



SPLIT SUMMER SCHOOL 2023

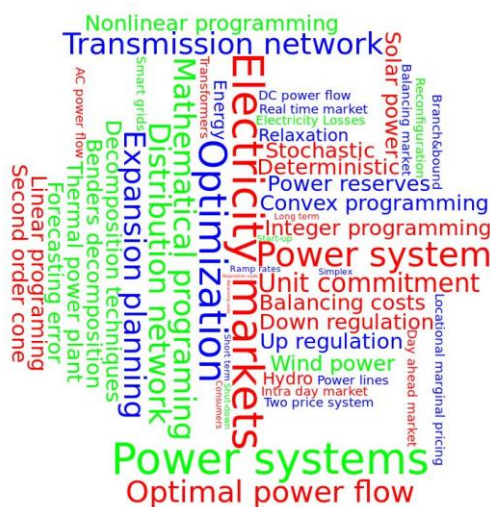
COURSE: OPTIMIZATION IN POWER SYSTEMS AND ELECTRICITY MARKETS

Contact person: **Damir Jakus** damir.jakus@fesb.hr
phone: +385 91 430 5807 skype: damir.jakus

Web page: <http://split-summerschool.com>

Main topics:

- Types of optimization problems and solution techniques
- Application of decomposition techniques for solving optimization models
- Introduction to computer programs and libraries for solution of optimization problems: GAMS, Python (Pyomo)
- Optimal unit commitment and optimal power flow calculations
- Optimal planning and operation of transmission and distribution networks
- Electricity markets with large scale of renewable energy sources



Programme structure:

- 5-day course
- Sample data and test cases will be provided for practice and for final presentation of student projects
- Every student gets lecture notes bound into a booklet, as well as a CD containing a digital version of the booklet, with models in GAMS and Python-Pyomo

Important dates:

Course dates: 02/09/2023 – 06/09/2023

Deadline for application: 01/07/2023

Payment due by: 01/08/2023

Confirmation of the course: 10/08/2023

Price of the course: 300 € (tax included)

Bed & breakfast: 189 € (tax included) – contact person: Marina Kero

marina.kero@scst.hr

Programme plan:

Day 1

- Introduction to mathematical programming and solution methods (2h)
- Application of decomposition techniques for solving optimization models (1h)
- Introduction to computer programs and libraries for solution of optimization problems: GAMS, Python (Pyomo) (3h)

Day 2

- Optimal unit commitment and optimal power flow models (3h)
- Individual work/exercise (2h)

Day 3

- Optimal planning and operation of transmission and distribution networks (3h)
- Individual work/exercise (2h)

Day 4

- Electricity markets with large scale of renewable energy sources(3h)
- Individual work/exercise (2h)

Day 5

- Final projects (2h)
- Project presentations (1h)

Programme lecturers:

Ph. D. Damir Jakus

*Associate professor at the University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Split, Croatia.*

Ph. D. Josip Vasilj

*Assistant professor at the University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Split, Croatia.*