Proposals for cooperation in Educational programs for science and engineering of Radio electronics department of NTU “KhPi”

Educational Activity

Specialty: "Computer engineering"

SPECIALIZATION: "Applied computer systems"

The main directions of training: the creation of system and software, development of specialized computer-information computer systems, optimization of existing computer systems of general purpose to special tasks, development of technical means of information protection in computer systems and networks.

Specialty: "Applied physics and nanomaterial's"

SPECIALIZATION: "Engineering of radio electronic systems"

The main directions of training: development of radio engineering and Radiophysics equipment, maintenance of complex radio systems, design and maintenance of antenna systems, development and maintenance of complex electronic systems, including computer and computerized automatic control systems, development and maintenance of electronic power systems.

Student Achievements and Awards

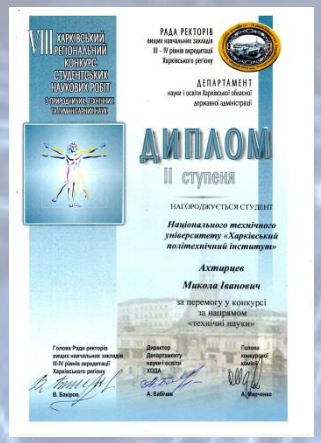
Our students – winners of Ukrainian Students Olympiad in "Radio Engineering" (USORE).

Young professionals have demonstrated their knowledge in basic disciplines: "Fundamentals of Circuit Theory", "Signals and Processes in Radio Engineering", "Analog Electronic Devices", "Electrodynamics and Distribution of Radiowaves", "Digital Devices and Microprocessors".

(USORE-2015)

(USORE-2016)

The University and Faculty Council supports student of our department in their research work, developments and creative activities, and allocate additional scholarships for outstanding achievements in training.



Also students of our department are winners of regional competitions of student works and their thesis works acknowledge as the best among all Institute.

Students are recognized as the best researchers and awarded the highest award as the most successful scientists who's providing a top contribution to the development of scientific research in academic institutions, and also participate in competitions of business ideas.

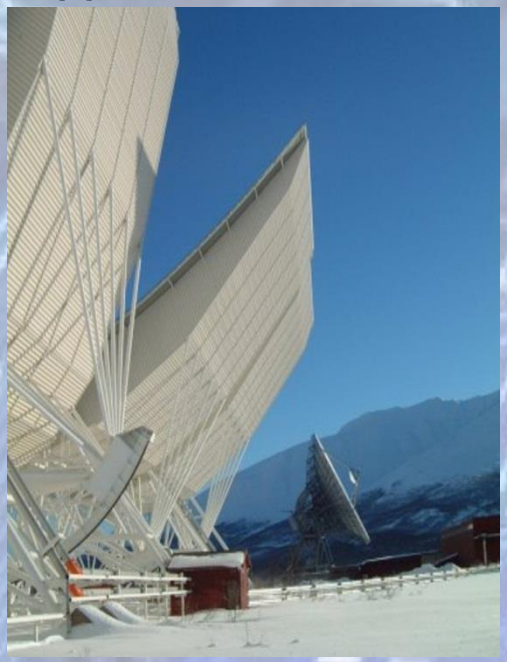
Research Funding and Training

GRANT : "Norwegian-Ukrainian cooperation aimed to sustainable development of the educational process in the study of near-earth space", 2012

GRANT : "Harmonization of the Norwegian-Ukrainian educational activities in studies of the geospace environment", 2014

Partners : University of Tromsø - The Arctic University of Norway, Institute of Radio Astronomy of the National Academy of Sciences of Ukraine.

In 2014, graduates of the department "Radioelectronics" NTU "KhPI" have got an opportunity to continue their education in one of the most northern universities – UiT The Arctic University of Norway (Norway, Tromsø) by the two-years Master's degree program in physics (discipline “Space Physics”) on Faculty of Science and Technology (Department of Physics and Technology). Education was supported under the Norwegian Quota Scheme.



In 2016 they successfully defended their diplomas and got qualification of Master in Physics. Students throughout their educational at the University of Tromsø have studied courses such as:

- Cosmic geophysics;
- Introduction to plasma physics;
- Introduction to satellite and rockets techniques and space instrumentations;
- Techniques for investigating the near-earth space environment;
- Earth observation from satellites;
- Sustainable energy.

During the studying at the UiT have also been carried out laboratory work and fieldwork with trips to other islands of Norway (Andoya and Svalbard, Norway).

Students with good academic performance and good knowledge of German have an opportunity to study at Otto von Guericke University, Magdeburg (OvGU),

by the two-years Master's degree program in Digital Engineering on Faculty of Computer Science. The university offers many courses for the international students. The lectures are instructing through English and German languages.

Classes are taught in computerized classrooms, at the disposal of students there are laboratories, halls for experiments.

The Faculty of Computer Science offers a higher than average proportion of practical and application-oriented core areas in research and teaching. As an engineering faculty, it encompasses all of the key areas of computer science. These include Computational Visualistics, Business Informatics and Computer Systems in Engineering. Computer scientists are concerned with the systematic processing of information. The research profile of the Faculty is characterized by the three key areas of image, knowledge and interaction.

Main Directions of Scientific Research

- Experimental study of the ionospheric parameter variations by incoherent scatter method in the altitude range 150 – 1500 km;
- Modeling of the geospace parameter variations in quiet heliogeophysical conditions;
- Observations, analysis and interpretation of physical effects of the geospace storms of varying intensity;
- The study of wave disturbances of natural and artificial origins in the ionospheric plasma;
- Study of the effects in the atmosphere and ionosphere during partial solar eclipses;
- Development of the Kharkiv ISR database;
- Development of unique equipment for the near-Earth space research;
- Development of software for geophysical information processing.

Collaboration With Foreign and National Organizations

University of Tromsø
The Arctic University of Norway

Institute of Geophysics
National Academy of Sciences of Ukraine

Otto von Guericke University
burg

Massachusetts
Institute of Technology

Institute of Radio Astronomy
National Academy of Sciences of Ukraine

Kharkiv National University
of Radioelectronics

FREDERICK UNIVERSITY
Frederick University, Cyprus

Institute of Geophysics
Polish Academy of Sciences

Vasyl Karazin
Kharkiv National University

Proposals for Cooperation

- Geospace storm investigations
- Investigations of wave disturbances (WDs) caused by artificial and natural sources
- Development of regional ionospheric model
- Development of different databases
- The development of ground systems for remote radio sounding of the ionosphere and special software