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2<sup>nd</sup> training course/workshop on  
**EddyUH: a software for eddy covariance flux  
calculation**

21 – 25.01.2013, University of Helsinki, Kumpula Campus, Helsinki, Finland

## Final programme

Monday 21.01.2013

14.00 – 14.30 Welcome and Introduction to the workshop (Ivan Mammarella)

14.30 – 15.15 Eddy covariance fluxes: basic concepts and background (Timo Vesala)

15.15 - 15.30 Coffee break

15.30 – 16.15 Eddy covariance fluxes: basic concepts and background (Timo Vesala)

16.15 -17.00 Downloading, installing and testing EddyUH on trainee's computers (Ivan Mammarella/Olli Peltola).

Tuesday 22.01.2013

09.15 – 10.30 EC system design, set-up and calibration (Sami Haapanala/Sigrid Dengel)

10.30 - 10.45 Coffee break

10.45 – 11.30 EC raw data post processing (Annika Nordbo)

11.45 – 12.45 Lunch

12.45 – 14.00 Practical work with EddyUH: Setup and run pre-processor (Olli Peltola/ Ivan Mammarella )

14.15-15.00 Energy and gas exchange in urban area. Experience from EC measurements in Helsinki, Finland (Leena Järvi)

15.00 - 15.15 Coffee break

15.30 – 16.15 Visit to SMEAR III urban measurement station in the University Campus (Leena Järvi & Annika Nordbo)

16.15 – 17.00 Practical work with EddyUH: spectral analysis and planar fit tools (Olli Peltola/ Ivan Mammarella)

Wednesday 23.01.2013

09.15 – 10.15 Flux corrections (Ivan Mammarella)

10.30 - 10.45 Coffee break

10.45 – 12.00 Energy and gas exchange in aquatic ecosystems (Anna Rutgersson)

12.15 – 13.15 Lunch

13.30 – 15.15 Practical work with EddyUH: Lag times and transfer functions (Olli Peltola/ Ivan Mammarella)

15.15 - 15.30 Coffee break

15.30 - 17.00 Flux gap-filling methods(Pasi Kolari/ Sigrid Dengel)

Thursday 24.01.2013

09.15 – 10.30 Scientific presentations by the participants (20 min each)

10.30 - 10.45 Coffee break

10.45 – 12.00 Scientific presentations by the participants (20 min each)

12.15 – 13.15 Lunch

13.30 – 14.15 Flux uncertainty and quality criteria (Ivan Mammarella)

14.15 – 15.00 Practical work with EddyUH: calculate final flux values (Olli Peltola/ Ivan Mammarella)

15.00 - 15.15 Coffee break

15.30 – 16.30 Practical work with EddyUH continues ... (Olli Peltola/ Ivan Mammarella)

18.00 - workshop dinner downtown.

Friday 25.01.2013

09.15 – 10.30 Practical work with EddyUH (Olli Peltola/ Ivan Mammarella)

10.30 - 10.45 Coffee break

10.45 – 11.45 Footprints (Üllar Rannik)

11.45 – 12.15 Summary and conclusion of the course/workshop (Ivan Mammarella)

### **Presentations by the participants:**

- Milan Fischer (CzechGlobe, Brno, Czech Republic)  
“The comparison of eddy covariance and Bowen ratio energy balance method for measuring the latent and sensible heat fluxes above high density poplar stand”
- Ladislav ŠIGUT (CzechGlobe, Brno, Czech Republic)  
“Improvement of CO<sub>2</sub> eddy fluxes modelling in topographically complex terrain”
- D. Barantiev (National Inst of Meteorology and Hydrology, Physics of the Atmosphere and Ecology, Sofia, Bulgaria)  
“Boundary layer structure during sea breeze conditions at Ahtopol, Bulgaria”

### Coffee break

- T. M. Ruuskanen (Department of Physics, University of Helsinki, Finland)  
“Fluxes of Volatile Organic Compounds over Boreal Forest”