IPST '99 TECHNICAL PROGRAM

1 NEW TOOLS, NEW TECHNIQUES

NETOMAC - Calculating, Analyzing and Optimizing the Dynamic of Electrical Systems in Time and Frequency Domain
99 IPST 062–A1   B. Kulicke, E. Lerch, O. Ruhle, W. Winter   (Germany)

ATPDraw - Graphical Preprocessor to ATP - Windows Version
99 IPST 065–A2   Hans Kr. Høidalen, L. Prikler, J.L. Hall   (Norway)

A Comparison Between Three Tools for Electrical Transient Computations
99 IPST 013–A3   P.H. Schavemaker, A. de Lange, L. van der Sluis   (The Netherlands)

Preprocessor for EMTP Power Transformer Models
99 IPST 113–6.1   Juan A Martinez-Velasco, F. Gonsales-Molina, Bruce A. Mork   (Spain)

Database of Power System Parameters for Data Validation in EMTP Studies: Overhead Transmission Line Application
99 IPST 087–6.2   M.B. Selak, J.R. Martí, H.W. Dommel   (Canada)

Proposal of Circuit Description Language
99 IPST 023–6.3   Taku Noda   (Japan)

2 TRANSMISSION LINES

Z-Domain Frequency-Dependent Network Equivalent for Electromagnetic Transient Studies
99 IPST 067–1.1   N. R. Watson, A.M. Gole, G. D. Irwin, O. Nayak   (New Zealand)

Frequency-Dependent Low Order Approximation of Transmission Line Parameters
99 IPST 054–1.2   Alécio B. Fernandes, Washington L.A. Neves   (Brazil)

Quasi-Modes Three-Phase Transmission Line Model - Comparison with Existing Frequency Dependent Models
99 IPST 103–1.3   M.C. Tavares, J. Pissolato, C.M. Portela   (Brazil)

An Examination of a Phase Domain Modeling of Untransposed Transmission Lines
99 IPST 079–1.4   Tomoatsu Ino, Masahiro Sekita, Junji Sawada   (Japan)

Transmission Line Models for the Simulation of Interaction Phenomena Between Parallel AC and DC Overhead Lines
99 IPST 002–1.5   B. Gustavsen, G. Irwin, R. Mangelrød, D. Brandt, K. Kent   (Norway)

3 SOLUTION METHODS

Computational Methods for EMTP Steady-State Initialization
99 IPST 129–2.1   J.A. Martinez-Velasco   (Spain)

Combined Iteration Algorithm for Nonlinear Elements in Electromagnetic Transient Simulation
99 IPST 038–2.2   K. Yamamoto, G. Irwin, O. Nayak, A. Ametani   (Canada)

Modeling Power Systems with General Difference Equations - A Systematic Formulation
99 IPST 060–2.3   B.R. Oswald, M.A. Pöller   (Germany)

Augmented State-Space Formulation for the Study of Electric Networks Including Distributed-Parameter Transmission Line Models
99 IPST 073–2.4   Leonardo T.G. Lima, Nelson Martins, Sandoval Carneiro Jr.   (Brazil)

Representation of Electrical Signals by a Series of Exponential Terms
99 IPST 068–2.5   M. Alaoui Ismaili, A. Xémard   (France)

4 SWITCHING SURGES

Theoretical Formulation of a Transient Recovery Voltage when Clearing a Transformer Secondary Fault
99 IPST 005–3.1 A. Ametani, N. Kuroda, T. Tanimizu, H. Hasegawa, H. Inaba (Japan)

Transient Recovery Voltages When Clearing a Fault in Presence of Series Limitation Reactors
99 IPST 089–3.2 D. Santos, G. Cabriel (France)

Assessing Distribution System Transient Overvoltages due to Capacitor Switching
99 IPST 029–3.3 D.Daniel Sabin, Thomas E. Grebe, Ashok Sundaram (USA)

Vacuum Breaker Induced Overvoltages in Induction Motor Circuits
99 IPST 075–3.4 Y.S. Yuen, L.A. Snider, D.F. Peelo (P.R.O.C.)

