



Exhibition for Local, Regional and European Technology and Innovation

14-15 February 2023

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Outlook



ICS

Hungarian Railway Museum, Tatai út 95, H-1142 Budapest

Registration

Programme



About us

AI & Aut Expo - we provide an exhibition space for local, regional and European industry, technology, research and innovation in AI and Autonomous Systems. A two-day event with plenary presentations by senior policy makers, industry and research leaders from Hungary and Europe.

Topics

AI foundations | Autonomous systems | Industry 4.0 | Mobility and Aviation | Smart Agriculture | Data | Gaia-X | Natural Language Processing

About the organizers

Artificial Intelligence National Laboratory

The Artificial Intelligence National Laboratory Hungary, coordinated by SZTAKI, is founded in 2020 as the coordinated national artificial intelligence umbrella for the collaboration of all major research centers, universities and large-scale national programs. We funnel business needs and international research relations by

Autonomous Systems National Laboratory

The Autonomous Systems National Laboratory Hungary, coordinated by SZTAKI, is founded in 2020 to provide innovative solutions for the mobility of road vehicles, aerial vehicles and robots, particularly in the context of complex systems, formations and applications that necessitate either autonomous or cooperative operation.



The Neumann Nonprofit Ltd.

The Neumann Nonprofit Ltd., a state-owned company supports and implements key projects initiated by the Hungarian Government to raise the digitalisation level of Hungary and enable Hungarian citizens and enterprises to profit from increased digital competences.

Programme

Day 1, Tuesday, February 14

Opening Session

9:00-10:00 – guest registrations & orientation, coffee

10:00-10:50 – opening remarks

(Moderator: Dóra Lakatos, Péter Smejkál)

Gergely Fábián, State Secretary for Industrial Policy and Technology, Ministry for Economy Development

Miklós Maróth, president, Eötvös Loránd Research Network

László Monostori, director, Institute for Computer Science and Control

Roland Jakab, director AI Coalition Hungary, Ericsson regional director

10:50 – 11:40 Plenary Session – Hungarian National Laboratories **(Chair: László Monostori)**

The Artificial Intelligence National Laboratory at AI&Aut Expo 2023

András Benczúr – scientific director, Artificial Intelligence National Laboratory

Presentation of the National Laboratory for Autonomous Systems

Péter Gáspár – Head of Laboratory, Autonomous Systems National Laboratory

University roles in AI ecosystems

János Levendovszky, Vice-Rector, Budapest University of Technology and Economics (BME)

11:40-12:30 AI&AUT DEMO round tour

12:30-13:30 lunch break

13:30-15:00 Session 1A – Autonomous systems **(chair: Péter Gáspár)**

Utilizing Learning and Prior Knowledge Jointly for Autonomous Systems

Gellért Mátyus, Senior Expert on Machine Learning for Autonomous Driving,
Continental Autonomous Mobility Hungary

The importance of AI in the Hungarian drone ecosystem

Dániel Rohács, Drone Coalition Hungary

The Future Flight Challenge

Gary Cutts, Challenge Director, Future Flight, UK Research and Innovation

Autonomous Systems: Opportunities and Challenges

Michael Gadd, Head of the Office of Airworthiness, Blue Bear

Aerolelastic modelling and control challenges for fuel efficiency improvement of commercial aircraft

Bálint Vanek, Institute for Computer Science and Control (SZTAKI)

Agile maneuvering and transportation with autonomous drones

... .. Session 1B – Medical, Health (chair: István Csabai)

Péter Ferdinándy, Vice-Rector for Science and Innovations, Semmelweis University

Miklós Szócska, National Laboratory for Health Security

Lehel Ferenczi, GE HealthCare

The Huge Potential of AI in CAR-T Cell Therapies

Balázs Csanád Csáji, Institute for Computer Science and Control (SZTAKI)

Machine Understanding of Medical Text and MRI Images

László Vidács, University of Szeged

Designing multivalent protein-protein interactions for pharmaceutical research

Bence Bruncsics, Budapest University of Technology and Economics (BME)

15:00 – 15:30 Coffee break

15:30 – 17:00 Session 2A – Autonomous Systems in Industry (chair: József Váncza)

Sherrie Rad, Innovation Lead, Made Smarter Innovation, Innovate UK UKRI

Justin Quinn, Centre for Engineering and Renewable Energy (CERE), University of Ulster

