

Korea-EU Horizon Europe Researchers Networking Forum on Energy & Advanced Mobility

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•**Associate Professor**

•**SRIPAS**

•**AI/ML + IoT + Agents**



1. Short Introduction to SRIPAS

SYSTEMS RESEARCH INSTITUTE POLISH ACADEMY OF SCIENCES

- SRIPAS was established 1954
- Research + Doctoral and Doctor of Science degrees
- Fundamental research – institute level – selected areas
 - AI/ML – broadly understood
 - Optimization
 - Process automation
- Funded research – selected areas
 - Energy management
 - Agriculture
 - Water – clean/sewer management
 - Health
 - Internet of Things



2. SRIPAS in EU-funded projects (MP+MG group)

- H2020 **INTER-IoT** (2016-2018) – IoT interoperability
 - Streaming semantics for interoperability
- H2020 **ASSIST-IoT** (2020-2024, **MG – technical coordinator**) – next generation IoT
 - AI on the Edge (including 5G and frugal AI)
- HE **aerOS** (2022-2025) – edge-cloud continuum
 - Autonomous systems
 - Federated learning
 - Explainable AI
- HE **O-CEI** – (2025-2027) – large-scale pilot(s) for above
- CETP **FlexBIT** – (2025-2027+) – energy flexibility in buildings (Clean Energy Transition Partnership)
 - Time series analysis
- **EIG Concert Japan DRAGONS** – (2025-2027) – drones in agriculture
 - Image processing



3. Expertise – main areas

- **Software agents and agent / agentic systems**
- **AI / ML**
 - Frugal AI
 - Federated learning
 - Reinforcement learning
 - Explainable AI
 - Image processing
 - Time series analysis
 - Natural language processing (incl GenAI + RAG)
 - Multi-agent systems
- **Semantic technologies**
 - Interoperability solutions (streaming and static data)
- **IoT and Edge-Cloud continuum**
- **Communication and dissemination of results**



4. Existing partnerships – Prêt-à-porter

- **Universitat Politècnica de València** (Spain – partners academic and industrial)
- University of Leipzig (Germany – partners academic and industrial)
- Sweden / Finland / Italy / Greece / Latvia / Portugal / ...
- Warsaw University of Technology (via MG; best technical university in Poland)
- Port logistics / construction / energy / cities / worker safety
 - pilots – various countries



5. Something extra

SRIPAS had bilateral project with KIST (Seoul) in 2009-10 and will be glad to collaborate with Korean partners again



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