



## Studying the interaction between the permafrost and glaciers in the low temperature permafrost mountain regions

**Country:** Russia

**Institution:** Tyumen State Oil and Gas University, Department of Earth Cryology; Institute of Earth Cryosphere of Russian Academy of Science (Siberian Department of Russian Academy of Science)

**Category:** Indoors course combined with field course

**Level:** PhD, master's, bachelor's

**Course title:** Studying the interaction between the permafrost and glaciers in the low temperature permafrost mountain regions

**Period:** July-August annually

**Web-site:** --

**Languages:** English, Russian

**Course instructor:** Vladimir S. Sheinkman, associate professor

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**Coordinator:** scientific secretary Elena V. Ustinova, tel.: +7 3452 688 785

**Course duration:** four weeks

**ECTS:** 5.5

### **Locations:**

1<sup>st</sup> stage – participants welcoming and introductory lectures at the Tyumen State Oil and Gas University campus

2<sup>nd</sup> stage – road to the Novaya Chara railroad station by train and field school in the Chara river valley at the foot of the Kodar ridge and at the Kodar ridge itself

3<sup>rd</sup> stage – coming back to Tyumen, conclusions and final lectures at the Tyumen State Oil and Gas University campus

### **Instructors:**

Vladimir S. Sheinkman has a big field experience of work in almost all Siberian mountain regions. He is a famous researcher of permafrost and associated professor at the Tyumen State Oil and Gas University Department of Earth Cryology, and the leading researcher at Institute of Earth Cryosphere of Russian Academy of Science (Siberian Department of Russian Academy of Science).

Other leading specialists of the Institute of Earth Cryosphere of Russian Academy of Science (Siberian Department of Russian Academy of Science) will be involved in the study process as well.

**Course fee:** 700 Euro

**The price includes:**

1. Train ticket from Tyumen to Novaya Chara and back
2. Local transport and assistance at the field practice
3. Meals
4. Accommodation in Tyumen

**Requirements:**

1. The participants apply and get visas by themselves, as well as insurance, tickets to Tyumen and back. The required invitation letters will be provided by request
2. The participants should have proper health conditions to work in the mountains
3. The participants should have their personal equipment to work in the mountains including mountain boots, tarpaulin, tent, sleeping bag, sleeping mat, warm clothes, raincoat, personal crockery etc.

**Short description:**

Department of Earth Cryology of Tyumen State Oil and Gas University jointly with Institute of Earth Cryosphere of Russian Academy of Science organize on the annual basis the field course on the Chara river (Zabaykalsky krai). This region is quite unique thanks to the permafrost objects situated next to the Novaya Chara railroad station in the taiga at the foot of the Kodar ridge (Fig. 1).

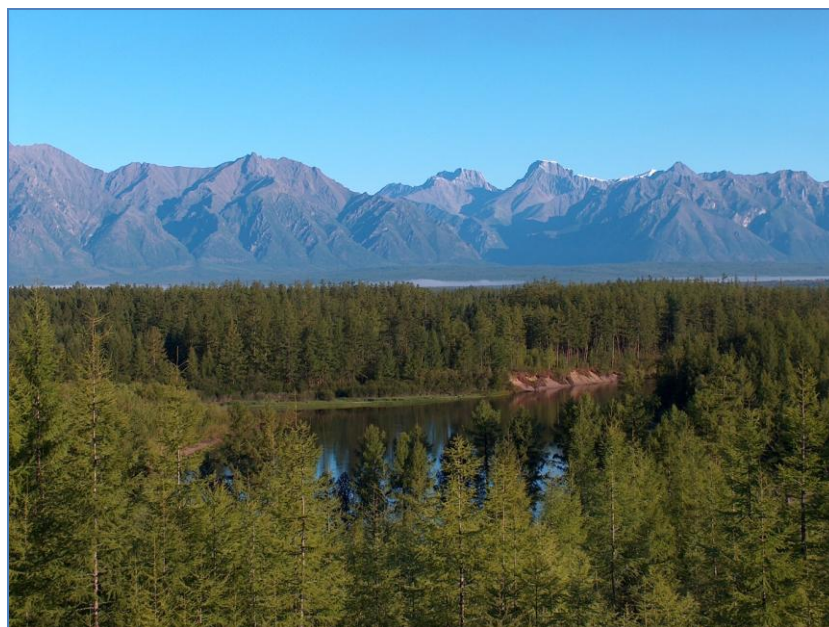


Fig. 1. The Chara river valley and the Kodar ridge

In the cliffs of the river, there are outcrops of ice wedges. (Fig. 2). They are always perfectly seen thanks to the constant river undermining.



Fig. 2. Ice wedges in the cliff of the right Chara river bank

Besides, right beyond the outcrops, there are moraine fields of ancient glaciers and associated permafrost phenomena. It is possible to reach the headwater of the Sredny Sukan river at the foot of the Pik BAM mountain (3072 m), where the largest glaciers of Eastern Siberia are situated. These glaciers are specific due to the fact that they gradually become the permafrost component (fig.3, fig. 4).



Fig 3. The Kodar ridge glaciers



Fig 4. moraine fields of ancient glaciers at the foot of the Kodar ridge

As a result, it is possible to give the course participants the overview on all aspects of forming and interaction between phenomena described above.



Fig. 4. Course instructor Sheinkman with students at the field course on the Kodar ridge glaciers