

Conference „Global Change: A Complex Challenge“

2nd (final) announcement

**Global Change Research Centre, AS CR in cooperation with
Mendel University in Brno**

is pleased to invite you to

the 4th annual conference

Global Change: A Complex Challenge

held in Brno, Czech Republic

on March 23rd – 24th, 2015.



evropský
sociální
fond v ČR



EVROPSKÁ UNIE



MINISTERSTVO ŠKOLSTVÍ,
MLÁDEŽE A TĚLOVÝCHOVY



OP Vzdělávání
pro konkurenceschopnost

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

The conference is organized under the head of OP VK project “ENVIMET - Building a scientific team focused on environmental metabolomics and ecophysiology and its integration into international networks” (CZ.1.07/2.3.00/20.0246).

Aim and focus of the conference

The aim of the conference is to present the results mainly of postgraduate students and young academic researchers related to different aspects of global change. In accordance, the four sessions will reflect the main research interests in CzechGlobe, focussing on:

- **atmospheric sciences:**
invited speaker **prof. Michel Déqué** (Météo-France CNRM, France),
- **biospheric sciences:**
invited speaker **dr. Miina Rautiainen** (University of Helsinki, Finland),
- **impact studies and molecular adaptations:**
invited speaker **prof. Wolfram Weckwerth** (University of Vienna, Austria),
- **societal challenges:**
invited speaker **prof. Tatiana Kluvánková** (Slovak University of Technology & SAS).

The opening lecture will be given by **prof. John Grace** (School of GeoSciences, University of Edinburgh, UK).

See Appendix 1 for full Scientific Programme.

Place of the conference

VIDA Moravian Science centrum (<http://vida.cz/>),
Křížkovského, 603 00, Brno, Czech Republic
GPS: 49.1863778N, 16.5840917E

Language

English is the only language of the conference.

Conference materials

All participants will receive:

1. Conference programme
2. List of participants including email contacts
3. Book of abstracts to all (oral and poster) presentations,
4. Conference Proceedings with accepted full papers will be distributed before June 30, 2015.

Conference Fees

Participation in the conference is **FREE OF CHARGE**.

Appendix 1: Scientific programme

“Global Change: A Complex Challenge.” Scientific programme

March 23, 2015

8:00 – 8:45 Registration

8:45 – 9:00 Welcome (Michal V. Marek)

9:00 – 9:45 John Grace: Human Impacts on the Climate System

9:45 – 10:15 Michel Déqué: How CMIP5 bias can invert the precipitation response in Eurocodex: the Aladin (25'+5')

10:15–10:30 Lhotka O.: Heat waves over Central Europe in Aladin-Climate/CZ regional climate model (12'+3')

10:30–11:00 Coffee/tea break with poster session

11:00 – 11:15 Mikšovský J.: Attribution of European temperature variability in the 1882–2010 period: A statistical perspective (12'+3')

11:15 – 11:30 Geletič J.: Empirical and modelling approaches for heat risk assessment in Urban Climate under Climate Change (a case study for Brno, Czech Republic) (12'+3')

11:30–11:45 Juráň S.: Dynamics of the emissions of biogenic volatile organic compounds above the peri-urban Holm oak forest of Mediterranean coast (12'+3')

11:45–12:00 Krupková L.: Application of statistical methods for interpretation of large data sets (12'+3')

12:00–12:30 Flash talks (3', no discussion)

Piskala V., Svobodová E., Trnka M., Řezníčková L., Chromá K., Dolák L., Štěpánek P., Szabó-Takács B., Opálková M., Skalák P.

12:30–14:00 Lunch break

14:00 – 14:30 **Miina Rautiainen: The seasonal cycle of boreal forests: a remote sensing perspective (25'+5')**

14:30 – 14:45 Homolová L.: Remote sensing activities at CzechGlobe. a case study of chlorophyll content retrieval from airborne hyperspectral data of a beech forest (12'+3')

14:45 – 15:00 Ač A.: Hyperspectral remote sensing of beech (*Fagus sylvatica*) leaves across chlorophyll gradient and during the seasonal course: from leaf to canopy level (12'+3')

15:00 – 15:15 Rajsnerová P.: Convergence of morphological, biochemical and physiological traits of upper and lower canopy European beech leaves and Norway spruce needles within altitudinal gradients (12'+3')

15:15 – 15:45 Flash talks (3', no discussion)

Pikl M., Novotný J., Trnka M., Möttus M., Majasalmi T., Pivovarník M., Janoutová R., Bohovic R., Macalková L., Pozníková G.