Simulation of Commutation Spikes and Measurement of the Voltage Distribution and Interturn Voltages in a Synchronous Generator Due to Rectifier Loads
99 IPST 009–3.5 A.Kunakorn, J. Hiley, K.S. Smith (UK)

Transient Phenomena at Energization and Deenergization of Capacitor Banks
99 IPST 025–3.6 P. Vukelja, J. Mrviæ, M. Senæaniæ, D. Hrviæ, D. Raduloviæ (Yugoslavia)

A Real Case of Current Chopping Overvoltage
99 IPST 117–16.1 J.C. Oliveira, O.C.N. Souto, A.L.A. Vilaca (Brazil)

Switching Overvoltages on 400 and 750 kV Romanian Transmission Lines
99 IPST 039–16.2 Liliana Oprea, Corneliu Velicescu (Romania)

The Energy Absorption Capacity of Metal Oxide Surge Arresters - An Approach for Switching Surges
99 IPST 104–16.3 Manual L.B. Martinez, Luiz Cera Zanetta Jr. (Brazil)

Overvoltages Limitation in the 400 kV Nord Transilvania Network
99 IPST 115–16.4 Liana Cipcigan, K. S. Smith, J. Hiley (Romania)

Energization of 380-kV Partial Networks for the Purpose of Fast Blackstart after System Collapse
99 IPST 107–20.1 Mustafa Kizilcay, Stefan Groninger, Martin Losing (Germany)

Digital Simulation of the Fault Transient Phenomena on EHV Transmission Lines under Non-Linear High Impedance Arcing Faults
99 IPST 001–20.2 C.H. Kim, R.K. Aggarwal, A.T. Johns (UK)

Electromagnetic Transient Components Induced by Faults in Different Coupled Transmission Line
99 IPST 100–20.3 M. Kielbon, P. Sowa (Poland)

The Simulation of High Speed Grounding Switches for the Rapid Secondary Arc Extinction on 765 kV Transmission Lines
99 IPST 017–20.4 C.H. Kim, S.P. Ahn (Korea)

Overvoltages During Switching of 400 kV, 220 kV and 110 kV Circuit-Breakers in High Voltage Networks
99 IPST 022–20.5 Z. Zdravkoviæ, P. Vukelja, R. Naumov, M. Vuèiniæ (Yugoslavia)

Generator Dynamics Influence on Currents Distribution in Fault Condition
99 IPST 082–20.6 D. P. Stojanovic, J. Nahman, M. Veselinovic (Yugoslavia)

5 NEW PROTECTION TECHNIQUES

New SIMULINK Libraries for Modeling Digital Protective Relays and Evaluating Their Performance Under Fault Transients
99 IPST 033–D2 Bogdan Kasztenny, Mladen Kezunovic (USA)

Modeling Fault Conditions for Parallel Series-Compensated Lines
99 IPST 021–11.1 M.M. Saha, E. Rosolowski, J. Izykowski, B. Kasztenny (Sweden)

6   GENERATORS, MACHINES

Adjustable Speed Hydro Machine Applied for Improved Utilisation of Power Networks
99 IPST 071–14.2   Ronald Sporild, Jan Ove Gjerde, Terje Gjengedal   (Norway)

Analysis of Self-Excitation in the Palmar Hydroelectric Power Plant
99 IPST 070–14.3   Claudio Saldaňa, Graciela Calzolari   (Uruguay)

Transient Analysis of Electrical Machines by Differential Taylor Transform
99 IPST 081–14.4   M.S. Mamis, T. Abbasov, S. Herdem, M. Koksal   (Turkey)

7   SHIELDING AND GROUNDING

Mitigation of EMI in High Voltage Substation Environment by use of Wiring Cables with Improved Screening Effectiveness
99 IPST 127–7.1   Gy. Varjú, F. Szilágyi, J. Németh   (Hungary)

Calculation of Frequency-Dependent Parameters of Power Cable Arrangements Using Pixel-Shaped Conductor Subdivisions
99 IPST 088–7.2   R.A.Rivas, J.R. Martí   (Canada)

Electromagnetic Transients in Large and Complex Grounding Systems
99 IPST 124–7.3   Leonid Grcev, Vesna Arnautovski   (Republic of Macedonia)

