1px solid red;"/> <p>Simulation Tools II</p> <hr style="border: 1px solid red;"/> <p><i>Chair: Akihiro Ametani</i></p> <hr style="border: 1px solid green;"/> <p>MATLAB Program for Systematic Simulation over a Transmission Line in Alternative Transients Program. <i>G. D. Guidi-Venerdini, F. E. Pérez-Yauli</i> 10:30</p> <p>The History and Recent Trends of Transient Analysis in Transmission Lines. <i>A. Ametani</i> 10:50</p> <p>Efficient Application of Parallel Processing with Standard Tools for Electromagnetic Transients Simulation. <i>H. Medeiros de Barros, A. de Castro, R. N. F. Filho, M. Groetaers dos Santos, C. F. T. Soares</i> 11:10</p> <p>Implementation of Induction Machine VBR Model with Optional Zero-Sequence in SimPowerSystems, ASMG, and PLECS Toolboxes. <i>M. Chapariha, F. Therrien, J. Jatskevich, H. W. Dommel</i> 11:30</p> <p>A multirate approach to combine electromagnetic transients and fundamental-frequency simulations. <i>F. Plumier, C. Geuzaine, T. Van Cutsem</i> 11:50</p> <p>Session Ends 12:10</p> <hr style="border: 1px solid blue;"/> <p>Pick Up Boxed Lunch at Walter Gage Commons Block 12:30</p> <hr style="border: 1px solid blue;"/> <p>Board Bus in front of Gage for Grouse Mountain Excursion and Banquet 1:15</p> <hr style="border: 1px solid blue;"/> <p>Excursion Ends 11:00</p>
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Saturday July 20

