DIGIDOUPĚ

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Digidoupě

Digidoupě is the name **of a laboratory of modern information and communication technology** located at the Faculty of Education of Palacký University Olomouc and operated by the Centre for Prevention of Risky Virtual Communication. In our laboratory, we focus primarily on the efficient and meaningful use of information and communication technology in teaching and in everyday life.

Digidoupě has several objectives:

A. To improve the digital literacy among future teachers – students

(through teaching, own projects, innovation, research, etc.).

B. To improve the digital literacy among teachers

who, for example, seek to increase their qualification or are simply interested in this area.

C. To improve the digital literacy among undergraduate students

who want to set up their business in the future based on digital technology (start-up, technology-oriented company, etc.).

D. To increase children's interest in the meaningful use of technology

(for example, as part of thematic projects, content development, prototyping, etc.).

E. To design tools that can be used in teaching and in students' home preparation

Our technology

Digital technology encompasses useful tools that can help teachers and other teaching staff achieve their educational goals. And that's exactly what we focus on in Digidoupě! The portfolio of technology that we work with in the laboratory includes:

A. Programmable robots

B. 3D printing

C. Virtual reality (VR) systems

D. Augmented reality (AR) systems

E. Microcomputers in teaching

F. Presentation and visualization technology

G. Mobile touch devices

H. STE(A)M kits

I. Industrial devices that can be used in teaching

J. Laser technology

K. Other interesting technological gadgets
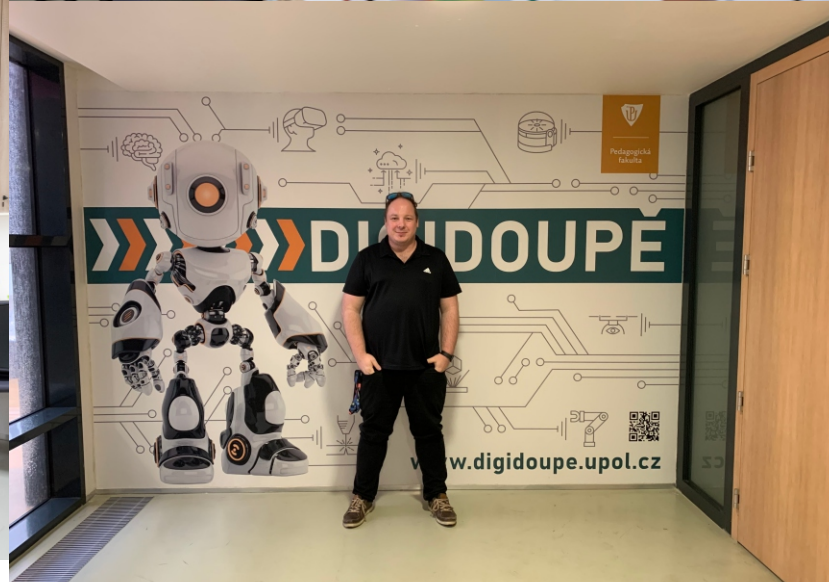
Programmable robots

In Digidoupě, we work with a wide range of programmable robots designed for use in kindergartens, elementary schools, secondary schools and also universities. We focus on simple programmable robotic toys (designed primarily for smaller children) as well as on more complex and advanced robotic systems, such as robotic arms or humanoid robots.

Our robotic portfolio

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Alpha 1S	**Genibot**	**Sphero**
Artie 3000	**InO-Bot**	**Sphero BOLT**
Artie MAX	**Intelino Smart Train**	**Sphero Ollie**
Bee-Bot	**Line-Us**	**Sphero RVR**
Blue-Bot	**Matatalab**	**uArm**
Code&Go	**mBot**	**Vector**
Code-a-pillar	**Pro-Bot**	**Woki**
Cozmo	**Ozobot BIT 2.0**	and others
Cubetto	**Ozobot EVO**	
Cue robot	**Qobo**	
Edison	**Root Coding Robot**	

3D printing

In Digidoupě, we work with a wide range of technology that enables printing of three-dimensional objects, including 3D printers that use printing filaments or printers that work with UV resins. Popular machines used in our laboratory include 3D printers manufactured by **Prusa** (i3 Mk2, Mk3, Mini, etc.), **Creality Ender** or **Anycubic Photon**.
We also work with different types of 3D pens designed primarily for the young visitors of our laboratory.