15:45–16:15 *Coffee/tea break with poster session*

- 16:15–16:30 Šigut L.: Automated eddy covariance data quality control for long-term measurements (12'+3')
- 16:30–16:45 Dušek J.: Effect of water level and temperature to methane emission from a sedge-grass marsh (12'+3')
- 16:45–17:00 Machacova K.: Fluxes of nitrous oxide and methane from boreal upland forest (12'+3')
- 17:00–17:30 Flash talks (3', no discussion)
Dvorská A., Komínková K., Veselík P., Semerádová D., Rokaya M.B., Timsina B., Štípková Z., Květ J., Bartošová L., Mochalov V. (Brovkina O.)

March 24, 2015

8:00 – 9:00 *Registration*

- 8:30 – 9:00 **Wolfram Weckwerth: Molecular adaptation of plants in a fluctuating environment – application of OMICS in the field metabolomics (25'+5')**
- 9:00 – 9:15 Oravec M.: Examples of application of metabolomic profiling in ecosystem research and impact studies (12'+3')
- 9:15 – 9:30 Vítěk P.: Raman spectroscopy in biomolecular analysis (12'+3')
- 9:30 – 9:45 Večeřová K.: Seasonal changes in emissions and vertical distribution of volatile organic compounds within spruce canopy (12'+3')
- 9:45–10:00 Novotná K.: Interactive effects of elevated CO₂ concentration, drought and nitrogen nutrition on yield and grain quality of spring barley and winter wheat (12'+3')
- 10:00–10:30 Flash talks (3', no discussion)
Holub F., Bartošová L., Dařenová E., Orság M., Trunda P., Kováč D., Novosadová K., Pietras J., Tripathi A.M., Holišová P.

10:30–11:00 *Coffee/tea break with poster session*

- 11:00 – 11:15 Mishra A.: Towards chlorophyll fluorescence emission based plant phenotyping: Screening of cold tolerance in cold acclimated *A. thaliana* accessions (12'+3')
- 11:15 – 11:30 Šebela D.: Chlorophyll fluorescence signals of maturing rice panicles exposed to high-night temperature-field study (12'+3')
- 11:30–11:45 Materová Z.: Elevated temperatures stimulate light induced processes that contribute to protection of photosystem 2 against oxidative stress (12'+3')
- 11:45–12:00 Zavřel T.: Characterization of autotrophic growth of a model cyanobacterium *Synechocystis* sp. PCC 6803 in a flat panel photobioreactor (12'+3')

12:00–12:30 Flash talks (3', no discussion)
Olejníčková J., Kurasová I., Karlický V., Segečová A., Fedorko J., Nevrhalová E., Hlaváčová M., Veselá B., Dreveňáková P., Pohanková E.

12:30–14:00 *Lunch break*

14:00–14:15 Pavlík P.: Why is diversity important in scientific research? (A gender lecture)

14:15–14:45 **Tatiana Kluvánková: Smart Governance (25'+5')**

14:45–15:00 Lorenzová E.: Exploring climate change beliefs and attitudes towards adaptation among Czech citizens (12'+3')

15:00–15:15 Partl A.: Assessing the environmental risk of ecosystem services provision in the Czech Republic

15:15 – 15:45 Flash talks (3', no discussion)

Rajdl K., Frélichová J., Hubatová P., Plch R., Maco M., Jakubínský J., Cudlín O., Nyklová B., Guerra Torres C.P., Nguyen V.X.

15:45–16:15 *Coffee/tea break with poster session*

16:15–16:30 Hlavinka P.: Reliability of regional crop yields predictions in the Czech Republic based on remotely sensed data (12'+3')

16:30–16:45 Harmáčková Z.: Ecosystem Services in the Šumava National Park: Impact of Climate and Land Use Change (12'+3')

16:45–17:00 Purkýt J.: The influence of land use change and landscape fragmentation on selected ecosystem service provision (12'+3')

17:00–17:30 Closing (Director's conclusion, awarding the best poster etc.)