Seminář katedry fyzické geografie a geoekologie, letní semestr 2018/2019

Geografické kolokvium studentů postgraduálního studia (čtvrtky, 14:50 Věž)

Departmental seminar series, summer term 2018-2019 (Thursday, 14:50 Věž)

28.2.2019

Presentations of new doctoral projects of 1st-year PhD students

Jan Bureš, Tereza Dlabáčková, Jitka Kofroňová, Ondřej Racek, Martin Veselý

7.3.2019

Michal Jeníček: Modelling the impact of changes in seasonal snowpack on annual runoff and summer low flows

Mountain catchments are largely influenced by snow, but it is expected that an increasing proportion of the precipitation will fall as rain in the future. Consequently, snow storage is expected to decrease, which, together with changes in snowmelt rates and timing, will cause changes in spring and summer runoff, mainly low flows. A bucket-type catchment model, HBV, was applied to 74 mountain catchments in Czechia and Switzerland to simulate snow storage and streamflow during last 35 years. Additionally, the model was used to simulate future changes in snow storage and summer low flows for Swiss catchments. The results showed that expected decrease in snow storage in the future might cause the decrease in annual runoff and also intensify summer low flows. This will largely affect seasonal water distribution and thus water availability.

28.3.2019

Petra Štěpančíková: The youngest tectonic movements in the Bohemian Massif as revealed by geophysical and paleoseismological survey in the Cheb basin

Tectonic activity of the NW-SE trending Mariánské Lázně Fault (MLF), which controls the eastern limit of Cheb-Domažlice graben with morphologically pronounced 100 km long mountain front, was studied in the area of the Cheb basin. The basin is known for Quaternary volcanism, CO2 emanation and earthquake swarms (max. ML=4.6). To study Quaternary activity of the MLF, 2D and 3D geophysical survey and 3D trenching was performed to look for surface-rupturing prehistoric earthquakes responsible for the pronounced mountain front. Seven excavated and six hand-dug trenches revealed a complex geology and deformation at the study site probably as a result of right-lateral transpression during the Late Quaternary. Two Holocene earthquakes were inferred from the faulted sediments with corresponding magnitudes around Mw=6.4. The latest geologically documented earthquake appeared to be historical around 1000 AD, which is the youngest documented surface-rupturing event in central Europe.

4.4.2019

Jan Divíšek: What do we know about the distribution of species richness in the Czech Republic?

The recent increase in the availability of large vegetation-plot databases has created unprecedented opportunities for analysing and explaining patterns of fine-scale plant species richness across large areas

and for individual habitat types. In my presentation, I will summarize current knowledge of plant diversity distribution in the Czech Republic. I will also talk about the effects of environmental conditions and historical landscape development on regional differences in species richness and invasion levels.

25.4.2019

Marek Stibal: Large-scale impacts of biological processes in glacial (eco)systems

Previously overlooked by the glaciological community, biological processes have recently come to prominence as an important component of glacial systems. Microorganisms take part in glacier formation via ice nucleation in the atmosphere, they inhabit glacier surfaces and beds as well as the englacial ice, and contribute to increased melting by producing light-absorbing molecules and thus darkening the ice surface and reducing its albedo. Moreover, biological processes in glacial ecosystems may produce significant amounts of greenhouse gases and so constitute an additional climate feedback on a global scale.

16.5.2019

Presentations of doctoral students