

Head of the department:

## Nosirov Kh. Khabibullo

**Reception days:**Monday - Friday(14:00 - 16:00)

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### History of the department

The Department of "TV and Radio Broadcasting Systems" was formed on September 3, 2010, when the departments of "Antenna Feeder Device" and "Television and Radio Broadcasting" were merged.

The department "Antenna-feeder devices" (formerly "Technical electrodynamics and antennas") was founded in 1965 by transforming the departments "Theoretical Foundations of Electrical Engineering" and "Theoretical Foundations of Radio Engineering", which are part of the faculty "Radio Communication and Radio Broadcasting". At the beginning, the department began its activities under the guidance of the candidate of technical sciences, associate professor Likontsev Nikolay Nikolaevich. He made a great contribution to the creation of the educational-technical laboratory of electrodynamics and antenna-feeder devices, to the publication of teaching materials.

Later in 1967-1979, Honored Scientist of Uzbekistan Honored Scientist of Uzbekistan, Candidate of Physical and Mathematical Sciences, Associate Professor Tsitovich Petr Aleksandrovich, in 1979-1988 Candidate of Technical Sciences, Associate Professor Bezkakova Tatiana Borisovna, in 1988-2003 Candidate of Technical Sciences, Associate Professor Gabzalilov Galiy Fakhretdinovich, in 2003-2010, Candidate of Technical Sciences, Associate Professor Likontsev Dmitriy Nikolayevich worked as the heads of the department. Candidate of technical sciences, associate professor Gan Svetlana Pavlovna, candidate of technical sciences, associate professor Serova Galina Sergeevna, candidate of technical sciences Soloviev Yevgeniy Vitalyevich, teachers Smirnov Alexander Borisovich, Rusinkevich Zoya Edmundovna, Bitkov Vladimir Abramovich worked in the department in those years.

The department "Television and Radio Broadcasting", attached to the department "Systems of TV and Radio Broadcasting", was created in 1960 and as a major department was part of the faculty "Radio Communication and Broadcasting". The department was headed by Candidate of Technical Sciences, Associate Professor K.N. Matvienko (1960-1964), Candidate of Technical Sciences, Associate Professor Li Sen-San (1964-1964), Senior Lecturer M.N.Vaulin (1969-1970. ), Honored Signaler of Uzbekistan, Candidate of Technical Sciences, Associate Professor Sh.Z.Tazhibayev (1970-1980 and 2002-2005), Doctor of Technical Sciences, Professor Yu.S.Sagdullaev (1980-2001), Candidate of Technical Sciences, Associate Professor E.V.Makhmudov (2005-2008), Candidate of Technical Sciences, Professor T.G.Rakhimov (2008-2011), Candidate of Technical Sciences, Associate Professor H.S. Soatov (2014-2017).

In 1970, the first research laboratory was opened at the department. The laboratory was headed by a candidate of technical sciences, associate professor Sh.Z.Tazhibayev. In the laboratory using semiconductor devices in the period 1977-1982 an experimental copy of the first color television camera was created. Creating a television camera has made a great practical assistance in the development of large-scale scientific research. Joint work was carried out with academicians of the Russian Space Research Institute with G.A Sagdeev, Koinot design office in Tashkent city by Sh.A. Vakhidov, with the Institute of Astronomy of the Academy of Sciences of Uzbekistan T.S. Yuldashev, Institute of Nuclear Physics U.G. Gulyamov . As a result, the first television microscope and the first color video camera were created based on the matrix of the charge coupled device.

Subsequent research was devoted to the introduction of digital technology in television. The first created device was presented in 1982 at the second international conference in Armenia in Yerevan. Employees of the scientific laboratory created "The television device determines the state of the object's shape at a

distance" in 1982-1985, and "A device for converting small-frame television signals in a multi-frame standard" in 1988-1990.

Since 2017, Doctor of Technical Sciences, Associate Professor Rakhimov Bakhtiyor Nematovich has been working as the head of the department "TV and Radio Broadcasting Systems". B. Rakhimov worked as deputy dean of the Tashkent University of Information Technologies. Today is the chairman of the Union of Young Scientists of the Tashkent University of Information Technologies.

At the department there are laboratories for training in the following subjects: Fundamentals of Television, Digital Television, Electroacoustics, Electromagnetism, Antenna-feeder devices.

