

NTK

50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Library of Technology

**National Centre
for Information Support of Research,
Development, and Innovation**

Robotics at NTK: Why We Should Not Be Scared of Robots in Libraries

Mgr. Vojtěch Novák, Ph.D.

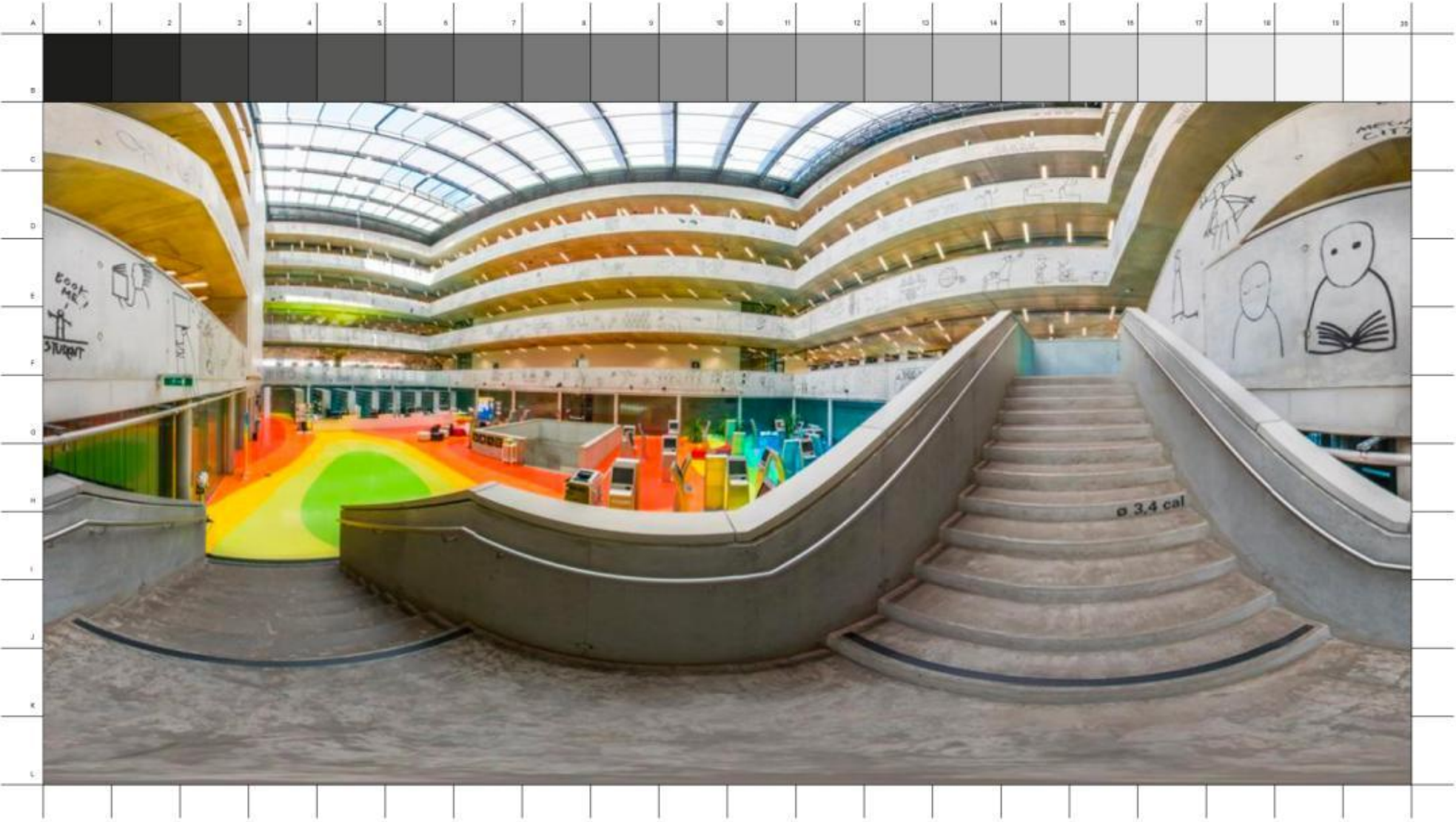
54th LIBER Annual Conference 2025 in Lausanne

3rd of July, 2025



The National Library of Technology (*further NTK)

NTK
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National Library of Technology