In Digidoupě, we use 3D printing to develop a variety of useful accessories that expand the potential of digital learning technology – such as drawing attachments and mobility extensions. In addition to conventional 3D objects, we are also able to turn usual 2D photographs into plastic 3D images (lithophanes).
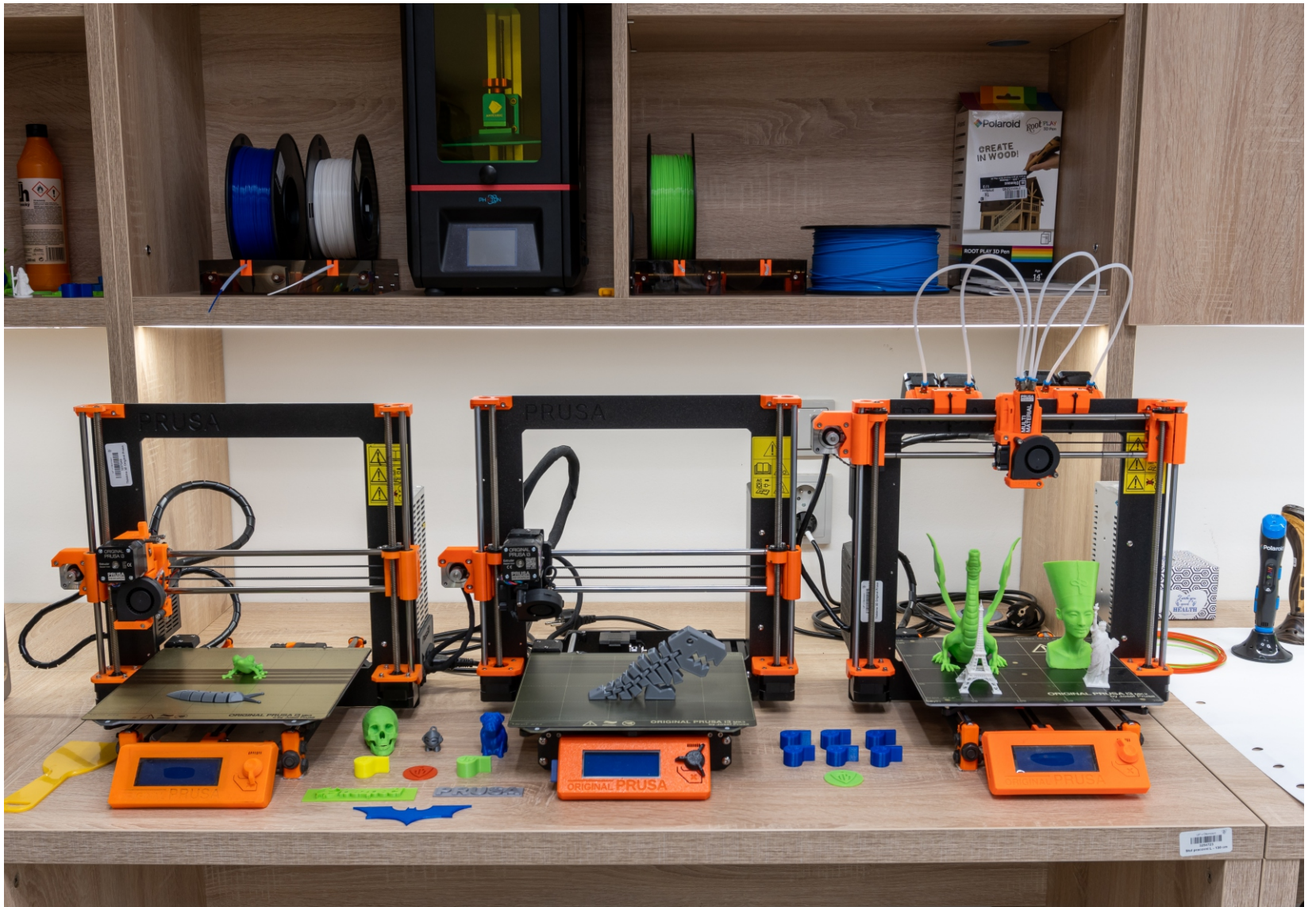
Augmented and virtual reality

Popular technology that can be used for entertainment but also for education includes virtual reality (VR), augmented reality (AR) or mixed reality systems. In our laboratory, you can have first-hand experience with these types of technology!

For example, you can try out augmented reality solutions using the **MergeCube** system. It consists of a special cube and intelligent applications that can project a wide range of interactive objects – right onto your hand! Augmented reality activates learners and arouses their interest in education and the world of science.

In Digidoupě, we actively work with virtual reality systems including **Oculus HD**, **Oculus Quest** and **Oculus Go** headsets. They allow learners or adults to explore a number of locations that are usually unavailable (for example, they can visit the international space station, dive into the depths of the ocean, walk through Chernobyl or try out an adrenaline sport in a safe environment). Other available systems include, for example, **Google Glass** or **Microsoft Hololens**.

