



Information

[Summary](#)
[Agenda](#)
[Staff](#)
[Accommodations](#)
[Directions to Jacobs School of Engineering](#)

Open Distribution System Simulator Tutorial

Agenda

Tuesday, December 14, 2010

8:30 AM - 9:00 AM	Introduction to Open Distribution System Simulator Background and where Open Distribution System Simulator fits into EPRI research programs.
9:00 AM - 9:30 AM	Introduction to Uses and Applications Program concept and examples of how the program has been used to give students an idea of what kinds of analyses can be done with it
9:30 AM - 10:00 AM	Getting Started Installation and basic usage
10:00 AM - 10:15 AM	Break
10:15 AM - 10:45 AM	Open Distribution System Simulator Architecture and Circuit Modeling Basics Description of basic circuit elements, bus models, etc.
10:45 AM - 11:00 AM	Power Flow and Harmonic Solution Modes A brief explanation of how the basic solution algorithm works.
11:00 AM - 12:00 PM	Scripting Basics Syntax and how to build circuit models. A simple example is built and discussed.
12:00 PM - 1:00 PM	Lunch Break
1:00 PM - 2:30 PM	Scripting for Larger Circuits How to organize scripts for larger problems Examination of how the IEEE 8500-Node Test Feeder model is organized. (Class exercise)
2:45 PM - 3:30 PM	Loadshapes and Smart Grid Simulations How to use the OpenDSS Loadshape capability and simulate various time-series phenomena related to Smart Grid simulations.
3:30 PM - 4:00 PM	Intrinsic Simulation Modes Discussion of the various solution modes built into the Open Distribution System Simulator.
4:00 PM - 5:00 PM	Questions and Hints A wrap up discussion of various questions users typically have and hints for specific issues, as time allows.
5:00 PM	Adjourn for the Day

Wednesday, December 15, 2010

8:30 AM - 10:00 AM	Custom Simulations An introduction into how to implement your own solution modes through scripts and an introduction to the Open Distribution System Simulator COM interface.
9:45 AM - 12:00 PM	Using the Open Distribution System Simulator COM Interface Continuing presentation on driving the Open Distribution System Simulator from another program via its COM interface for customized simulations. Illustrations in Excel and Matlab.
12:00 PM - 1:00 PM	Lunch Break
1:00 PM - 3:00 PM	Examples Examples of actual case studies and applications, including: <ul style="list-style-type: none"> • Distribution Loss Studies • Evaluating Impacts of Plug-in Hybrid Electric Vehicles (PHEV) Penetration

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