



# PHOENIX FROM THE ASHES

ML in PL, October 15th 2025, Warsaw



**IDEAS**  
NCBR



# About IDEAS Research Institute

**IDEAS Research Institute** is a Polish national research centre dedicated to the development of advanced Artificial Intelligence and digital technologies.

Supervised by the **Ministry of Digital Affairs** and the **Ministry of National Defence**, IDEAS conducts high-level AI research while supporting technology transfer and strategic innovation for public and industrial partners.

Its mission is to **bridge scientific excellence with real-world applications**, fostering collaboration across academia, industry, and government.



Ministry of Digital Affairs  
Republic of Poland

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Ministry of National Defence  
Republic of Poland

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# Membership of the IDEAS Research Institute in European research networks



e l l i s  
European Laboratory for Learning and Intelligent Systems



The AI Data Robotics  
Association

# Strategic Goals

## Strategic Objectives for IDEAS Research Institute

1. **Credibility and Recognition** – strengthen visibility through reference pilots and applied publications.
2. **Scientific Excellence** – ensure that partnerships enhance, not dilute, fundamental research.
3. **Grant Acquisition** – build competitive advantage through industry-academic consortia.
4. **Support for Administration and National Security** – focus on defence, cybersecurity, and AI in public governance.

# Research Groups and Directions

Research Area	Leader	Industrial Collaboration / Application Potential
<b>Natural Language Processing</b>	Dr. Piotr Andruszkiewicz	Legal, medical, and financial text analytics; document understanding; domain-specific chatbots
<b>Cryptography</b>	Prof. Stefan Dziembowski	Secure protocols, zero-knowledge proofs, privacy technologies for business and defence
<b>Drones</b>	Dr. Przemysław Kornatowski	Autonomous navigation, environmental perception, collaboration with UAV and aerospace industry

# Research Groups and Directions

<b>Cybersecurity</b>	Prof. Wojciech Mazurczak	Anomaly detection, resilience systems, penetration testing with ICT partners
<b>AI Strategy Lab</b>	Dr. Tomasz Michalak	Corporate AI strategies, AI roadmaps, technological consulting
<b>Phenomenology &amp; Computational Psychiatry</b>	Dr. Marcin Moskalewicz	Emotional interfaces, psychometric data analysis, AI for diagnosis and therapy
<b>LLM Development for Defence</b>	Dr. Hubert Niewiadomski	Domain-specific language models for security and intelligence analysis

# Research Groups and Directions

<b>AI Digital Forest</b>	Prof. Krzysztof Stereńczak	Environmental monitoring, forest image analytics, ecosystem simulations
<b>Computer Graphics</b>	Dr. Przemysław Spurek	Rendering, generative graphics, AR/VR visual tools
<b>Medical Image Data Analysis</b>	Dr. Żaneta Świderska Chadaj	Diagnostic support systems, medical image segmentation, cooperation with medtech companies
<b>Computer Vision</b>	Dr. Bartłomiej Twardowski	Automated inspection, visual monitoring, perception for autonomous robots and vehicles

# Research Groups and Directions

<b>Learning in Control, Graphs, and Networks</b>	Dr. Paweł Wawryński	Adaptive control, graph learning, network optimization for logistics and energy systems
<b>Robotics</b>	Dr. Krzysztof Walas  The AI Data Robotics Association	Collaborative robots, human-robot interaction, manipulation and robotic platforms

# About ELLIS Unit Warsaw

**ELLIS Unit Warsaw** is located within the **IDEAS Research Institute**, the unit connects top researchers from Poland and abroad, focusing on AI methods that combine theoretical depth with societal and industrial relevance.

Its mission is to strengthen position in human-centric AI by fostering research excellence, collaboration, and talent development through the ELLIS PhD & Postdoc Program and international partnerships.

Work is currently underway to **expand the ELLIS Unit Warsaw** so that it includes not only leading AI researchers from **IDEAS Research Institute**, but also from the **University of Warsaw** and the **Warsaw University of Technology**. This is an important step toward the **future transformation of ELLIS Unit Warsaw into ELLIS Institute Poland**.

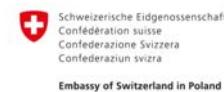


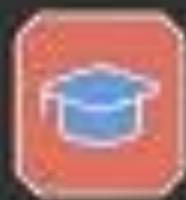
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# Achievements and Milestones (First 6 Months of IDEAS)

## Key Figures and Activities

- 13 research groups and nearly 100 researchers: a strong institutional launch.
- 15 publications A\* in top-tier venues.
- Grant proposals submitted for a total of approximately 50 mln PLN.
- Partnerships and projects with public institutions (administration, healthcare, technology agencies).
- Organization of the ELLIS Doctoral Symposium with nearly 200 participants (PhD students and experts from across Europe).





ELLIS  
PhD & Postdoc  
Program



## Unit Warsaw: ELLIS Doctoral Symposium 2025



**Thank you for your attention & stay in touch!**

**Tomasz Trzcinski**

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Director of ELLIS Unit Warsaw

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