Robota => ROBOT

Karel Čapek & Josef Čapek

R. U. R.

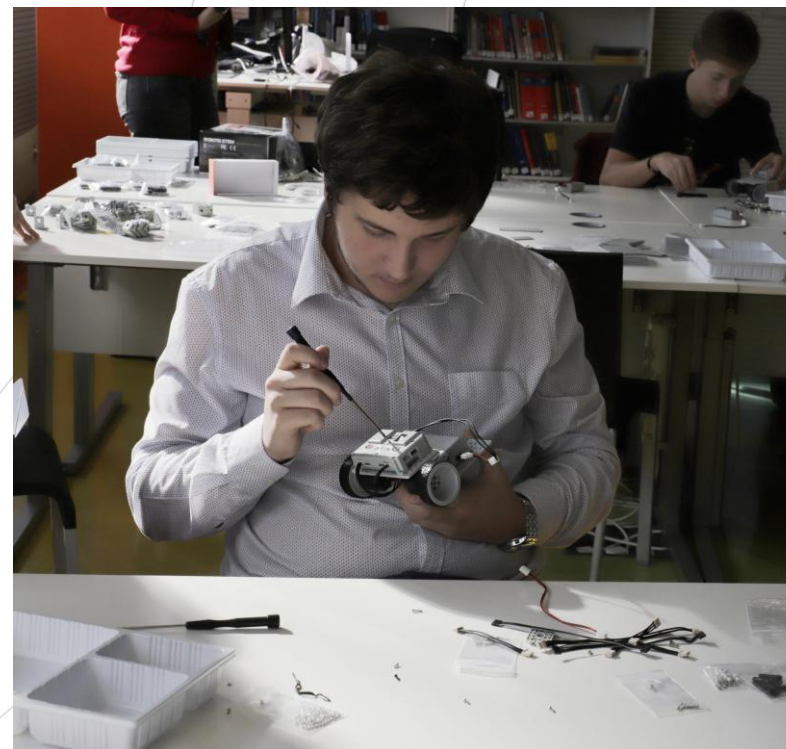


#RobotikaNTK

InfoCorner of Robotics



Workshops & Events

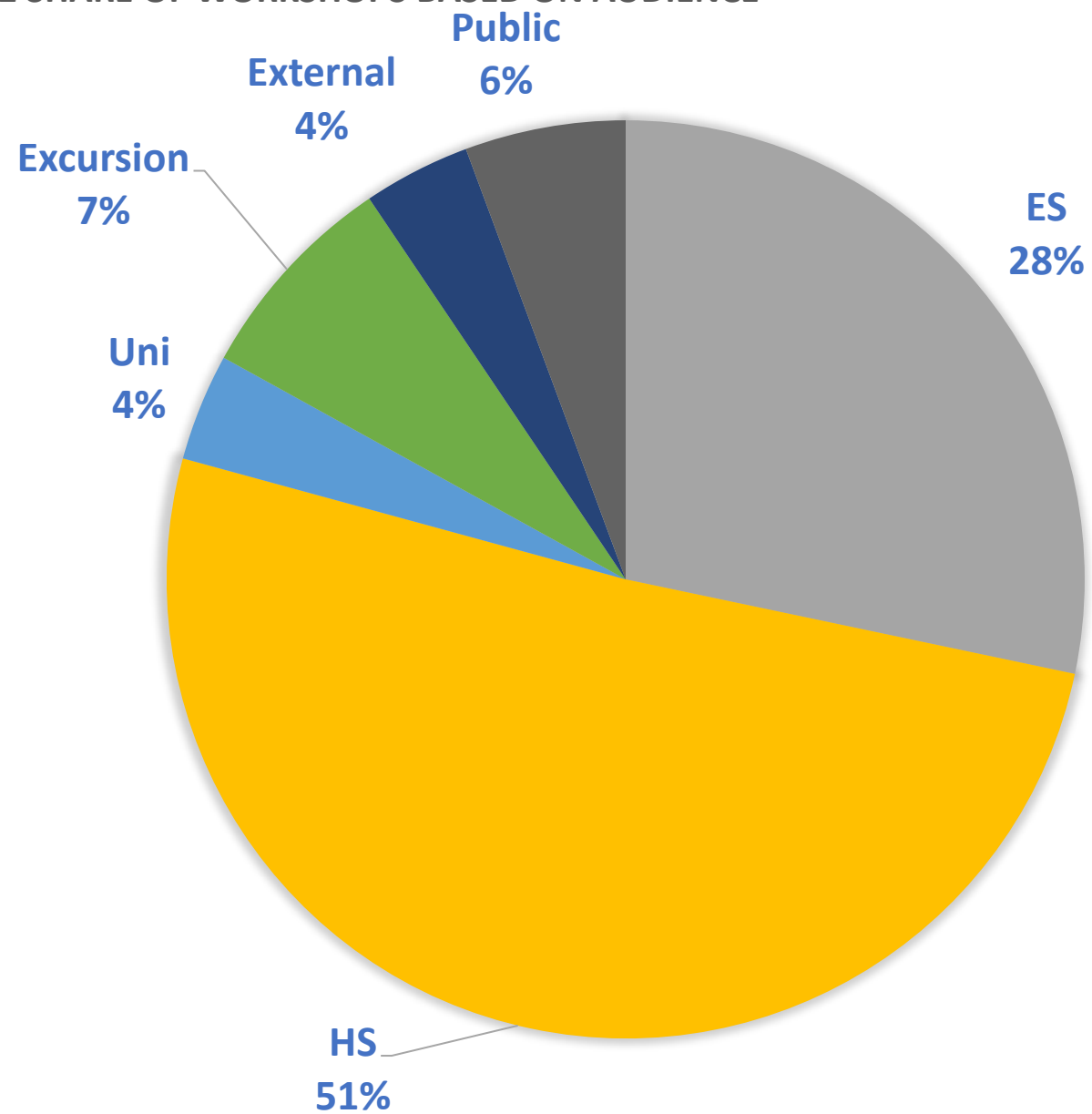


#RobotikaNTK 2022-2024

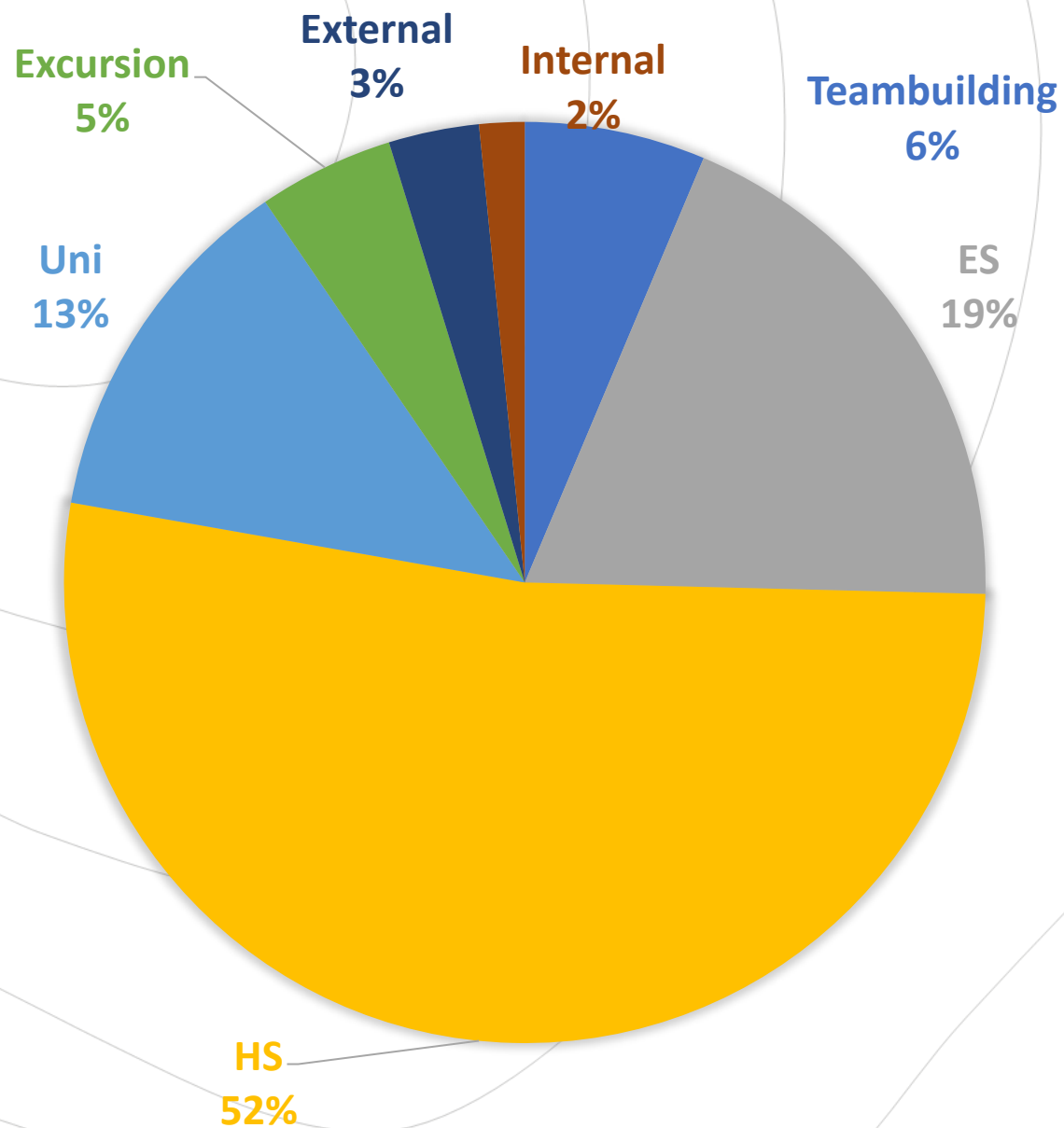
- 177 robotics events (mainly workshops)
- 2624 participants
- 14-15 participants / workshop
- 2 conference abstracts
- 396 books (23rd of May 2025)



