

Activity of Nuclear Engineering Center at the Georgian Technical University

The Nuclear Engineering Center was established at Georgian Technical University in 2010. The center is mainly employed by GTU young scientist-specialists: Archil Surmava; Besik Kekelia; Niko Tsutskiridze; David Varamashvili; Lasha Fataridze; Shota Kobakhidze; David Shekiladze; Nikoloz Udzilauri; Khatuna Jokhadze-Saralidze; Giorgi Avaliani and their average age is 25,1 year.

According to the active agreement, being in force since 1 January 2015, the Center conducts cooperative projects with the European Organization of Nuclear Researches (CERN, Geneva, Switzerland). Within the framework of the agreement the center participates in elaborating work packages with American and European Universities:

- 1) Package#01: Processing of ATLAS experiment database control Web application. Collaborative Partners: University of Oxford, Saclay - Scientific Center, University of Genoa.
- 2) Package#02: Detector geometrical model processing Grant-4 simulation packages. Collaborative partners: Stanford University, Berkley National laboratory, Louisville University.
- 3) Package#03: Processing of geometrical modeling platforms on the basis of CATIA. Collaborative partners: CERN, Fribourg University, Brand University.
- 4) Package#04: Processing of program visual-cognitive application for physical processes of ATLAS detector. Collaborative partners: Paris University, Dresden Technical University, Pittsburg University.
- 5) Package#05: Development of engineering models for HighLuminosity LHC sets. There is a pilot project. It is planned since 2017.

Scientific Activity

- 2 Master dissertations were prepared in CERN on CERN themes, now 2 doctoral and 1 master dissertation are being prepared, which in essence represent scientific-research work. Masters' papers have received higher evaluation from the CERN experts, what is confirmed by the document signed by the experts;

- 7 scientific articles were published in European journals;
- Reports were made and works were published in 4 European and 2 International conferences: TMCE 2016, Aix-en-Provence, France, 2016; TMCE 2012, Karlsruhe, Germany; CHEP2013, Amsterdam, The Netherlands; NEC'2015; Montenegro, Budva, Becici; SCGCCW 2014, Tbilisi, Georgia; SCGCCW 2012, Tbilisi, Georgia etc.;
- 4 long-term scientific internships in CERN were performed funded by GTU and Shota Rustaveli National Science Foundation;
- 22 student reports were made in scientific workshops organized by CERN.