Other types of technology

In Digidoupě, we work with a wide range of presentation technology, such as **digital touch panels** and **mobile touch devices**. For example, you can try out a multi-touch digital panel which is an advanced replacement for commonly used interactive boards. Other interesting tools include various types of digital scanners – in the laboratory we use **Sense 3D Scanner** or **Scanmarker Air** which can be used as a support tool for students with learning disabilities.

Laser technology is visually attractive. Digidoupě is equipped with **laser engraving devices** or useful gadgets, such as **laser keyboards**. You can also try out the **leap motion** technology that allows touch-free computer control, **thermal cameras**, **endoscopes**, various types of measuring devices, etc. Very popular gadgets designed for physics classes include various types of **levitrons**. You can also see examples of spy technology, spy glasses, spy pen, spy watch or a USB keylogger.
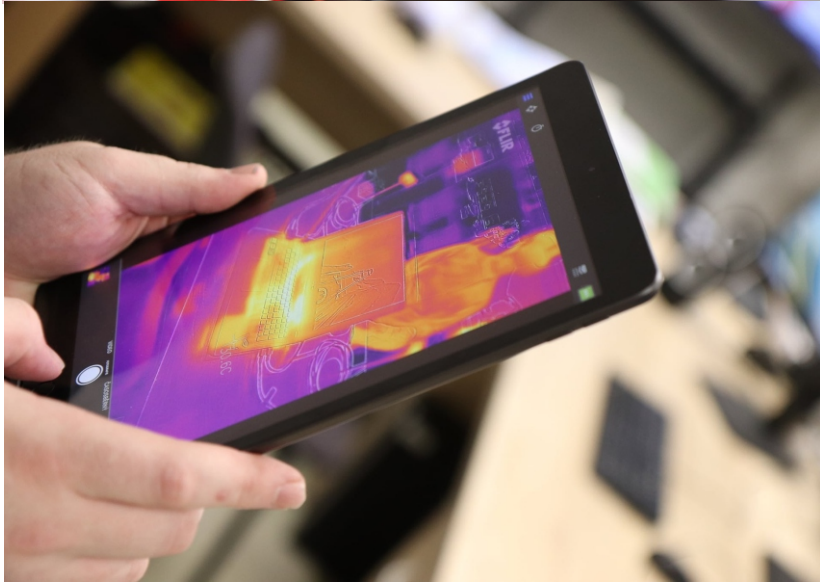
Training courses for teachers

Are you planning to use new computer technology in your school? Are you wondering how to start? Do you want to know what digital technology can be used in schools, which digital learning tools you should acquire and which you should avoid? Do you want to know how to use digital technology in specific subjects? In Digidoupě, we are ready to help you! Join one of our in-class or e-learning training courses.

Education with digital learning tools – basic course (3 x 45 minutes)
Venue: Faculty of Education, Palacký University Olomouc, Žižkovo náměstí 5, Olomouc
Target group: teachers (maximum 15 participants per group)
During the training course, you will learn about the basic digital learning tools that can be used in schools. We will explain how to include the technology in specific subjects and what to watch out for. We will outline how to create meaningful teaching activities using these tools. We will explain the advantages and disadvantages of IT tools. The course is suitable for all teachers (irrespective of qualification), no specific knowledge or skills are required (for example programming skills).

Want to know more?
Write to our e-mail: digidoupe@upol.cz.
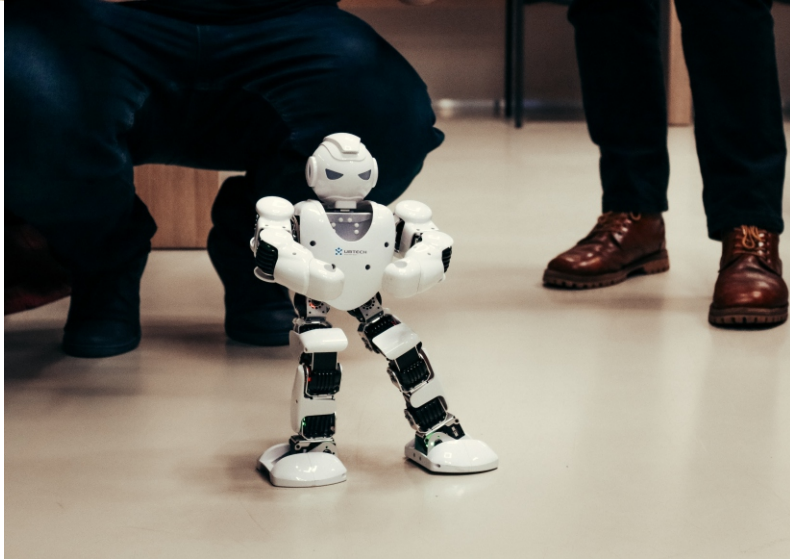
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