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Global Tech



MTA SZTAKI

Hungarian Academy of Sciences
Institute for Computer Science and Control

Address:
H-1111 Budapest, Kende u. 13–17

Mailing address:
1518 Budapest, Pf. 63.

Phone:
+36 1 279 6000

Fax:
+36 1 466 7503

Web:
<http://www.sztaki.mta.hu>

E-mail:
contact@sztaki.mta.hu

ABOUT THE INSTITUTE

The Institute for Computer Science and Control, Hungarian Academy of Sciences (MTA SZTAKI), the former Computer and Automation Research Institute, now with nearly 300 full-time employees including about 140 with scientific degrees, was founded in 1964 as a research and development institution of the Hungarian Academy of Sciences. The Institute gained worldwide reputation in computer graphics, computer-aided design and manufacturing, process control, robotics, operations research, numerical methods, advanced information systems and networking. ERCIM (European Research Consortium of Informatics and Mathematics) granted full membership to SZTAKI in 1994. The institute was awarded the title "Centre of Excellence" in "Information technology, computer science and control" by the EU in 2001.

Researchers at the Institute take part in the management bodies and working groups of the most significant international scientific organizations (CIRP, IEEE, IFAC, IFIP, etc.). Many of their colleagues are members of the Editorial Boards of leading international journals.

At the Institute, information science based developments exploitable both in Hungary and abroad, together with high-level advisory activity, are built upon the results, outstanding by international standards, in focused basic research. As a centre of excellence, this provides themes of interest and attracting conditions for talented young people in PhD study, for starting their creative scientific work.

The adequate infrastructure is an indispensable requirement of high-quality research activity. The Institute has realized in due time that its main research focus and the scopes of new laboratories (3D-internet, control of robotic devices and UAVs, SmartFactory, cloud-computing) should be determined by taking the most important directions of information and communication technology into account, joining this way the worldwide research arena of Cyber-Physical Systems (CPS).

The Institute is a stable, independent partner in R&D&I and in the fields of contract-based applied work, such as system planning, system integration, consulting and turn-key information systems. Quality is an important issue at the Institute: we have an EN ISO 9001:2000 certification.



Focused basic research

- Computer Science
- Systems- and control theory
- Engineering and business intelligence
- Machine perception and human-computer interaction

Development and innovation

- Vehicles and transportation systems
- Production informatics and logistics
- Energy and sustainable development
- Security and surveillance
- Networks, networking systems and services, distributed computing

International relations

MTA SZTAKI in the past decade was intensively engaged in international scientific cooperation, for example the institute was involved in 44 projects within the EU FP7 Programme, in 8 cases acting as the head of consortium. This series of success seems to continue also in the Horizon 2020 Programme.

With respect to the research in avionics, the relationships with the University of Minnesota, the US Office of Naval Research (ONR), University of Bordeaux, as well as the German Aerospace Centre (DLR) and the European Space Agency (ESA) should be mentioned. Of special importance is the long standing R&D cooperation between SZTAKI and HITACHI that, going back to nearly a decade, has already resulted in a number of joint patent applications. Most of the Institute's activities pertaining to applied R&D in production informatics and logistics as well as to the industrial deployment thereof are carried out in the framework of the Fraunhofer-SZTAKI Project Centre for Production Management and Informatics established in 2010.

Industrial cooperation

MTA SZTAKI cooperates with significant major enterprises such as GE, Audi, Hungarian Telekom, MOL, Knorr-Bremse, Bosch, Opel. The technology transfer to small enterprises guarantees that the Institute's results keep on spreading in the widest possible spheres. The Hungarian National Technology Platform on Industry 4.0 is led by the Institute.

Participation in higher education

The Institute regards teaching activities as an important ingredient of its research work and also as an indispensable part of building the future. Many researchers at the Institute also fulfil teaching mandates at various Hungarian universities. On average, around 20 PhD students conduct research work at the Institute under the tutorship of our senior researchers.

Chairman:

Prof. János Csirik

Hungarian Members:

Prof. László Pap

Prof. Gábor Stépán

International Members:

Prof. Jürgen Beyerer

Prof. Hendrik van Brussel

Prof. Paul-M.J. Van den Hop

Director:

Prof. László Monostori

Director, science:

Prof. József Bokor

Director, finance:

Mrs. Mariann Dörnyei