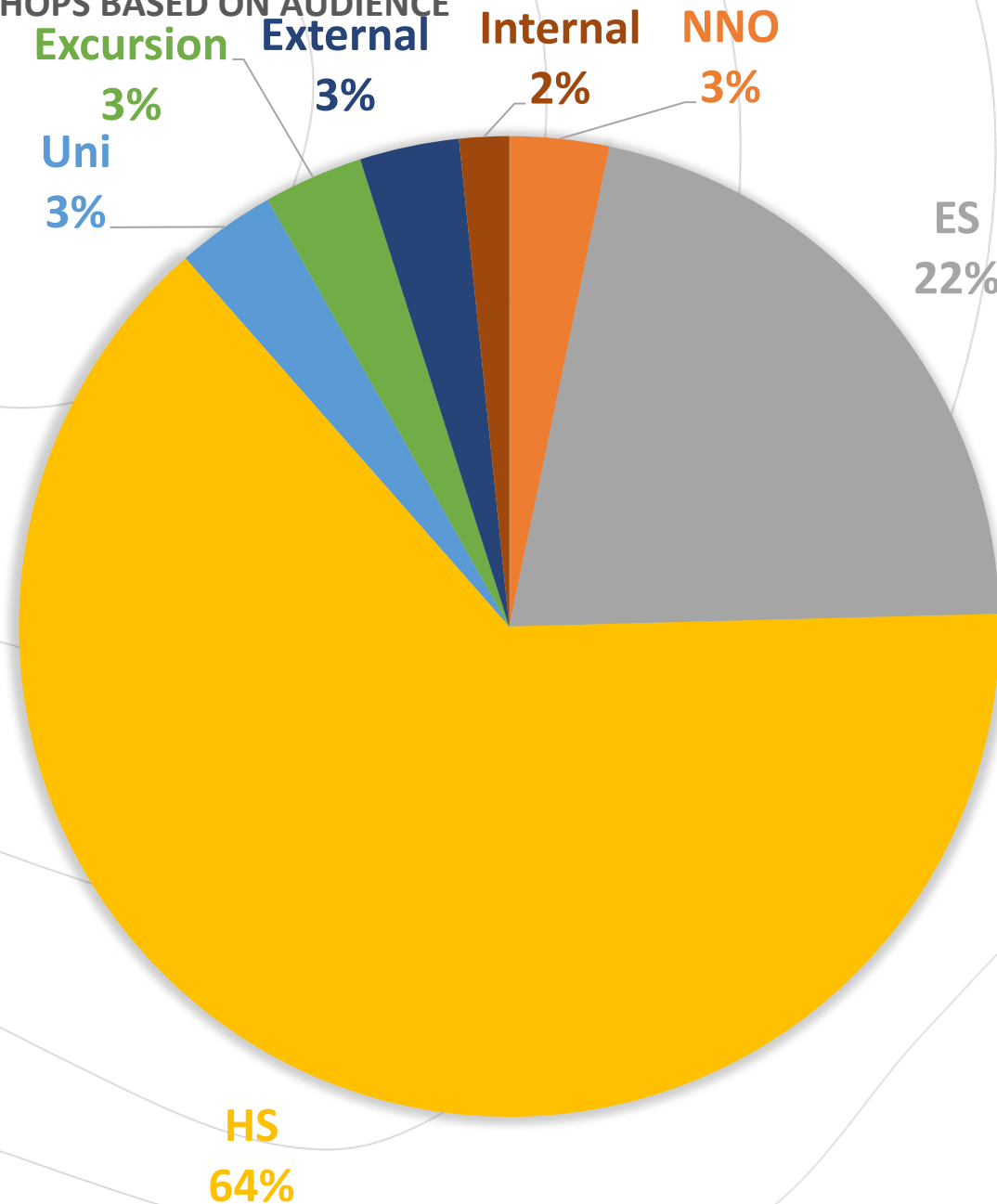
2022 SHARE OF WORKSHOPS BASED ON AUDIENCE