Responsible Tech at Digital Catapult

Jennifer Cheung, Data Ethicist, Digital Catapult UK

Smart modelling techniques for better insights

Botond Kádár, EPIC Innolabs

Autonomous industrial robotics

Gábor Erdős, Institute for Computer Science and Control (SZTAKI)

Applications of Artificial Intelligence in Manufacturing Engineering

István Németh, Budapest University of Technology and Economics (BME)

Automation challenges in the automotive inhouse logistics

Ákos Csomós, Audi Hungária

15:30 – 17:00 Session 2B – Natural Language Processing

Thomas Searle, researcher, Health Data Research UK

Christopher Weavill, Co-founder & CEO, Hertizan

ChatGPT vs. OTP GPT

Lotár Schin, OTP Bank, AI CoE Lead

Telekom Digital Business Assistant and the ChatGPT

János Horváth Varga, Head of AI, Hungarian Telekom

End-user applications based on large language models

Gábor Berend, University of Szeged

Neural speech technologies

Géza Németh, Budapest University of Technology and Economics (BME)

László JOBBÁGY, Neumann Technology Platform, Digital Champion

Day 2, Wednesday, February 15

Opening Session

9:00 - 9:30 – guest registrations & orientation

9:30 - 10:00 – opening remarks

(Moderator: Dóra Lakatos, Péter Smejkal)

9:30 - 9:40 Paul Fox, British Ambassador to Hungary, British Embassy of Hungary

9:40 - 10:00 István Szabó, Vice President, Hungarian National Research,
Development and Innovation Office (NKFIH)

10:00 - 12:00 Keynote presentations (chair: *András Benczúr*)

10:00 - 10:20

*Advancing aviation, keeping the skies safe ... how can digital twins and AI support
our mission?*

Mark Gillan, Head of Research & Development, NATS

10:20 - 10:40

Towards Reliable AI

Christian Szegedy, Google AI

10:40 - 11:00

Industrial AI and how to cooperate in ecosystems

Morning Session: European AI Initiatives (chair: **András Benczúr**)

11:00 - 11:15 Sethu Vijayakumar, Programme Director for Human-AI Interfaces and Robotics, Turing Fellow at The Alan Turing Institute

11:15 - 11:30 Patrick Van der Smagt, Director of Volkswagen Group ML Research Lab Munich

11:30 - 11:45 Alexander Ilic, CEO ETH Zürich AI Center

11:45 - 12:00 Alois Krttil, CEO Artificial Intelligence Center Hamburg

12:00 - 12:15 Geraud Guilloud - Senior European Funding Advisor

12:15-13:00 AI&AUT DEMO round tour

13:00-14:00 lunch break

14:00-15:15 Session 3A – Machine Learning and Control (chair: **József Bokor**)

Autonomous Vehicle Research at the Széchenyi University
Ernő Horváth, Széchenyi István University (SZE)

Autonomous Vehicle Research at the Budapest University of Technology and Economics

Tamás Bécsi, Budapest University of Technology and Economics (BME)

Pure mathematics and AI

Dávid Terjék, Pál Zsámboki, Alfréd Rényi Institute of Mathematics

AI Testing - a new, industry-oriented certification and training
Árpád Beszédes, University of Szeged

Hierarchical control design of automated vehicles for multi-vehicle scenarios
Balázs Németh, Institute for Computer Science and Control (SZTAKI)

14:00-15:15 Session 3B – Gaia-X, Data Sharing and HPC (chair: **Róbert Lovas**)

Gaia-X Trust Framework – Enabling borderless dataspace
Roland Fadrany, Gaia-X COO

Gaia-X Hub Austria: Accelerating European data ecosystems for economic, ecological and societal value creation

Martina Malakova, SK CEE Tech

Federated AI scaling on distributed data to EU cloud (FedX)

Antal Kuthy, Co-founder and CEO, E-Group

Komondor, an AI specialized HPC system

Zoltán Kiss, KIFÜ, Head of HPC Development and Operations

Digital Trust Services (DTS) - distributed DATA and Ai reliability across the EU

Gyula Solymos, Chief Technology Officer Advisor, 4iG

Will the new EU data regulations satisfy Als' hunger for data?

