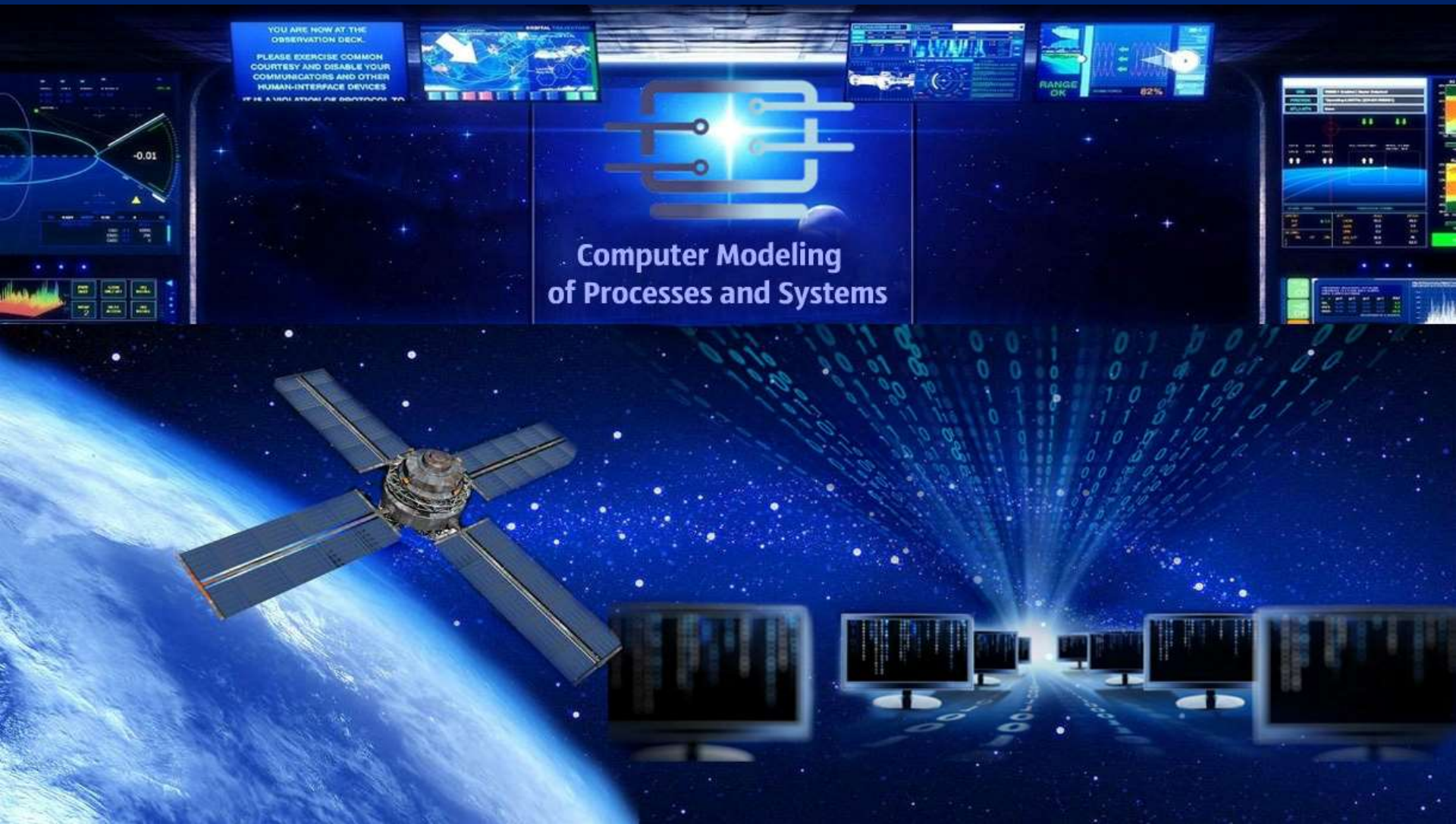
National Technical University "Kharkiv Polytechnic Institute"

Engineering and Physics Faculty

Department of Computer Modeling of Processes and Systems



Specialties and specializations

✓ **Specialty “Applied Mathematics”**

Specialization “Computer Modeling of Processes and Systems”

- Bachelor of Applied Mathematics
- Master of Applied Mathematics

✓ **Specialty “Computer Science and Information Technologies”**

Specialization “Design, creation and analysis computer systems”

- Bachelor of Computer Science and Information Technologies
- Master of Computer Science and Information Technologies

Areas of studying

Applied Mathematics

Mathematical modeling of complex systems and processes, analysis and synthesis of control systems.