2023 SHARE OF WORKSHOPS BASED ON AUDIENCE



2024 SHARE OF WORKSHOPS BASED ON AUDIENCE

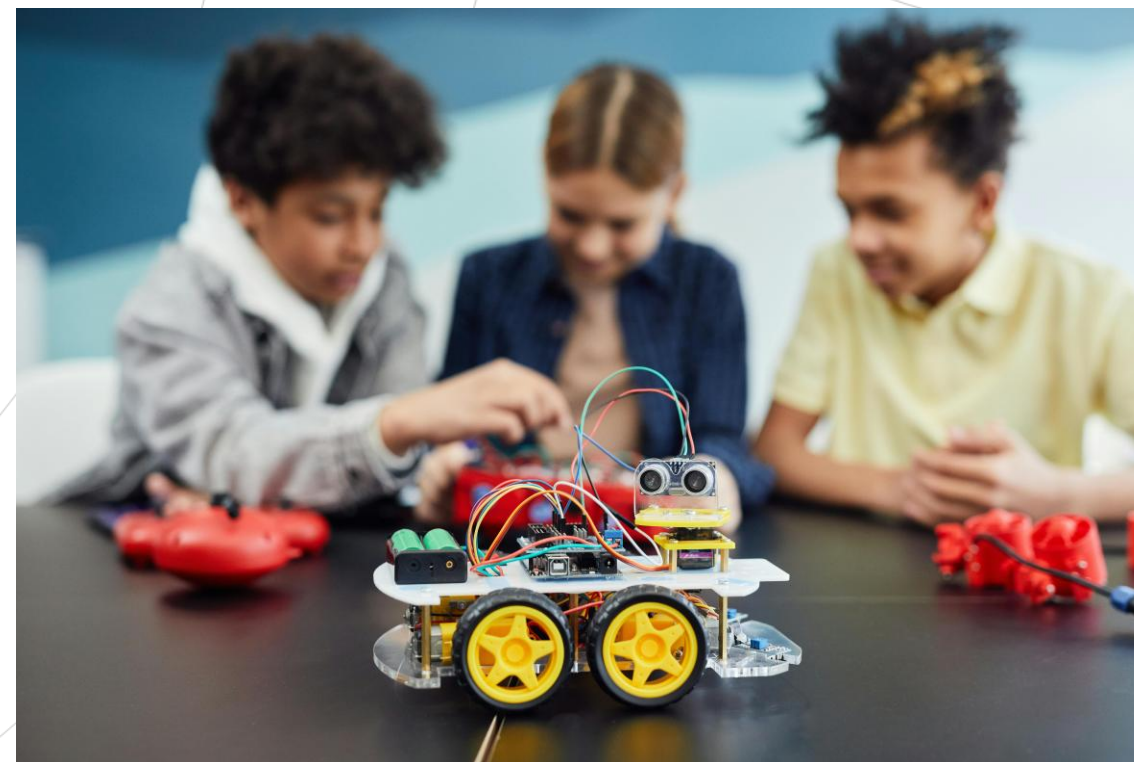


Frontal Teaching vs. Constructivist Learning Approach

Frontal (Traditional)



Constructivist (=> Digital Natives)



Workshops of Robotics at NTK

Elementary School

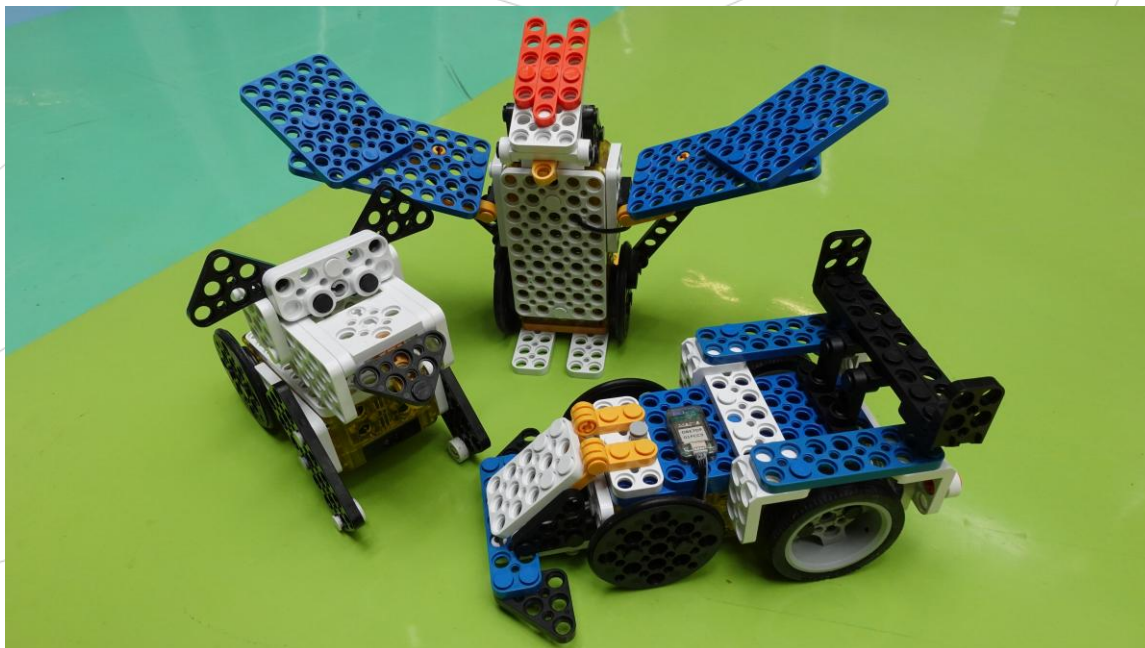
- Robotics for Youngsters
- Robotics ZOO Junior (**since 2025*)

High School / University

- Working with the UR3e Collaborative Robot Arm
- On the Trail of a Collaborative Robot at NTK
- Intro to Walking Robots at NTK
- Robotics ZOO
- The Basics of Robot Programming - Robot Cart
- Robot Cart - Working with the Optical Sensors
- Walking Robots Contest

Elementary School

Robotics for Youngsters



- Hardware: Robotis PLAY 700 Ollobot
- Target Group: Children 8+
- Capacity: 25 students (1 classroom)

Elementary School

Robotics ZOO Junior



- Hardware: Robotis PREMIUM
- Humanoid, Puppy, Scorpion, Dinosaur, King Spider
- Target group: middle schoolers (grades 5 to 8)
- Capacity: 25 students (1 classroom)

High School / University

Working with the UR3e Collaborative Robot Arm



- Entry level course with Robotic Arm
- Hardware: UR3e
- Software: Rhinoceros (with Grasshopper plugin)
- Drawing or pick-and-placing with an end effector gripper
- Capacity: 15 students

