



AI Day

March 30, 2026 - Auditorium MIR

9h – Talk 1



Accelerated Scientific Discovery with AI

Vassilis Christophides (ENSEA - ETIS)

10:30h – Coffee Break

11h – Talk 2



From Projects to Competencies: Using AI to Transform Higher Education Pedagogy

Michele Linardi (MCF CY - ETIS)



12:30h – Lunch

Please RSVP to let us know if you will join us for the coffee break at 10:30 and lunch at 12:30.

[Click here !](#)

Accelerated Scientific Discoveries with AI

Vassilis Christophides

ETIS Laboratory – ENSEA

One of the aims of Explainable Artificial Intelligence is to employ deep learning models that might capture the underlying rules governing data on par with explainable methods to understand these rules. This requires both components to be perfectly adapted to the studied problem. In this paper, we focus on 3D molecules data represented as graphs with regression tasks. If the literature is rich concerning graphs and Graph Neural Networks for classification tasks, it is not discussed for regression. In this presentation, we thus present a simple way to perform counterfactual explanations with regression tasks and some preliminary results obtained on 3D molecules data on the QM9 dataset.

From Projects to Competencies: Using AI to Transform Higher Education Pedagogy

Michele Linardi (MCF CY - ETIS)

Project-Based Learning (PBL) has become a central pedagogical approach in Computer Science education, promoting hands-on experience, critical thinking, and collaborative problem-solving.

Within the framework of the Competency-Based Approach (CBA), which is increasingly adopted in higher education, PBL enables students to apply their knowledge in authentic contexts and develop competencies aligned with professional practice. In the French university system, this paradigm has been progressively implemented in Institutes of Technology (IUTs) since 2021 and will become mandatory across higher education programs by 2026.

Artificial Intelligence (AI) plays an emerging role in re-examining the foundations of Competency-Based Education (CBE) as presented by the work of Jacques Tardif. In this perspective, pedagogy builds around two fundamental pillars: motivation and coherence. Motivation relates to the learner's engagement, perception of usefulness, value of tasks, and sense of feasibility, while coherence ensures that learning activities, resources, and assessment methods are aligned with the competencies to develop.

Implementing the CBE approach requires the deconstruction of many traditional pedagogical assumptions and habits, especially those centered on content transmission and summative evaluation. In this context, AI can act as a catalyst for pedagogical transformation. By enabling adaptive learning support, real-time feedback, personalized guidance, and reflective interaction through tools such as intelligent tutors or chatbots, AI helps instructors and learners reconsider the roles of knowledge, resources, and evaluation within the learning process. Consequently, AI contributes to strengthening both motivation and coherence, which are essential foundations of competency-based pedagogy.

In this talk, I will present my double hat experience (computer science instructor and ML Machine Learning researcher) in which I use and design Generative AI for education (for the students and for the teachers).

I will present some results and important lessons learned in the project IA et Rétroactions Pédagogiques sur Plateforme (IA&RPP), which I am conducting with several colleagues of the EMA and LDAR laboratories.