

Microwave and Radiofrequency Group
of Physical and Biomedical Electronics Department
of NTUU “KPI”

Area of research is development of microwave devices, materials study at microwaves, hardware and software for wireless communications.

Actual interests in educational activity

- Programming and algorithmic languages
- Electromagnetic theory
- Numerical methods
- Digital signal processing
- Wireless communications

Scientific interests

- Numerical Methods
- Materials study at microwave frequencies
- Simulation and design of microwave components
- Physics of gyrotropic media and non mutual passive microwave devices based on them
- Digital signal processing
- Wireless communication
- Embedded systems in communication
- Mobile platforms in bio-medical and healthcare areas
- Biomedical and physical sensors

Main achievements

- Tunable dielectric resonator filters
- Electrically controlled phase shifters based on microstrip and coplanar line
- Electromagnetic analysis and design for shield boxes and TEM Cells

Collaboration

- TESCOM Co. Ltd. <http://www.tescom.co.kr>.

Members of the Group

Yuriy Prokopenko, PhD, Associate Professor.

Courses:

“Computational Mathematics”, “Microwave technology”.

Research:

Numerical Methods in Electromagnetics; electromechanically-tunable microwave devices; measurement of electrophysical parameters of materials at the microwave band; testing of mobile devices;

Member of [IEEE](#)’s [MTTS](#).

Chairman of Central Ukraine Chapter.

He is head of Student research group on microwave.

He is research scientist (wireless testers design group) at TESCOM Co. Ltd.

(www.tescom.co.kr.)

Author of more than 114 publication and patents, inventions, books

Viktor Kazmirenko, PhD, Associate Professor.

Courses:

“Computational Mathematics”, “Microwave technology”, “Standardization of biomedical equipment and information”,

Research:

Numerical methods; passive microwave devices; digital signal processing; programming of microcontrollers, DSPs, FPGAs; wireless communication systems.

He is research scientist (wireless testers design group) at TESCOM Co. Ltd.

(www.tescom.co.kr.)

He is an author of more than 44 publications.

Irina Golubeva, PhD, Assistant Professor.

Courses:

“Computational Mathematics”, “The analog circuitry”, “Programming and algorithmic languages”,

Research:

Numerical methods; passive microwave devices; digital signal processing; programming of microcontrollers, DSPs, FPGAs; wireless communication systems.

She is research scientist (wireless testers design group) at TESCOM Co. Ltd.

(www.tescom.co.kr.)

She is an author of 18 publications.

Borys Pratsiuk, Assistant Professor

Courses:

“Computational Mathematics”, “Microwave technology”, “Programming and algorithmic languages”, “Personal computers and programming fundamentals”

Research:

Member of the Microwave Theory and Techniques Society ([MTTS](#))

The founder of the student branch [IEEE KPI Student Branch](#).

Head of mobile application developers group.

He is research engineer (wireless testers design group) at TESCOM Co. Ltd.

(www.tescom.co.kr.)

He is an author of 16 publications.

Pavlo Sergienko, 2^d year PhD student

He is preparing the PhD thesis “Tunable microwave filters based on microstrip line”

Research:

Modeling of microwave filters based on microstrip lines, calculation of the microwave characteristics. Developing mobile applications.

Also a member of Android KPI developers group. Member of the Microwave Theory and Techniques Society ([MTTS](#)) of the Institute of Electrical and Electronics Engineers ([IEEE](#)).

He is an author of more than 5 publications.

Kostiantyn Savin, 2^d year PhD student

He is preparing the PhD thesis “Tunable microwave filters based on thin films”

Research:

Modeling of microwave filters based on thin films, calculation of the microwave characteristics. Theoretical development of microwave devices. Member of the Microwave Theory and Techniques Society ([MTTS](#)) of the Institute of Electrical and Electronics Engineers ([IEEE](#)).

He is an author of more than 5 publications.

Anton Voloshin, 1st year PhD student

Research:

Has a good skills in Bluetooth protocol implementation.

Taras Zaporozhets, BSc student

Research and skills:

Deep knowledge in embedded systems design and OS Linux porting to different ARM platforms. Good understanding of hardware principle design and usb driver design for Linux kernel.