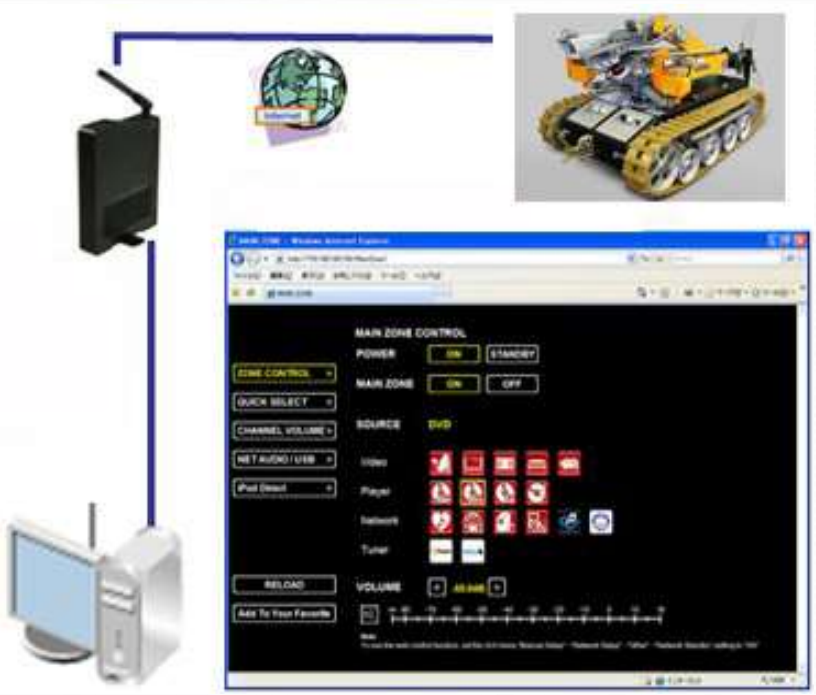
Computer Science and Information Technologies

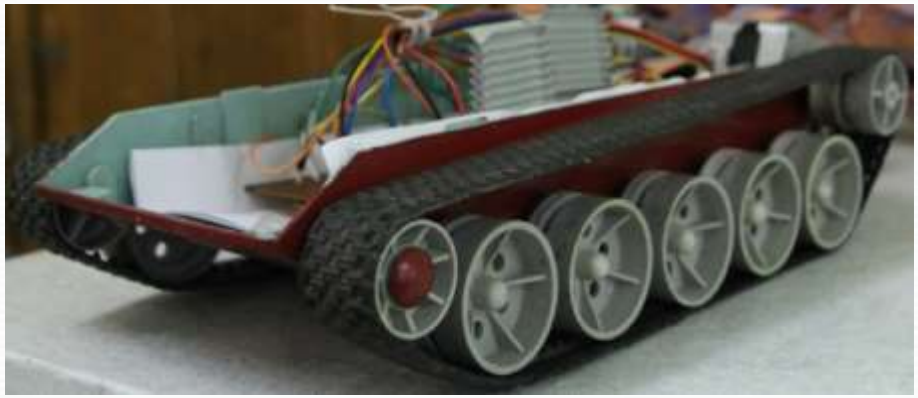
Programming, analysis and systematization of data, development of algorithms of processing information and program supports.

Areas of studying “Applied Mathematics”

- Development of calculation algorithms, their implementation in the form of an application software on a computer or on the computer network.
- Mathematical modeling, automatic control of complex processes.

The main development





Crawler which can be used as a base for sapper robot.

Areas of studying “Computer Science and Information Technologies”

- Development of software solutions with use of computer graphics
- Programming of web applications and databases
- System administration

Software SANACAD

Development of CAD system «Program-mathematical software for navigation systems».

Application for design of onboard information systems for different moving objects.

Employment perspectives

- *IT*- companies «INTETICS», «DATA ART», «NIX SOLUTIONS», «GLOBAL LOGIC», «MIRATECH» etc.
- Leading scientific, research and development centers of Ukraine and other countries
- Data processing centers

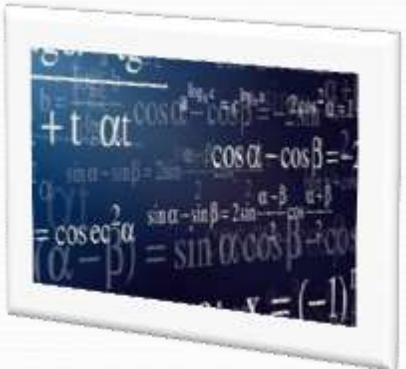
General academic disciplines specialty “Applied Mathematics”

Disciplines bachelor’s level

- Programming
- Mathematical analysis
- Software
- Discrete mathematics
- Algorithms and data structures
- Theory of control
- Optimization methods
- Architecture of computer systems
- Data analysis

Disciplines master’s level

- Modeling and Analysis of Complex Systems
- Modern Control Theory
- Artificial neural networks
- Methods of computing experiment
- Reliability, testing and diagnostics information systems
- Nonlinear processes and models
- Navigation and navigation systems



General academic disciplines specialty “Computer Science and Information Technologies”

Disciplines bachelor’s level

- Programming
- Computational methods
- Object-oriented programming
- Operating systems and system programming
- Databases and Information Systems
- Control theory
- Image Processing and Multimedia
- Information Theory and Coding
- Data protection

Disciplines master’s level

- Programming in Computer Networks
- Digital control systems
- Programming 3-D graphics
- Programming Mobile Devices
- WEB-programming technology
- Artificial neural networks

Laboratory base of department

Department staff

Breslavsky D.
Head of Department
Doctor of Technical Science
Professor

Andrieiev I.
Doctor of Technical Science
Professor

Plaksiy Yu.
PhD
Professor

Uspenskyi V.
Doctor of Technical Science
Professor

Korytko Yu.
PhD
Dozent

Nekrasova M.
Dozent

Tatarinova O.
PhD
Dozent

Grizun M.
PhD
Lecturer

Khatzko N.
PhD
Lecturer