8:00	Authors/Chair Meeting (F1221)	Authors/Chair Meeting (F1001)	8:00
	F1 (1221)	F2 (1001)	
	Circuit Breakers	System Protection, Fault Location I	
	Chair: Marjan Popov	Chair: Murari Mohan Saha	
8:30	Autotransformer Inadvertent Energization Through Circuit Breakers Gradient Capacitors. E. Martinez, E. Godoy, R. Ruelas	Development of a Methodology for Evaluating the Reliability of Transformer Differential Protection Function Based on Monte Carlo Method. J. R. da Mata-Soares-de-Souza, C. S. P. Filho, A. R. De-Conti	8:30
8:50	Switching transients in 400 kV transmission network due to circuit breaker failure. S. Bojić, I. Uglešić, B. Filipović-Grčić	Transmission Line Protection Using Discrete Wavelet Transform and Support Vector Machine. A. Saber, A. Emam, R. Yamer	8:50
9:10	Medium Voltage Laboratory for Load Break Switch Development. E. Jonsson, M. Runde	Test Bed for Cascading Failure Scenarios Evaluation. A. Abdullah, A. Esmailian, G. Gurralla, P. Dutta, T. Popovic, M. Kezunovic	9:10
9:30	Investigation of Arc Parameters in Serially-Connected 3 Arc Model. T. Koshizuka, K. Udagawa, T. Iijima, T. Uchii, T. Shinkai, T. Mori	Real-Time Implementation of a Fault-location Algorithm for Homogeneous Systems. J. C. Pequeña-Suni, J. A. Martinez-Velasco, J. Mahseredjian, O. Saad, E. Ruppert	9:30
9:50	New Requirements for the Application of Generator Circuit-Breakers. M. Palazzo, M. Delfanti	Online Fault Location on AC Cables in Underground Transmission Systems using Sheath Currents. C. F. Jensen, K. Nanayakkara, A. Rajapakse, U. Gudmundsdottir, C. L. Bak	9:50
10:10	Session Ends	Session Ends	10:10
10:15	Coffee Break	Coffee Break	10:15
	Solution Methods I	System Protection, Fault Location II	
	Chair: Taku Noda	Chair: Maria Cristina Tavares	
10:30	Application of Frequency-Dependent Network Equivalents for EMTF Simulation of Transformer Inrush Current in Large Networks. Y. Vernay, B. Gustavsen	Real-Time Evaluation of PMU-Based Fault Locators. F. Lopes, Y. Melo, D. Fernandes Jr., W. Neves	10:30
10:50	Frequency Domain Transient Analysis of Resonant Behavior for Different HV Overhead Line and Underground Cable Configurations. L. Wu, P. Wouters, F. Steennis	ATP-EMTP Investigation of Two-End Synchronized Fault Location on Transmission Lines not Requiring Line Parameters. P. Dawidowski, P. Balcerak, J. Izykowski, E. Rosolowski	10:50
11:10	Using Local Grid and Multi-core Computing in Electromagnetic Transients Simulation. R. Singh, A. M. Gole, C. Muller, P. Graham, R. Jayasinghe, B. Jayasekera, D. Muthumuni	Swift Detection of Power Transformer Inrush Current Based on the Windowed - Adaptive Linear Combiner Estimation Algorithm. A. Tavighi, S. Soleymani, J. R. Marti, H. Abdollahzadeh	11:10
11:30	Exploiting Latency in Frequency Dependent Networks Equivalents. A. C. Lima, F. Camara, F. Moreira	The Effects of the Fault Inception Angle in Fault-Induced Transients on Series Compensated and Non-Compensated Transmission Lines. A. H. P. Sobrinho, F. B. Costa, B. A. de Souza	11:30
11:50		Phase Angle Pattern Classifier for Differential Protection of Power Transformers. A. Hosny, V. Sood	11:50
12:10	Session Ends	Session Ends	12:10
12:30	Lunch (Totem Park Cafeteria)	Lunch (Totem Park Cafeteria)	12:30
1:30	Authors/Chair Meeting (F1221)	Authors/Chair Meeting (F1001)	1:30
	Solution Methods II	System Protection, Fault Location III	
	Chair: Washington Neves	Chair: Unnur Stella Gudmundsdottir	
2:00	Parallel-in-space-and-time scheme for implicitly coupled electromechanical and electromagnetic transients simulation. S. Abhyankar, A. Flueck	An Integrated Technique for Fault Location and Section Identification in Distribution Systems. D. da Silva Gazzana, G. D. Ferreira, A. Bretas, A. L. Bettiol, A. Carniato, L. F. N. Passos, A. H. Ferreira, J. E. M. Silva	2:00
2:20	A Novel Method for the Optimal Parameter Selection of Discrete-Time Switch Model. R. Razzaghi, C. Foti, M. Paolone, F. Rachidi	Effect of Subharmonic Frequencies in Phasor Estimation Algorithms for Distance Protection of Series Compensated Transmission Lines. D. Moura, F. Moreira, K. Silva	2:20
2:40	Modeling and Analysis of an Induction Machine Soft-Starters Interconnected to a Power Cable Using Frequency Domain Equivalents. J. de Jesús-Chávez, M. Madrigal, P. G. Vite	Protection Scheme For Single-Phase Fault Along A Half Wavelength Transmission Trunk Using Conventional Relay. E. Gomes, M. C. Tavares, C. Floriano	2:40
3:00	On the Inclusion of Nonlinear Conditions in Numerical Laplace Transform Analysis. C. Villanueva, P. Moreno, A. Ramirez, P. Gómez, J. L. Naredo	Using of Conventional Relays for Protecting Half-Wavelength Transmission Line from Three-Phase Faults. R. G. Fabián E., M. C. Tavares	3:00
3:20	Supplementary Techniques for 2S-DIRK-Based EMT Simulations. T. Noda, T. Kikuma, R. Yonezawa	Transmission Lines Fault Location Based on High-Frequency Components Technique: a general formulation for estimation of the dominant frequency. L. Lurinic, R. Ferraz, É. Guimarães, A. Bretas	3:20
3:40	Session Ends	Session Ends	3:45
3:45	Coffee Break	Coffee Break	
	Solution Methods III	System Protection, Fault Location IV	
	Chair: Jean Mahseredjian	Chair: Chul-Hwan Kim	
4:00	Transient Characteristics of a Vertical Grounding Electrode — Experimental Observations and FDTD Simulations. K. Nakamura, A. Ametani, N. Nagaoka, Y. Baba	High Impedance Fault Detection and Location Based on Electromagnetic Transient Analysis. W. Santos, F. Lopes, B. Souza, W. Neves, N. Brito	4:00
4:20	Custom-Coded Models in the State Space Nodal Solver of ARTEMIS. C. Dufour, H. Saad, J. Mahseredjian, J. Bélanger	An Efficient Algorithm for Fault Location on Mixed Line-Cable Transmission Corridors. M. Popov, G. Rietveld, Z. Radojević, V. Terzija	4:20
4:40	Estimation of the Short Circuit Ratio and the Optimal Controller Gains Selection of a VSC System. J. Z. Zhou, A. M. Gole	ATP-EMTP study of current differential protection with synchronization and fault location functions. M. M. Saha	4:40
5:00	Implementation of the parametric variation method in an EMTF program. A. Holdyk, J. Holboell	Modern approach to pole slip protection. A. Burek, J. Krata, J. Altonen	5:00
5:20	Application of Magnitude Vector Fitting for approximating modal propagation function from the frequency spectrum data of underground cables. N. Goswamy, I. Kocar	The Tool supported Detection of Faulted Section and Fault Locator in HVDC lines. A. Burek, T. Sikorski, J. Rezmer	5:20
5:40	Session Ends	Session Ends	5:40
5:45	Closing Ceremony (F1005)		5:45
6:15	Closing Ends		6:15
6:45	Reception MOA	Reception MOA	6:45
9:30	Reception Ends	Reception Ends	9:30