Modelling of Long Grounding Conductors Using EMTP
99 IPST 093–7.4   M.I. Lorentzou, N.D. Hatziargyriou   (Greece)

8   LIGHTNING SURGES, OVERVOLTAGES

Sensitivity Analysis of Induced Overvoltage by Lightning Stroke Near Distribution System Using ATP-EMTP
99 IPST 024–B1   R. Montano, A. Cordero, J. Ramírez, M. M. Lozano   (Venezuela)

Lightning Induced Overvoltages on Multiconductor Overhead Lines
99 IPST 126–B2   M.T. Correia de Barros, J. Festas, M.E. Almeida   (Portugal)

Calculation of Lightning-Induced Overvoltages using MODELS
99 IPST 064–B3   Hans Kr. Høidalen   (Norway)

Probability Density Function of the Lightning Crest Current at Ground Level - Estimation of the Lightning Strike Incidence on Transmission Line
99 IPST 055–B4   R. Lambert, A. Xémard, G. Fleury, E. Tarasiewicz, A. Morched   (France)

Lightning Overvoltages: Statistical Study of a 550-kV Substation
99 IPST 099–10.1   P. Bergin, J.C. Poirot, C. Delaporte, C. Andrieu   (France)

Incoming Lightning Surge Analysis Considering Return Stroke Parameters
99 IPST 035–10.2   S.Sekioka, T.Ueda, I.Matsubara, S.Kojima   (Japan)

Numerical Evaluation of Lightning Stress on High Voltage Substations
99 IPST 052–10.3   S Pack, Y. Wamser   (Austria)

Calculations of Overvoltages in the Generator Electrical Circuit of a Power Station
99 IPST 074–10.4   Ivo Uglešiæ, Zlatko Maljkoviæ, Lj. Kuterovac   (Croatia)

Lightning Protection of Transformers Supplied by Underground Cables
99 IPST 128–10.5   D.O. C. Brasil, P.A. Brunheroto, E.L. Ferrari, J.J.S. Oliveira, C.M.V. Tahan   (Brazil)
Computation of Lightning Overvoltages Using Nonuniform, Single-Phase Line Model
99 IPST 095–13.1   M.S. Mamis, M. Koksal   (Turkey)

Induced Overvoltage Analysis by Lightning Stroke Near Distribution System TACS-EMTP
99 IPST 020–13.2   R. Montano, A. Hernández, A.J. Urdaneta, J. Rodríguez, M. Martínez   (Venezuela)

Transients in Transformer Windings
99 IPST 090–13.3   Tomas Hasman   (Czech Republic)

Development and Application of Surge Measuring System for 550kV Substations
99 IPST 056–13.4   T. Yamada, T. Shioda, T. Narita, T. Chiba, N. Harigaya, Y.Sato,   (Japan)

9   TRANSFORMERS, INRUSH, FERRORESONANCE

10   CIRCUIT BREAKER AND ARC MODELS

11   POWER ELECTRONICS, FACTS, SVC, HVDC

Dynamic Analysis of UPFC Using Transient Simulation
99 IPST 118–C3   R. Caldon, P. Mattavelli, B.M. Han   (Italy)

ATP Simulation of Switching Transients in ASD Systems Including Cable Modeling and Algorithm for Damping Overvoltage Problem
99 IPST 046–15.1   Eduardo Cano Plata, Oscar Trad, Guiseppe Ratta   (Argentina)

Determination of Location of FACTS Devices using Fuzzy Decision Making
99 IPST 094–15.2   Mustafa Bagriyanik, Hasan Dag   (Turkey)

Controller Modelling in Electromagnetic Transient Simulations
99 IPST 105–15.3   N.R. Watson, G.D. Irwin, O. Nayak   (New Zealand)

HVDC Ring Modelling and Simulation - A New State Equation Development Algorithm for Modelling
99 IPST 123–15.4   R. Mienski, T. Siewierski   (Poland)

Transient Behavior of Harmonics Filter Operation in a Railway Network
99 IPST 077–19.1   M. Barbieri, S. Achilles, R. Bianchi Lastra, J. Barbero   (Argentina)

