South Ural
State University

National research
university

School of Electronic
Engineering and
Computer Science

Bachelor Degree in
Information and
Communication Technology

Major: Communication technologies and Intelligent data processing

Gleb Radchenko
Director of EECS, SUSU

Programme outline

Terabytes of data are generated, transmitted, processed and stored every second. It fundamentally transforms the life around us today.

Communication Technologies and Intelligent Data Processing bachelor programme allow you to study the key aspects of technologies for distribution, transmission, storage and intelligent processing of information, including:

- Fundamentals of Mathematics and Physics
- Programming and Software Development Processes
- Theory of Communication
- Fundamentals of Electronics and Internet of Things
- Data Storage and Processing Systems
- Machine Learning and Intelligent data analysis
- Industrial applications of sensing, data transmission and processing

Programme Structure

Pie chart showing Programme Structure:
- Information Technologies 31%
- Communication Technologies 22%
- Fundamental Studies 19%
- Engineering Studies 14%

Information Technologies Track

SOFTWARE DEVELOPMENT

- Programming Languages
- Structures and Algorithms of Data Processing
- Mobile Development
- Machine-oriented Languages
- Software Engineering
- Microprocessor Systems

INTELLIGENT DATA PROCESSING

- Parallel processing of information
- Methods of data storage and processing
- Intelligent data analysis
- Basics of machine learning

COMPUTER NETWORKS

- Introduction to service-oriented architecture
- Wireless Networks
- Network routing and switching

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Communication Technologies Track

- General Theory of Communication
- Digital Signal Processing
- Mobile Networks and Systems
- Transmitting and Receiving Radio-devices
- Standards and Technologies for Mobile Communication Systems
- Microwave and Antenna Devices
- Satellite Navigation Systems

Engineering Studies Track

- Basics of digital devices and mathematical logic
- Basics of Circuit Theory
- Electronics
- Information Theory
- Automated design of electronic devices
- Internet of Things Technologies

Infrastructure

Your education and project work would be provided using the facilities of such Laboratories of SUSU as

- Samsung IoT Academy
- Emerson PlantWeb Centre of Competence
- Kaspersky Research and Education Centre
- Smart Home Lab
- SUSU Supercomputer Center
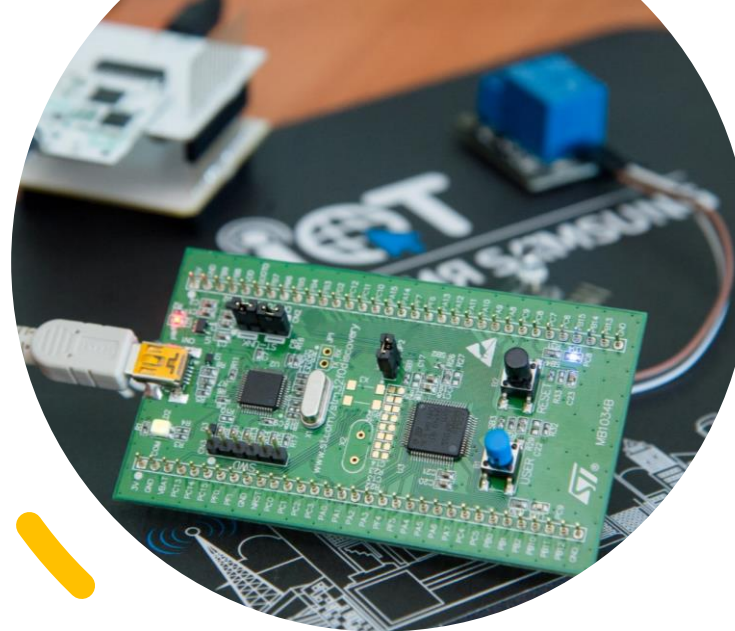
Prof. Franck Leprevost

University of Luxembourg, head of Laboratory of Algorithmics, Cryptology and Security (LACS)

Head of the Programme

Questions?

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