High School / University

On the Trail of a Collaborative Robot at NTK



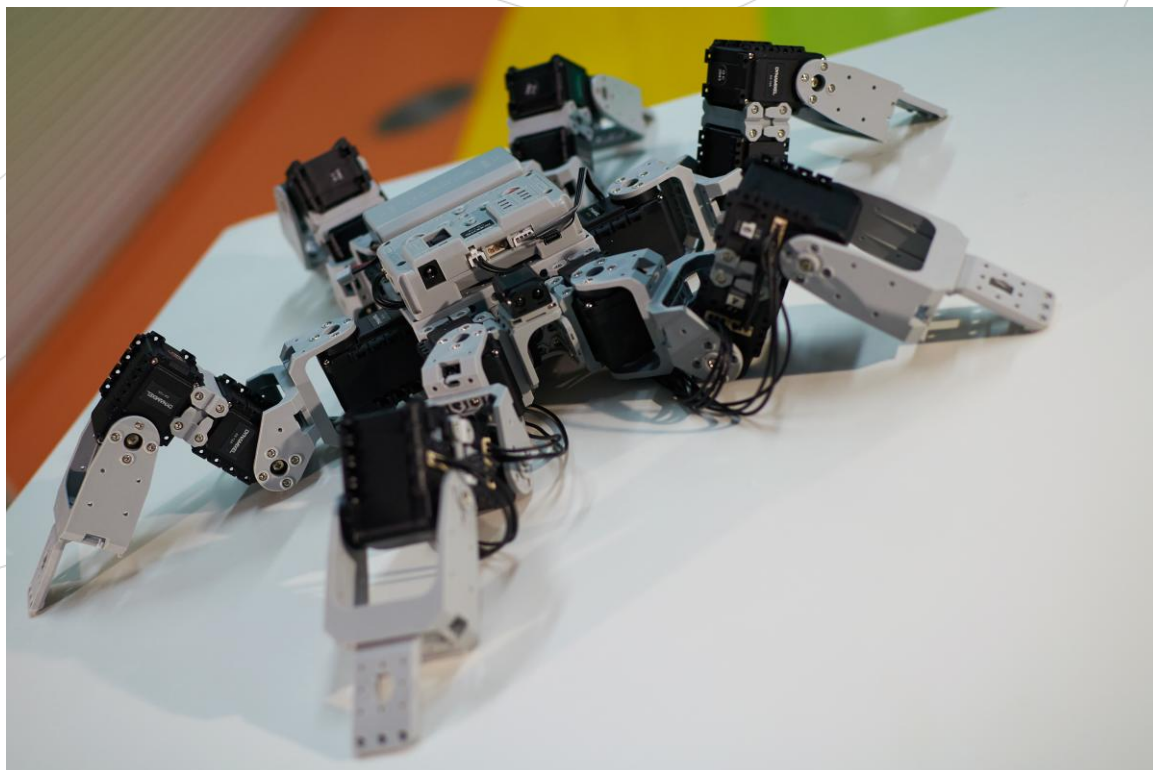
- Follow-up course with Robotic Arm
- Hardware: UR3e
- Working with plaster to design a tile
- Software: Rhinoceros (with Grasshopper plugin)
- Capacity: 15 students



UR3e and Sandwich [online]. URL:
https://www.facebook.com/100064441013994/videos/1030996734925687?_so=_permalink, [1. 6. 2024].

High School / University

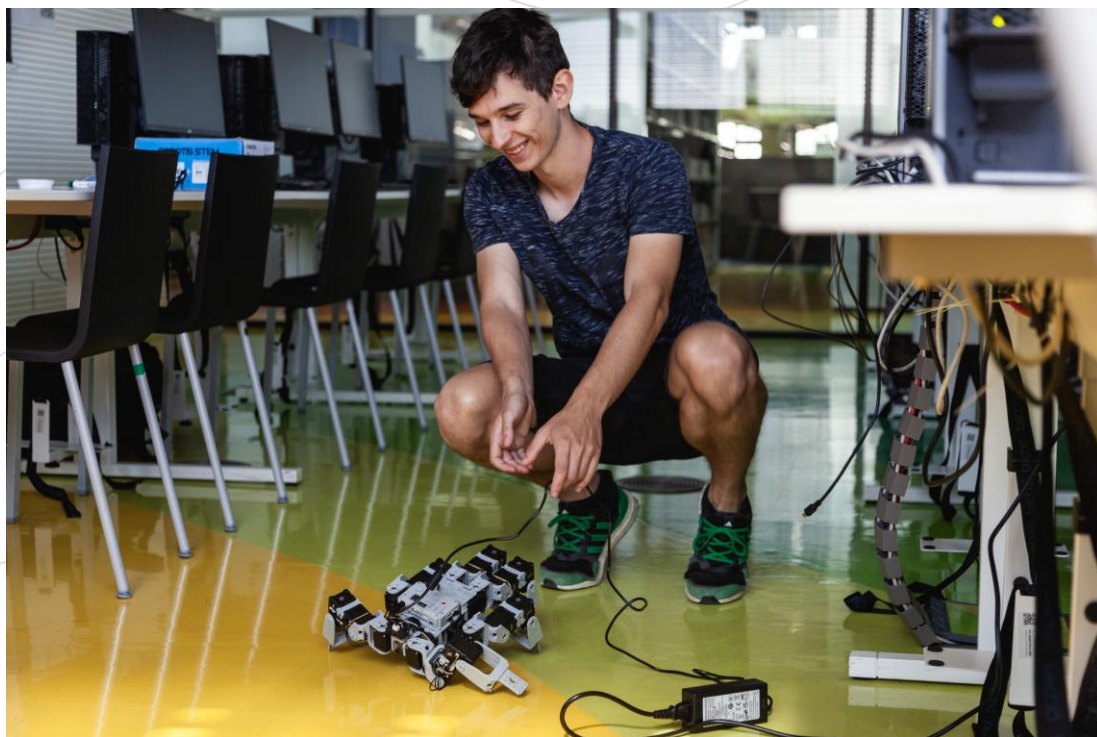
Intro to Walking Robots at NTK



- Robot walk programming basics
- Hardware: Robotis Premium
- King Spider (hexapod)
- Capacity: 15 students

