ЦЕНТЪР ЗА ОБУЧЕНИЕ – БАН

1000 София
ул. „Сердика“ № 4
http://edu.bas.bg

email: tdc-phd@cu.bas.bg
тел.: 02 987 31 67
02 979 52 60

Basic Information:
Course Title: Introduction to the most popular meso-scale system of the atmospheric dynamic (WRF), the air quality (CMAQ) and emission modelling in the context of environmental hazard assessment and human heath
Lecturer: Prof. Georgi Gadzhev, PhD
Phone: +359 2 979 3303
Email: ggadjev@geophys.bas.bg
Total Teaching Hours: 30

Annotation (up to 150 words)
The main course objective is to give the bases of the most popular system consists of three meso-scale models: of the atmospheric dynamics (Weather Research and Forecasting - WRF modelling system), of the air quality(Community Multiscale Air Quality Model - CMAQ) and emission modelling (Sparse Matrix Operator Kernel Emissions – SMOKE) and training to work with these models. The participants in this course will be able to gather knowledge of model's structure, the necessary input conditions and available data bases, model's configuration based on general physical parameters for model set up and different steps for model's run during the exercise. The practice will help learning basic commands working under Linux system and running in parallel environment for better adoption of the models (WRF, CMAQ, SMOKE) and gain skills working with different visualization tools (IDV, PAVE).

Course content (brief description by topics or modules)
Topic 1: Introduction and work with WRF
Topic 2: Introduction and work with SMOKE
Topic 3: Introduction and work with CMAQ

Teaching and assessment methods
Attendance of 15 hours of lectures and 15 hours of practical exercises.
Assessment through presentation of a course assignment and discussion.

Competencies acquired as a result of training (3–5 points)
At the end of the training, students will acquire basic knowledge in numerical modeling of the atmospheric composition at different scales.

Additional information (optional) (e.g., special requirements, laboratory equipment, prior knowledge)
Basic Linux skills and commands.