Saturday July 20

8:00 Authors/Chair Meeting (F1003)

F3 (1003)

System Dynamics I

Chair: Bruce Mork

- 8:30 Immunity to voltage dips for synchronous motors. *P. Marini*
- 8:50 Investigation of Turbine Generator Shaft Torsional Interaction with Self-commutated Converter. *M. Watanabe, H. Iki, Y. Uriu, Y. Mitani, Y. Kado*
- 9:10 Impact of transformer saturation from GIC on power system voltage regulation. *L. Gérin-Lajoie, S. Guillon, J. Mahseredjian, O. Saad*
- 9:30 A Comparison of Different Signal Selection Options and Signal Processing Techniques for Sub-synchronous Resonance Detection. *Y. Xia, B. Johnson, N. Fischer, H. Xia*
- 9:50 On Assessing the Risk of SSR Related Torque Amplification in Series Compensated Networks. *P. Vuorenää, T. Rauhala, P. Järventausta, E. Acha*
- 10:00 Session Ends

10:15 Coffee Break

System Dynamics II

Chair: Brian Johnson

- 10:30 An Adaptive Aggregation Algorithm for Power System Dynamic Equivalencing in Transient Stability Studies for Future Energy Grids. *S. Zadkhast, J. Jatskevich, E. Vaahedi, A. Alimardani*
- 10:50 Sensitivity Analysis on Turbine - Generator Shaft Torque in 154 kV Transmission System. *J.K. Park, Y.S. Oh, H.C. Seo, C.H. Kim*
- 11:10 Modeling of a Synchrophasor Measurement Unit in an Electromagnetic Transient Simulation Program. *D. R. Gurusinghe, A. Rajapakse, D. Muthumuni*
- 11:30 Assessment of Transient Stability using Rate of Change of the ISE in Transmission System. *G.H. Gwo, J.K. Park, Y.S. Oh, S.B. Kang, H.C. Seo, C.H. Kim, T. Funabashi*
- 11:50
- 12:10 Session Ends

12:30 Lunch (Totem Park Cafeteria)

1:30 Authors/Chair Meeting (F1003)

Harmonics and Power Quality

Chair: Neville Watson

- 2:00 Defining and Measuring AC Frequency Based on Symmetry Principles. *K. Seki*
- 2:20 A Case Study on the Power Quality Issues in the Hospitality Sector. *G. Navaneethkrishnan, C. Muthial, S. Chenniappan*
- 2:40 Investigation of Power Quality at a Distribution Network in Brunei Darussalam. *Z. Zainal, S. P. Ang, M. A. Salam, P. J. Weira, P. H. Petra, R. Goh*
- 3:00 Simulation and control of Harmonics in Ship Networks. *G. Ackermann*
- 3:20 Alleviating Harmonic and Reactive Power Issues in Smart Grid Based on the Implementation of the Instantaneous p - q Power Theory under Unbalanced and Distorted Supply Voltages. *M. Shahbaz, N. Jelani, M. Molinas*
- 3:40 Session Ends

3:45 Coffee Break

Parameter Identification

Chair: Juan A. Martinez-Velasco

- 4:00 Finite element calculation of leakage resistance and distributed capacitance of rail to earth in ballastless track. *T. Li, M. Wu, F. He, K. Song*
- 4:20 MOSA Monitoring Based on Analysis of the Total Leakage Current by SOM Networks. *G. Lira, E. Costa*
- 4:40 A Novel Approach for Ringdown Detection Using Extended Kalman Filter. *M. Yazdaniyan, A. Mehrizi-Sani, M. Mojiri*
- 5:00 A Method for Adaptive Time - Synchronized Measurement during Transients. *K. Görner, M. Lechtenberg, C. Rehtanz, J. Götze*
- 5:20 Comparison of Black-Box Modeling Approaches for Transient Analysis: A GIS substation case study. *G. H. C. Oliveira, S. D. Mitchell*
- 5:40 Session Ends

5:45 Closing Ceremony (F1005)

6:15 Closing Ends

6:45 Reception MOA

9:30 Reception Ends