High School / University

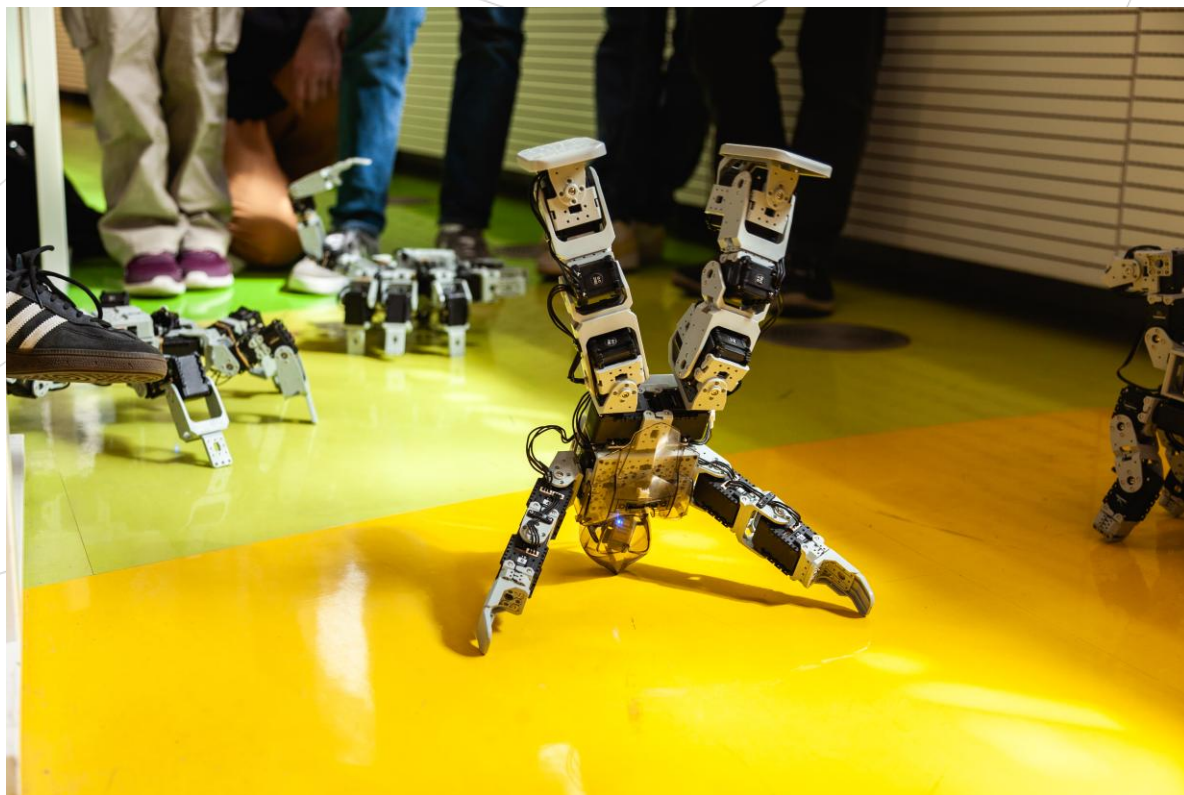
Walking Robots Contest



- Also as a teambuilding for SMEs
- Hardware: Robotis Premium
- King Spider (hexapod)
- Capacity: 15 participants

High School / University

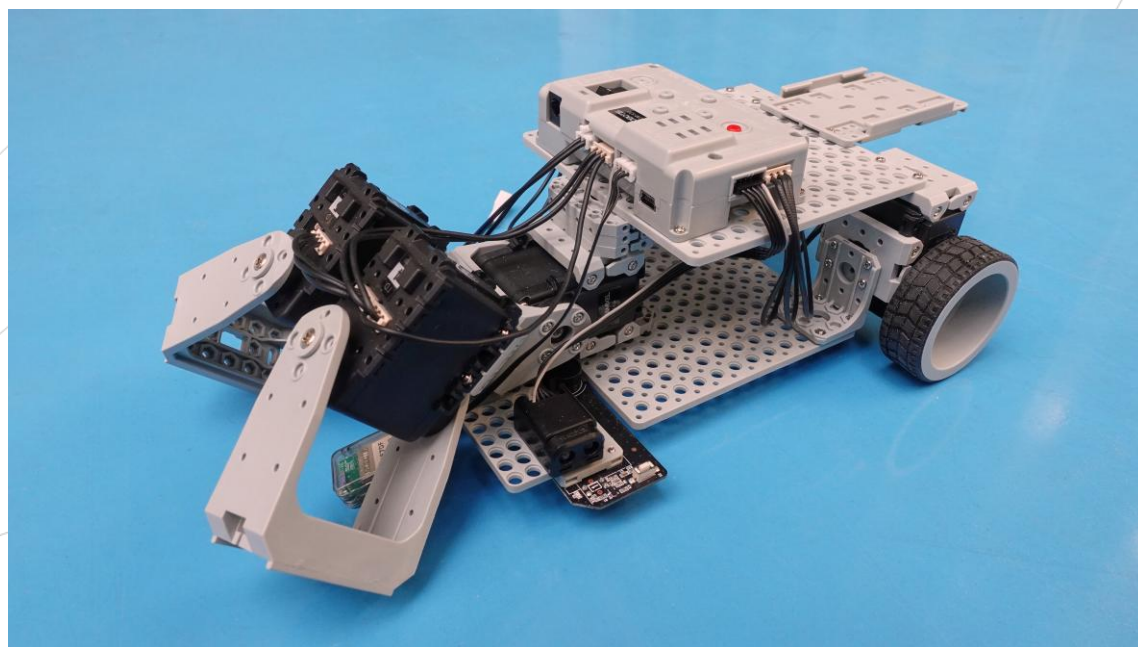
Robotics ZOO



- Hardware: Robotis PREMIUM
- Mutual collaboration by participants in working with different configurations
- Humanoid, Puppy, Scorpion, Dinosaur, King Spider
- Capacity: 15 students

High School / University

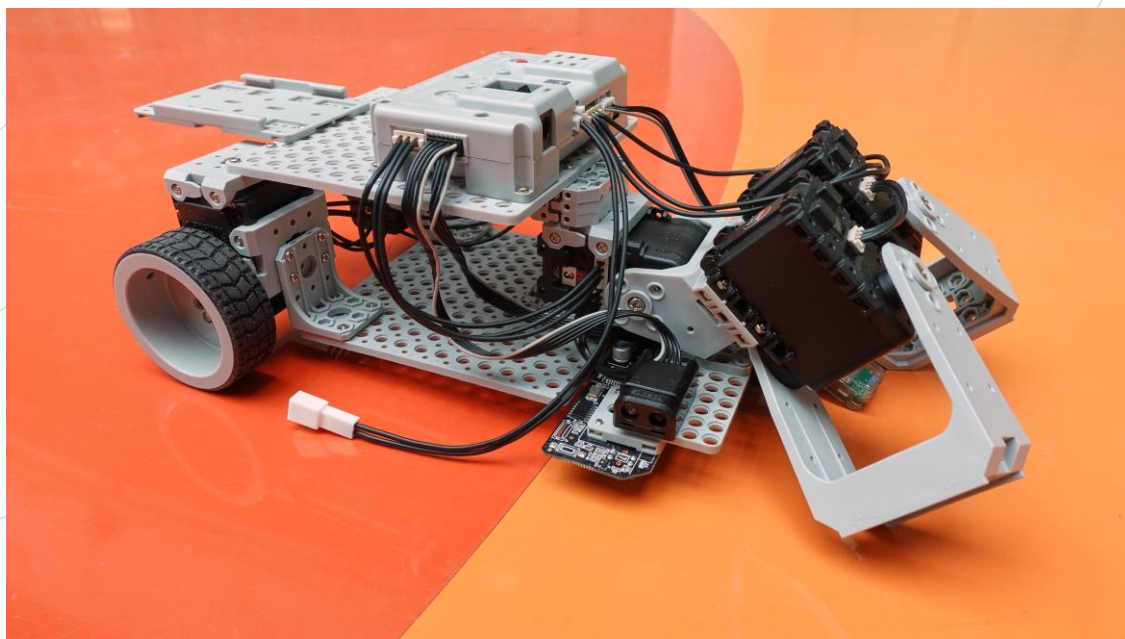
The Basics of Robot Programming - Robot Cart