Zsolt Zódi, National University of Public Service Hungary

15:15 – 15:45 Coffee break

15:45-17:00 Session 4A – Agriculture **(chair: Miklós Neményi)**

Anikó Juhász, Ministry of Agriculture Hungary

Unlocking the potential of AI in agriculture

Réka Haraszi, Sector Lead, CHAP Solution

Michael Halliwell, Commercial Director, CattleEye

Kit Franklin, Senior Engagement Fellow, Principal Investigator, Hands Free Farm

Introduction to B-hive Innovations

Mercedes Torres Torres, Head of Machine Learning, B-hive Innovations Ltd

Systematic Approach for Emerging Food Systems Risk Identification

Ákos Józwiak, University of Veterinary Medicine Budapest

Gábor Milics, Hungarian University of Agriculture and Life Sciences (MATE)

Small autonomous robot development for data logging and analyzing

Bálint Ambrus, Anikó Nyéki; Széchenyi University, Mosonmagyaróvár

15:45-17:00 Session 4B – Machine Perception **(chair: Tamás Szirányi)**

Scene analysis and environment model synthesis from multisensorial spatial data

Csaba Benedek, Institute for Computer Science and Control (SZTAKI)

Empowering medical imaging with machine learning

György Richárd Bogár, Budapest University of Technology and Economics (BME)

Human-Centered AI: Tools and Applications

Kristian Fenech, Eötvös University Budapest (ELTE)

Exhibition

Many interesting industrial applications, research topics and results will be on display in the exhibition area of AI & AUT EXPO. Exciting demonstrations in the fields of self-driving vehicles, industrial automation, robotics, drone technology, machine perception and language technology applications will be presented by members of the Autonomous Systems National Laboratory and the Artificial Intelligence National Laboratory consortiums, as well as industrial companies.

Visitors will have the opportunity to learn about research and development activities within the institutions and companies and to meet researchers directly.

Exhibiting industrial partners:

4iG | Audi Hungária | Bosch Rexroth | Continental Autonomous Mobility Hungary |
Clementine | Magyar Telekom | Nokia

More information about the exhibition and exhibitors is available on the official app. The AI & AUT EXPO Hungary official app can be [downloaded for Android and iPhone by clicking here.](#)



Registration

Contact

milab [at] sztaki.hu

Getting there

The Hungarian Railway Museum can be reached as follows:

By public transport:

Recommended route is 20E from Keleti railway station, which is conveniently reachable by metro (e.g. M4 to/from Kálvin Tér Airport bus stop and SZTAKI). 20E is one stop walk from the closest bus stop served by 30, 30A, 230 from Keleti, however 20E+walk is recommended. **Attention:** there are works on Metro line 3 partially served by replacement bus.

By train:

Special trains from Nyugati railway station to Railway Museum station (Vasútmúzeum): the most convenient way to get there, also the most fancy since the trains stop only for us. The following trains serve the Museum:

2023.02.14.

Departure from **Nyugati Pályaudvar** railway station to **Vasútmúzeum: 08:51** - Train number: **2062**

Departure from **Vasútmúzeum megálló** to **Nyugati Pályaudvar**: approx. **17:30** - Train number: **2063**

Departure from **Vasútmúzeum megálló** to **Nyugati Pályaudvar**: approx. **18:00** - Train number: **2073**

2023.02.15.

Departure from **Vasútmúzeum megálló** to **Nyugati Pályaudvar**: approx. **17:30** -
Train number: **2063**

Departure from **Vasútmúzeum megálló** to **Nyugati Pályaudvar**: approx. **18:00** -
Train number: **2073**

Taxi:

We recommend the following taxi companies and their apps:

[Főtaxi - +3612222222](tel:+3612222222) (this is the official airport taxi)

[City Taxi - +3612111111](tel:+3612111111)

[Bolt \(app only\).](#)

Free parking:

The Hungarian Railway Museum has a **free outdoor parking lot** with 1,000 spaces.
We recommend to use this option. Please note that charges shall be paid for parking
on a public space on the territory of Budapest

[Általános Szerződési Feltételek](#)

Ezt a képet egy felhasználó készítette. További információ saját képek felhasználásáról.

Sponsors

Support by the European Union project RRF-2.3.1-21-2022-00004 and RRF-2.3.1-21-2022-00002 within the framework of the Artificial Intelligence and Autonomous Systems National Laboratories.