



This project is co-funded by the European Union
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ICTürkiye2026

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International Brokerage Event

PRESENTER FULL NAME: Julie Vandekerckhove
ORGANIZATION: UCLouvain
E-MAIL: julie.vandekerckhove@uclouvain.be





Description of the Organisation



UCLouvain

Institute for Information and Communication
Technologies, Electronics and Applied
Mathematics

UCLouvain

Belgium's largest French-speaking university, with 40,000 students, including 19% international students.

Its research community includes more than 3,600 researchers conducting around 2,500 research projects each year.

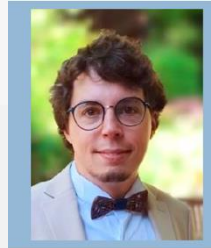
UCLouvain has secured 68 ERC grants and manages 2,500 research projects per year and €370 million granted for research



**Teams'
Expertise**

Computing Science and Engineering Expertise

We conduct research across the foundations, systems and applications of modern computing. From Artificial Intelligence & Optimization, Software Sciences and Engineering, and Systems, Networks & Security.



Professor
Tom Barbette

Efficiency of Networked Systems Group

- High-speed networking
- Programmable network
- SmartNICs, DPUs and GPUs



Professor
Etienne Rivière

Cloud and Large Scale Computing

- Cloud and distributed systems
- Decentralized systems
- Adaptive resource management



ENERGY-AWARE EXECUTION

CPU/GPU/DPU selection and
power-performance trade-offs



ADAPTIVE SCHEDULING

Latency-aware workload
placement, power capping and
dynamic allocation



DATA-CENTRE NETWORKS

Programmable networks,
SmartNICs, NFV and high-speed
processing



CLOUD SYSTEMS

Scalable distributed infrastructures,
monitoring and orchestration





xPUBench

Energy and performance benchmarking across CPU, GPU and DPU for network functions

RAINDROP / GEPICIAD

Adaptive cloud-edge microservices and predictive infrastructure management

Sloth

Kernel-bypass scheduling that maximises energy efficiency under latency constraints

SCEAL

Adaptive execution strategies for smart contracts across distributed infrastructures.



Call: HORIZON-CL4-2027-04-DATA-09 Energy efficiency and sustainability of AI data processing in Data Centres

Deadline Dates: 18 March 2027

Project Idea: EPIC-DC Energy-Proportional Intelligent Computing for Data Centres

Energy-proportional AI data centres through hardware–software co-design and adaptive orchestration across energy-efficient chips, CPUs, GPUs and DPUs.

- ☐ **Objectives:** Develop joint hardware and software optimisation methods that dynamically match AI workloads with the most energy-efficient computing resources.
- ☐ **Expected Results:** An experimentally validated hardware–software framework demonstrating measurable reductions in AI energy consumption while maintaining performance and latency.



**Consortium - profile of
known partners**

No	Partner Name	Type	Country	Role in the Project
01	UCLouvain	University	Belgium	Infrastructure optimisation, scheduling, networking
02	KTH	University	Sweden	AI efficiency expertise
03	UCLouvain	University	Belgium	Energy-efficient adaptive computing hardware & environmental impact optimization over the data center life cycle



No	Expertise	Type	Country	Role in the project
01	Data-centre / cloud operations	Industry	Eu	Pilot site, workloads, deployment and exploitation
02	Power systems and storage	Industry / RTO	Eu	Backup power, renewables and grid integration
03	Cooling and thermal management	Industry / RTO	Eu	On-chip cooling, advanced packaging and heat recovery
04	Experienced IA coordinator	Any	Eu	Consortium leadership and system integration

PRESENTER CONTACT

DETAILS:

Dr Julie Vandekerckhove, Research
partnership & development manager

julie.vandekerckhove@uclouvain.be



COUNTRY: BELGIUM