- Entry level course with Robot Cart
- Programming basics for the beginners
- Fine motor skills improvement
- Hardware: Robotis STEM
- Capacity: 12 students

High School / University

Robot Cart - Working with the Optical Sensors



- Entry level course with Robot Cart
- Explanation of sensors and their role in robotics
- Hardware: Robotis STEM
- Capacity: 12 students

High School / University

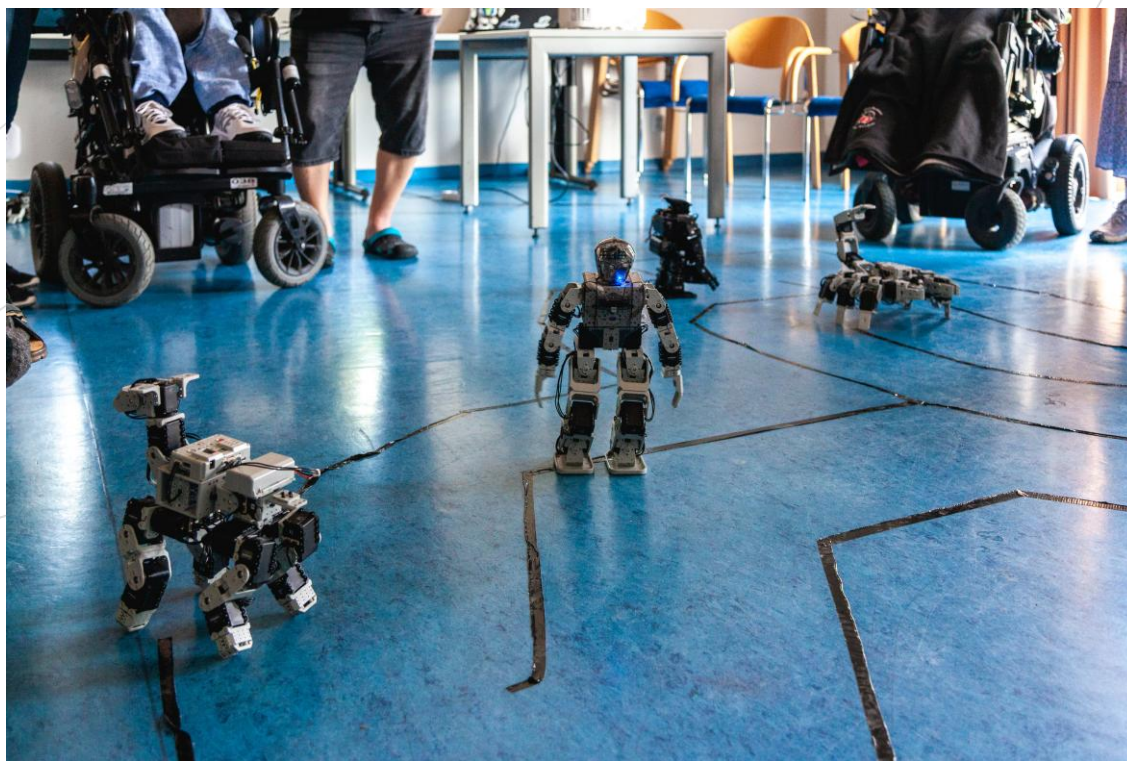


High School / University

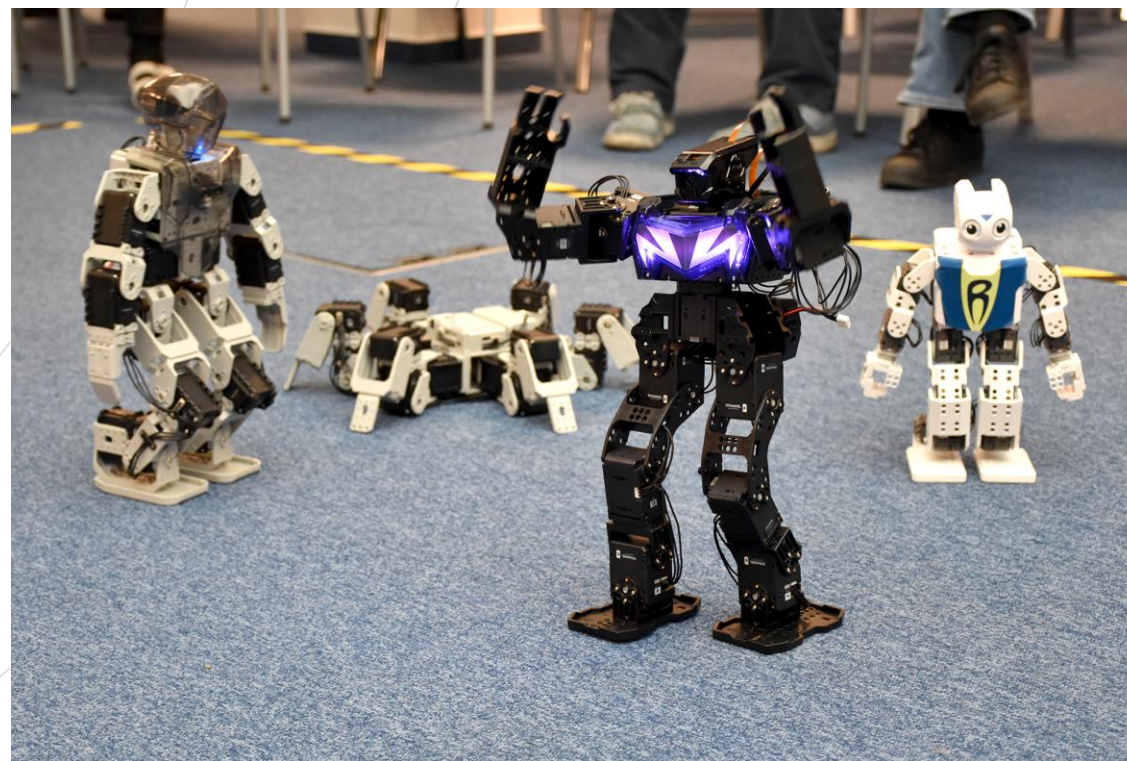


Events Outside of NTK

Parent Project CZ



Industrial Property Office of the Czech Republic



Events Outside of NTK

VědaFest (from 2022 - 2025)



