

Report on the achievements and benefits of the event “Slovaci v CERNe 2011”

Marek Domaracký, Michal Mlynarčík, Juraj Sučík

The principal objective of the event was to increase the interest of students in the technical schools to apply for internships at CERN.

The event was organized in collaboration with the CERN Human Resources Department and the Ministry of Education, Science, Research and Sport of the Slovak Republic, represented by Slovak Committee for Cooperation with CERN.

The Following schools participated on the event:

- Technical University of Košice,
- The Faculty of Manufacturing Technologies of the Technical University of Košice with a seat in Prešov,
- University of Žilina,
- Slovak University of Technology, Bratislava,
- Comenius University, Bratislava,
- College of Electrical Engineering, Prešov,
- College of Electrical Engineering, Košice,
- College of Electrical Engineering, Žilina,
- College of Electrical Engineering, K. Adlera, Bratislava,
- College of Electrical Engineering, Zochova, Bratislava.

The European Organization for Nuclear Research CERN in Geneva is the most important international organization for research on the structure of matter. It was founded in 1954 and currently brings together 20 European countries. According to the statute of CERN, member States contribute to the budget as a proportion of their national income. The supreme body of CERN is the CERN Council, in which each country has two representatives (the political and scientific delegate). Each member country has one vote in CERN Council regardless of the size of the country's contribution to the CERN budget. The work and funding of CERN also depends on a number of other affiliated, non-member countries such as USA, Japan, Russia Canada and India.

CERN is the world leader in research of the building blocks of matter. Examination of the smallest particles of matter requires a huge investment in mammoth machines including high energy particle accelerators and extremely complicated, gigantic pieces of detection equipment that are beyond the capabilities of any single, developed nation to construct.

The Slovak Republic is a member of the CERN since 1. January 1992. The CERN facilities have a unique scientific and technological means, such as high energy particle accelerators, detector apparatus and systems for collecting and analyzing large volumes of data with high-performance computing resources. Thanks to these facilities it is a unique institution in the field of matter structure research, and membership in this organization is a testimony to the work of Slovak scientists and engineers. Slovak engineers participate in the LHC experiments and are involved in the operation of CERN facilities as laboratory staff.

Slovak staffs are active in the following departments:

- General Infrastructure Service - provides and supports the infrastructure and services needed to ensure the preservation of the health and the safety of any person entering the domains under the Organization's control,
- Information Technology Services - provide the information technology required for the fulfillment of the laboratory's mission,
- Technology Department - is responsible for technologies which are specific to existing particle accelerators, facilities and future projects,
- Beams Department - is responsible for the beam generation, acceleration, diagnostics, controls and performance optimization for the whole CERN accelerator complex,
- Physics Department – carries out basic research in the field of experimental and theoretical particle physics.

Even though representation of Slovak staff is well balanced, CERN has difficulty to attract a sufficient number of engineering students to study and work at CERN as there is a deficit of college graduates applying for positions.

To reverse this trend, the human resources department at CERN (the HR) has decided to address CERN staff with Slovak nationality to help promote the student programs among students of colleges and universities in Slovakia. On this appeal we have offered to cooperate in promoting of CERN. As a form of cooperation we proposed give presentations for technically oriented colleges and universities in Slovakia. HR department warmly accepted our offer and thus this idea became the base of the event.

Such an event would of course be impossible without the cooperation of representatives of the Slovak Republic at CERN. We addressed Dr. Karel Šafařík, who was willing to provide documents and valuable advice. We also contacted Prof. Branislav Sitár, who fully supported our initiative and also provided support from the Ministry of Education, Science, Research and Sport of the Slovak Republic.

Schools were selected from a list provided by HR, and in conjunction with our experience and knowledge of the Slovak academic environment. Selected schools gladly accepted our offer to hold lectures in their academic premises. Guarantors of the events are people who work in these schools and will serve as a permanent contact for the HR department for future collaboration with CERN.

As a next step in the summer of 2011 we created a event web page <http://cern.ch/slovaci-v-cerne-2011> and drew up a presentation that according to the instructions of HR department should mainly focus on student and graduate programs for students of technical directions. The presentation motivates technically educated young people to sign up to programs offered by CERN and thus transmit the know-how acquired at CERN to Slovakia. It also draws the attention of college students to the possibility of applying on position of an employee at CERN after the end of college education.

Our supervisors have actively supported us by officially releasing us from work duties for the necessary time. Within five days, from 10th to 14th October 2011, we have conducted 15 lectures, of 2x45 minutes in colleges and 75 minutes in universities of the same city. For capacity reasons, at colleges, the same lecture had to be conducted twice. The actual lectures took place without any major problems and with a varying audience size at universities. Promotion of the event, as we assumed, was a critical factor that affected the number of attendees. Our colleague, Dr. Daniel Valúch assisted us with the promotion of the event on Slovak radio media, and in conjunction with our website advertisements, we were able to attract the attention of people outside the academic world.

Our conclusion is that the event was successful, which was also confirmed the HR department based on the increased number of applications to CERN. Presentation even exceeded the target group of students and attracted the attention of people from the commercial sector. Our presentation also had a positive side effect in the form of increased interest in CERN. Based on personal interviews with students, we found that even those who knew about CERN were unaware of the possibilities of studies and employment in technical fields.

Although awareness of CERN increased, we still recognize there is room to raise additional awareness, especially in schools. Schools were also interested in further lectures from the CERN staff, which would cover not only the job opportunities, but include expert presentations about technologies used and developed at CERN.

We hope that our initiative will lead to sustained contacts between Slovak technical schools and CERN, and that our example will encourage staff members of other nationalities at CERN to hold similar events, which will ultimately help the success of CERN and education in Europe as a whole.

Sources

Materials from proceedings of Slovak republic government 63/2007, 11.10.2007

CERN, Geneva, Switzerland, 31.October 2011

List of the participating schools

Technická univerzita v Košiciach

Garant: doc. Ing. František Jakab, PhD.

Kontakt: frantisek.jakab@tuke.sk

Fakulta výrobných technológií Technickej univerzity v Košiciach so sídlom v Prešove

Garant: Ing. Peter Knuth, PhD.

Kontakt: peter.knuth@tuke.sk

Žilinská univerzita v Žiline

Garant: RNDr. Ivan Melo, CSc.

Kontakt: melo@fyzika.uniza.sk

Slovenská technická univerzita v Bratislave

Garant: Prof. Ing. Peter Ballo, PhD; Doc. Ing. Mária Pavlovič, CSc.

Kontakt: peter.ballo@stuba.sk

Univerzita Komenského v Bratislave

Garant: RNDr. Tomáš Blažek, PhD.

Kontakt: blazek@fmph.uniba.sk

Stredná priemyselná škola elektrotechnická, Prešov

Garant: Ing. Slavomír Kožár

Kontakt: kozar@spse-po.sk

Stredná priemyselná škola elektrotechnická, Košice

Garant: Ing. Soňa Krempaská

Kontakt: krempaska@tuke.sk

Stredná odborná škola elektrotechnická, Žilina

Garant: Ing. Štefan Domanický

Kontakt: riaditel@soseza.sk

Stredná priemyselná škola elektrotechnická K. Adlera, Bratislava

Garant: Ing. Frantisek Vegh

Kontakt: office@adlerka.sk

Stredná priemyselná škola elektrotechnická Zochova, Bratislava

Garant: RNDr. Milada Erösová

Kontakt: office@zochova.sk