## READED DISCIPLINES ON DEPARTMENT

### Undergraduate:

- "The propagation of radio waves and antenna-feeder devices";
- "Electromagnetism";
- "Television";
- "Digital processing of audio and video signals";
- "Digital television";
- "Broadcasting";
- "Antennas and Wave Propagation in Wireless Systems"
- "Electromagnetic fields and waves"

### Master:

- "Systems of television"
- "Systems for encoding audio video signals"
- "Surround TV"
- "Basics of electroacoustics"

## PROFESSOR-TEACHING STRUCTURE

- Rakhimov B.N. – Head of the Chair, Doctor of Technical Sciences, Associate Professor
- Rakhimov T.G. – Ph.D., Professor
- Gubenko V.A. – Ph.D., Associate Professor
- Gavrilov I.A. – Ph.D., Associate Professor
- Kan V.S. – Senior Lecturer
- Shakhobidinov A.Sh. – Senior Lecturer
- Aripova U.Kh. – Senior Lecturer
- Akhmedova A.Kh. – Senior Lecturer
- Gaziev H.G. – Assistant
- Yusupova A.R. – Assistant
- Umarov U.A. – Assistant
- Berdiev A.A. – Assistant
- Sultonova D.E. – Assistant
- Ibragimov D.B. – Assistant
- Nosirov Kh.H. – Assistant
- Puziy A.N. – Assistant

Every year, about 200 bachelors spend before graduation, industrial and educational practice in the

specialty "Television, radio communication and broadcasting", assigned to the department "Broadcasting Systems". Under the guidance of professors, teachers of the department about 100 undergraduate qualifications and about 25 master's theses are defended.

### **SCIENTIFIC AND SCIENTIFIC AND METHODOLOGICAL WORKS, CONDUCTED AT THE DEPARTMENT**

To date, the department is investigating a number of scientific research and problem projects: "Creating methods for calculating the attenuation of radio waves in tunnels", "Developing software for television wavelet audio-video codec with interface processing for 3G cell phones", "Developing a working model of an anechoic radio engineering camera", "Development of a television codec software for IP-TV and mobile communications", "Modernization of the scientific-practical laboratory AFU", "Development of a joint technology installation and antennas of different operators on the same support ", " Development of methods for assessing the quality of service and reliable reception areas of radio monitoring stations ", " Development and creation of a measurement stand for testing the operation of fiber optic under the influence of the environment ". In the first semester of the 2014-2015 academic year, the IP-TV laboratory in the training room Raqamli televidenie started functioning.

In the first semester of the 2014-2015 school year, the IP-TV laboratory began to function in the training room of the Digital TV.

The project called "Educational and practical laboratory on antenna-feeder devices" is funded by the Ministry of Information and Communication Technologies Development with the aim of further improving the education system for training students and undergraduates.

The educational and methodical base of the department "TV and Radio Broadcasting Systems" is filled year after year with textbooks, manuals, published by teachers of the department. Including, under the authorship of Ph.D., associate professor Sh.Z.Tazhibayev, the textbook "Television", textbooks "Image Imaging Device ", " Image Restore Structure ", " Glossary of Modern Telecommunication Terms " were created Associate Professor M.Z. Zuparov created together with Professor of the Novosibirsk Academy of Communications and Informatics (Russia) G. P. Katunin textbooks in the Uzbek and Russian languages, Russian-Uzbek dictionary. In 2014, under his authorship, a textbook entitled "Acoustics of electro and acoustics of architecture" was published.

In 2015, under the authorship of Ph.D., Professor A.A Abduazizov and Ph.D., Professor T.G.Rakhimov "Radiotechnical systems", Ph.D., Associate Professor D.N.Likoneseva and senior lecturer A.Sh. Shakhobiddinov "Distribution of radio waves and antenna-feeder devices", in 2016 edited by Kh.S.Soatov and authored by I.A. Gavrilova, T.G.Rakhimov, A.N.Puziy. Kh.H.Nosirova, Sh.M.Kadirova published in 3 types (Russian, Uzbek Latin and Cyrillic languages) textbook "Digital TV". Of the teachers of the department A.Sh.Shahobiddinov, U.Kh.Aripova, U.A. Umarov, A.N. Puzy, Kh.H.H. Nosirov conduct research to obtain the degree of Doctor of Philosophy (PhD).