Honorable Mentions



Honorable Mentions

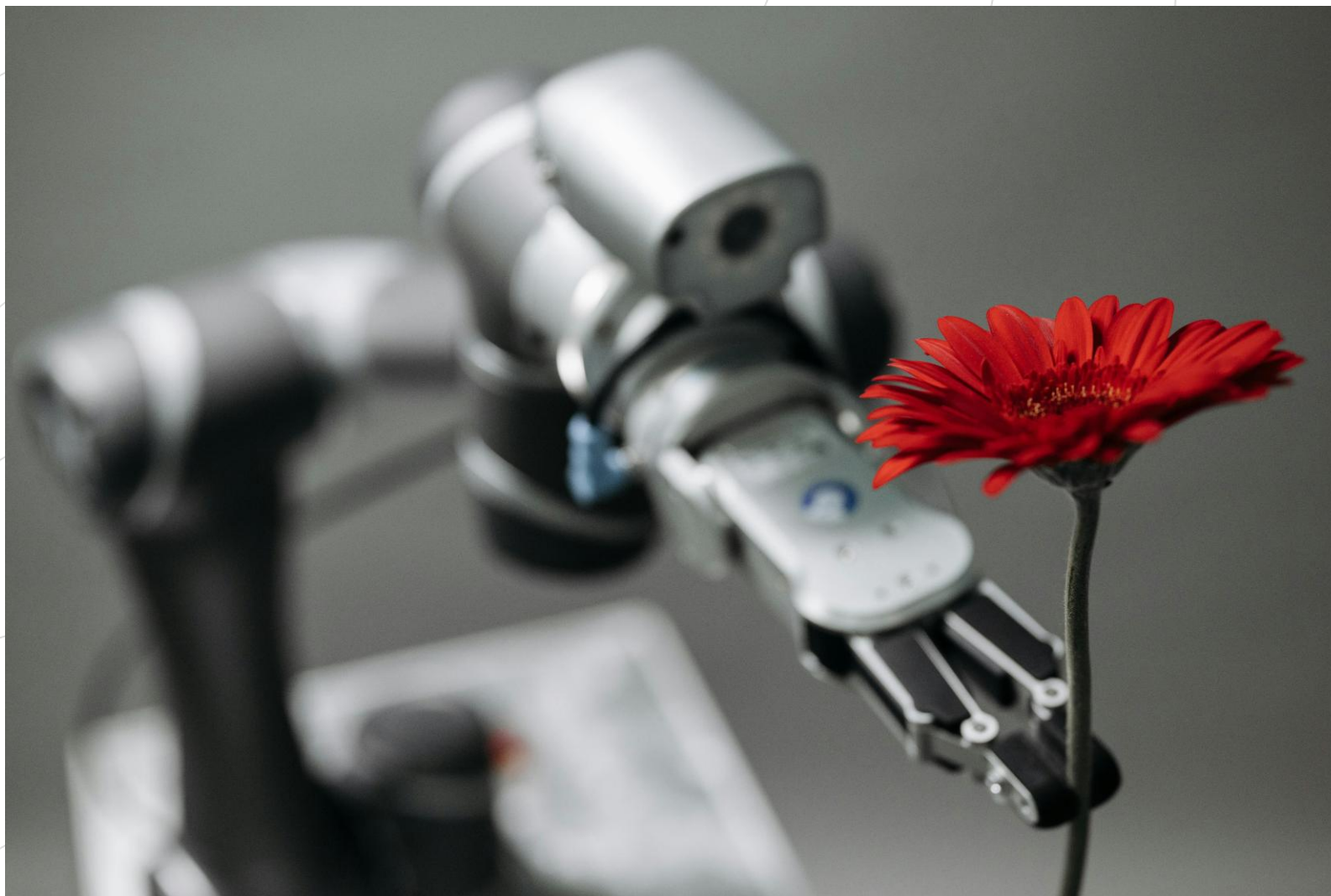
Hawassa University & Jimma
University



Ritsumeikan Asian Pacific University



Don't Be Scared ...



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National Library of Technology

National Centre
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Thank You !!!

@voitanovak

robotika@techlib.cz





1920x1080

IEEE 802.11

Business Services

💡 For SMEs, startups/small entrepreneurs
or academic teams

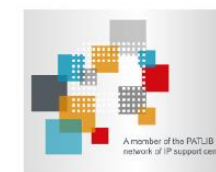
📈 Professional information support

📈 Media monitoring

📈 Intellectual property protection
and patent search

👛 We use professional information sources

✉️ firemnisluzby@techlib.cz



Images (Selected):

- *Constructivist Learning Approach* [online]. URL: <https://www.pexels.com/cs-cz/foto/auto-technologie-kola-elektronicky-7868890/>, [19. 5. 2025].
- *Frontal Teaching* [online]. URL: <https://www.pexels.com/cs-cz/foto/1708912/>, [19. 5. 2025].
- *Hawassa University & Jimma University* [online]. URL: https://media.licdn.com/dms/image/D4E22AQFrKr03RNztJg/feedshare-shrink_2048_1536/0/1687243805614?e=1720051200&v=beta&t=N5kfgm54GNGVRg5W7LH10wTlte4Q-8Tabljq7fxUzSs, [1. 6. 2024].
- *Industrial Property Office of the Czech Republic* [online]. URL: <https://www.facebook.com/photo?fbid=607769138045150&set=pcb.607769201378477>, [10. 6. 2025].
- *Karel Čapek & Josef Čapek* [online]. URL: <https://strednicechy.rozhlas.cz/sites/default/files/images/399e1cff8df36e614b1cf3b7477ed471.jpg>, [19. 5. 2025].
- Photo archive of NTK.
- *R. U. R.* [online]. URL: <https://www.3pol.cz/data/web/obr-1-20/panel-01-05a.jpg>, [19. 5. 2025].
- *The National Library of Technology* [online]. URL: <https://www.techlib.cz/public/slideshow/365.jpg>, [19. 5. 2025].
- *UR3e Holding Rose* [online]. URL: <https://www.pexels.com/cs-cz/foto/okvetni-listky-technologie-drzeni-kontrast-8438966/>, [19. 5. 2025].
- *UR3e Holding Rose with a Girl* [online]. URL: <https://www.pexels.com/cs-cz/foto/zena-technologie-kytka-drzeni-8438979/>, [19. 5. 2025].

#robotikaNTK (Videos):

- *Robotika v NTK* [online]. URL: <https://www.instagram.com/ntkcz/reel/C2Hr5kprkil/>, [1. 6. 2024].
- *UR3e and Sandwich* [online]. URL: https://www.facebook.com/100064441013994/videos/1030996734925687?__so__=permalink, [1. 6. 2024].
- *DigitalAnt Teambuilding at NTK* [online]. URL: <https://www.instagram.com/digitalantcz/reel/C0MUzGXMyHW/>, [1. 6. 2024].