Transient Studies of the Static VAR Compensator of San Lorenzo - Paraguay
99 IPST 102–19.2   Alfredo J. M. Szostak, Andrés Ramirez, Manuel L. B. Martinez   (Brazil)

Modelling Static Watt-Var Compensators using ATP
99 IPST 047–19.3   M. Ceraolo   (Italy)

Performance of Static VAR Compensators in Degradated Transmission System Conditions: Dynamic Studies Versus Electromagnetic Transient Studies
99 IPST 051–19.4   M. Correia Lima, Álvaro J.P. Ramos, Francisco. J. de A. Baltar   (Brazil)

A Frequency Domain Model for Evaluating Dynamic Compensator Response
99 IPST 084–19.5   Petrus H. Swart   (South Africa)

Equivalent Circuits of Power Electronic Converters
99 IPST 007–23.1   D. Nelles, C. Tuttas   (Germany)

An Efficient Technique for Determining the Responses of Nonlinear Circuits
99 IPST 045–23.2   S.R. Naidu, W.J. Trindade   (Brazil)

Earth Leakage Current in an Isolated Power System with Power Electronic Converters
99 IPST 010–23.3   L. Ran, K.S. Smith   (UK)

Comparison of Traditional and Thyristor-controlled Fault Current Limiters for Medium Voltage Application
99 IPST 125–23.4   András M. Dán, László Prikler   (Hungary)

Effect Analysis of Thyristor Controlled Ground Fault Current Limiting System for Undergrounded Power Distribution Systems
99 IPST 037–23.5   S. Sugimoto, I. Kouda, H. Arita, J. Kida, Y. Matsui   (Japan)

12 POWER QUALITY, HARMONICS, FLICKER

Diagnostic Tool for the Evaluation of Power Quality Events Related to Utility Capacitor Switching
99 IPST 030–4.1   Lee King, Thomas E. Grebe, Siddharth C. Bhatt   (USA)

Transient Analysis of Voltage Dips in MV Distribution Networks
99 IPST 083–4.2   A. Barone Barone, A. Campoccia, V. Cataliotti, M Inzerillo   (Italy)

Harmonics and Flicker Analysis in Arc Furnace Power Systems
99 IPST 072–4.3   J. Sousa, M.T. Correia de Barros, M. Covas, A. Simoes   (Portugal)

Flicker Transient Phenomena Encountered with Diesel Powered Embedded Generation
99 IPST 091–4.4   M.A. Redfern, D.A. Briggs   (UK)

Analysis and Control of Harmonic Overvoltages during System Restoration
99 IPST 012–8.1   D.Lindenmeyer, H.W. Dommel, A. Moshref, P. Kundur   (Canada)

Studying Harmonic Problems Using a Descriptor System Approach
99 IPST 036–8.2   S.L. Varricchio, N. Martins, Leonardo T.G. Lima, Sandoval Carneiro Jr.   (Brazil)

Evaluating Sources of Distortion: Applying Czarnecki's Power Definitions for Nonsinusoidal Situations as Discriminative Distortion Source Evaluators
99 IPST 096–8.3   A.P.J. Rens, M.J. Case   (South Africa)

Harmonic Analysis of 110 kV Filter Facility in Power System of Eastern Croatia Using "EasyPower Spectrum" Program
99 IPST 130–8.4   S. Nikolovski, L. Józsa M. Kalea   (Croatia)

Harmonic Propagation on Overhead Transmission Lines Operating in Unbalanced Power Systems
99 IPST 086–8.5   S. Ioan, S. Hurdubetiu, B. Angheluta   (Romania)

13 REAL TIME SIMULATORS

Real - Time Simulator ARTEMAC for Enhanced Automated Interactive Testing of Digital Relays
99 IPST 061–D1   E. Lerch, O. Ruhle, W. Winter, B. Kulicke, H.-D. Pannhorst   (Germany)

Real-Time Power System Simulator on a PC Cluster
99 IPST 043–D3   Y. Fugimoto, Y. Bin, H. Taoka, H. Tezuka, S. Sumimoto, Y. Ishikawa   (Japan)

Real Time, Oscillation Free Network Digital Simulation
99 IPST 032–D4   Jacques Szczupak, Carlos A. Duque   (Brazil)