



RECEIVING PARTNER CONFIRMATION

Name of trainee: **Ing. Lenka Janečková**

Has completed a work placement
coordinated by the Czech Technical University within the framework of
the **"Erasmus Programme - student mobility for placement"**
2012/2013

Partner organisation:

Name of company: Institute of Construction and Architecture, Slovak Academy of Science
Address: Dúbravská cesta 9, Bratislava, SK – 84503, Slovakia
Name and function of
responsible person: Associate Professor Stanislav Darula, PhD.
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Traineeship:

Duration: From: 13.5.2013 To: 16.8.2013 Country: Slovakia
Specialisation: Civil Engineering, Building Physics - Daylighting

Brief description of the internship:

The Ing. Lenka Janeckova learning program at Institute of Construction and Architecture, Slovak Academy of Sciences (ICA SAS) was divided into 3 month periods.

Month 1: Study of publications related to dynamic aspects of daylighting, daylight measurements and transmission of light through tubular light guides. She arranged delivery of two types of tubular light guides from Sola System Slovakia Ltd. She participated in calibration of photometric sensors in laboratory and in situ and elaborated calibration protocols.

Month 2: Ing. Janeckova participated in solutions of scientific project VEGA 2/0029/11 "Research of quantitative and qualitative characteristics of daylighting in buildings". She was trained in illuminance measurements and in evaluation of data taken from experimental laboratory and in situ measurements. She measured luminous fluxes of 5 tubular light guide samples, calculated light transmission efficiency and elaborated protocols. She studied measured data of daylighting courses with various sampling intervals. Discussion about Bratislava flood-protection concept and visit of flood-protection in the old city Bratislava were done.

Month 3: Ing. Janeckova performed daylighting measurements in the exterior and in the interior using her illuminance meters. Results will be applied in expected publication for Int. Conf. Envi Build 2013 and for the journal Advanced Materials Research.

Measurements of luminous fluxes of 5 tubular light guide samples, calculations of light transmission efficiencies and elaboration of protocols continued.

Visit of the Gabčíkovo hydro dam complex and hydro power station in Gabčíkovo was managed.

Month1 – Month3: Ing. Janeckova attended 5 lectures on Daylighting at ICA SAS (Lecturer: Assoc. Prof. S. Darula).

Results achieved and Evaluation:

- State of Art: Dynamic daylighting, daylight changes, DNI.
- During internship was corrected text of the manuscript Janeckova, L., Bosova, D. "The use of daylight for sustainable development" which abstract was submitted to the Int. Conf. Lux Europa 2013.
- The manuscript Kittler, R., Darula, S., Janeckova, L. "Slunce jako významný přírodní zdroj světla v budovách (Sun as an important natural light source in buildings)" was written and submitted to the reviewed Civil Engineering Journal. (In Czech)
- Darula, S., Janeckova, L. VEGA 2/0029/11, R13.1. Research of quantitative and qualitative characteristics of daylighting in buildings. Light transmission efficiency of two guide light samples. Partial Report, ICA SAS Bratislava, FCE CTU in Prague, August 2013, (in Slovak and Czech).
Report contains results of laboratory measurements of the light transmission efficiency of two guide light samples. This report was delivered industrial partner Sola System Slovakia Ltd.
- Janeckova, L., Darula, S. VEGA 2/0029/11, R13.2. Research of quantitative and qualitative characteristics of daylighting in buildings. Measurements of luminous characteristics of two guide light samples. Partial Report, ICA SAS Bratislava, FCE CTU in Prague, August 2013, (in Czech).
This report contains detail documentation of experimental measurements of luminous fluxes of two guide light samples and their components as well as evaluations of the light transmission efficiency.
- Janeckova, L. achieved new experiences in experimental measurements, i.e. arrangement of discussion with industrial partner and arrangement of experiments, construction of samples, measurements of luminous fluxes under artificial sky at ICA SAS, evaluation of measured data, calculation of the light transmission efficiency, elaboration of a report for industrial partner and a research partial report. She measured 5 samples under artificial sky in ICA SAS Bratislava.

Evaluation of Ing. Lenka Janeckova internship

Ing. Lenka Janeckova was very quick joint in the research team in Building Physics department of ICA SAS. She actively participated in project solutions and laboratory measurements. Her agreed programme for the training period was met at all points. Moreover she participated in solutions of another project tasks and tasks associated with her PhD. thesis.

Ing. L. Janeckova presented responsibility in working process and creativity in partial solutions of experimental tasks. She is able to adapt to solutions of new tasks. Her internship was profit also for our department.

Czech organisation:

Czech Technical University in Prague
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160 00 Prague 6
Czech Republic

Partner organisation in the target country:

Institute of Construction and Architecture,
Slovak Academy of Science
Associate Professor Stanislav Darula. PhD.
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**Signature of authorised person and stamp of partner
organisation in target country**

Place, date

Place, date: Bratislava, August 15, 2013



Czech Technical University in Prague



Education and Culture DG

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