## **Keynote Speech 2**

## **Navigating Artificial Intelligence for Education**



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**Abstract:** The landscape of HE is rapidly evolving with the integration of several AI tools. These tools are impacting HE, influencing both professional practices, the way institutions operate, and pedagogical practices, how students learn and educators teach. Regarding professional practice, in the administrative sphere, AI streamlines daily tasks, freeing up valuable staff time and minimising errors. Tools automate scheduling, attendance tracking, resource allocation, and even document management tasks related to academic writing. Beyond automation, AI-driven data analytics empower data-driven decision-making. These tools translate student performance and resource utilisation data into actionable insights that inform strategic planning, resource allocation, and curriculum development. Furthermore, AI is transforming research by assisting with literature reviews, data analysis, and even tasks like generating images or converting speech to text, accelerating research progress and uncovering new avenues for exploration. When it comes to pedagogical practices, it is evident that AI is revolutionising how students learn. HE institutions leverage AI to personalise learning journeys by tailoring content and instruction to individual student needs. AI-powered tools facilitate assessment and feedback, offering automated or AIassisted options that support student progress. Additionally, AI goes beyond content delivery by creating and curating engaging educational materials. Student support is also being transformed through the use of virtual tutors, chatbots, and assistive technologies, fostering accessibility and inclusivity for a diverse student body. AI also enhances engagement and interaction through innovative tools like recommendation engines that suggest relevant courses, and exploratory learning environments that dynamically adapt to student needs. These tools, combined with AI chatbots that facilitate communication and collaboration, all contribute to the development of critical thinking, problem-solving, and language-learning skills. This keynote presentation will provide a showcase of real world case studies and we will explore the impact of AI in education

by addressing both successes and challenges and critically examine the ethical and practical considerations of AI for education.

Biography: Eleni Mangina carried out her PhD work at the University of Strathclyde (UK), Department of Electronic and Electrical Engineering, working on Agent-based applications for intelligent data interpretation (1998-2001). The research area focused on software analysis, design and development of multi agent systems, which utilize different Artificial Intelligence (AI) techniques (Knowledge based systems, Artificial Neural Networks, Case Based Reasoning systems and Model based Reasoning systems). Eleni Mangina holds an M.Sc. in Artificial Intelligence from the Department of Artificial Intelligence at University of Edinburgh in the UK and an MSc in Agricultural Science from Agricultural University of Athens in Greece. In 2002 she joined the School of Computer Science, at University College Dublin, Ireland. Dr Eleni Mangina is currently Professor at the School of Computer Science, University College Dublin in Ireland and the Vice Principal (International) for College of Science. Eleni Mangina is guided by her own definition of the art of persistence, that involves both courage and compassion with research integrity and authenticity. Her lab operates at the intersection between applied Artificial Intelligence (VR/AR; Data Analytics; UAVs; Information Systems) and a portfolio development within interdisciplinary applications (i.e. Energy Sector and Educational Systems with XR). Eleni Mangina has extensive experience for the last 20 years in National, EU and International funded projects and she is project coordinator of two (2) H2020 projects (ARETE & AHA), one (1) Erasmus+KA2 (FANTASIA) and partner within other H2020 projects (i.e. iSEED) and three (3) Erasmus+ projects (XRforPed, BASE, RoboPisces). She is funded investigator as part of SFI Energy Systems Integration Partnership Programme (ESIPP), NEXSYS and academic supervisor for two (2) SFI Centres for Research Training (CRT) (Machine Learning - ML-Labs; Digitally-Enhanced Reality – D-REAL). She has authored more than 200 peer-reviewed articles in national and international peer reviewed workshops and conferences and international journals, including in IEEE and ACM. Eleni Mangina also contributes as a committee member for reviews to many international conferences and journals. Eleni Mangina also contributes actively to IEEE Standards and is the Executive Editor for the publications of the IEEE Global Initiative on XR Ethics. She is currently the Chair of Athena SWAN Bronze Award application for the School of Computer Science.