

POWER SYSTEM OPERATIONS IT SYSTEMS (DSO AND TSO)

תיאור הקורס

Perhaps more than other industries, engineering for energy has become an increasingly complex process with demands for digitalisation and interconnected services and products in increasing. Thus, a fundamental understanding of utitilies applications and energy digitalisation is essential for all systems engineers working in this domain.

The course provides the overview of the applications, used by power utilities (both transmission system operators TSO, and distribution system operators DSO). It also shows the basics of data acquisition, communication and control for electrical grids SCADA systems, and gives an overview of the main telecommunication and modelling standards.

תוצאות הלמידה

 Know common architectures.
 Understand the application environment of a power grid operator (TSO and DSO).
 Know the tasks and interaction of individual applications of grid and market operations.
 Know the tasks of network operation SCADA/EMS/DMS systems and corresponding solution approaches.

 Know the tasks of frequency and load control systems.
 Understand the most important solution-based approaches and challenges for individual application categories.
 Understand the role of service-based architecture and enterprise integration for the IT systems of the future.
 Understand the role of cybersecurity for the IT/OT applications.

למי מיועד הקורס

 Project Managers
 System Operators
 Software Engineers
 Product Owners

Attendees must have basic training in Systems Engineering (e.g. SE Foundations).

מחירי הקורסים

Regular: 800 CHF

משך הקורס

1 day

המרצה



Dmitri Tchoubraev

Dr. Dmitri Tchoubraev has had different leading roles over the last 20 years in Swiss industry. He was responsible for the introduction of Swiss Ancillary Market services, engineering and operation of numerous business-critical systems of Swiss Transmission Grid National Control

Center, establishing of Enterprise Integration and Solution Architecture at Swiss TSO.

Today he lectures, consults and mentors on the Power Utilities System Architecture, Energy Digitalisation and System Integration. His experience includes multiple applications of Project Management and Architectures Development in the area of complex heterogeneous IT System Landscapes. He also teaches Utilities IT Systems and Substation Automation Systems at the Technical High School Fribourg, Switzerland and was an Assistant Professor on Power Utilities Systems and Processes for 10 years, at the University of Aerospace Instrumentation, St. Petersburg, Russia.

Dr. Tchoubraev has more than 20 years of experience as project and program manager and as operational manager in development, engineering, integration and operation of complex industrial systems for both government and private sector industries.

Dr. Thoubraev is author and co-author of 30 papers and author of the book "Information Technologies for Electromechanical and Power Systems".

In addition, he is specialised on the System Design based upon Mini- and Micro-Services and optimisation of Industrial Operational Environments using Design Thinking and Usability approaches.