

# **Applications, Tools** and **Perspectives** of **AI** in **Education**

for Secondary School Teachers

Contact Seminar





## Friday, 10 May

**14:00 Local time** Transfer from the Athens airport directly to Computer Technology Institute and Press "Diophantus" at Patras

**Location:** Amphitheater of Computer Technology Institute and Press "Diophantus"

17:30 - 18:00	Registration and welcome coffee
	Opening - Welcome Speech
18:00 - 18:15	Panagiotis Passas – Director General for International and European Affairs at the Hellenic Ministry of Education, Religious Affairs and Sports
	Prof. Michael Paraskevas – CTI & GR NSO Coordinator
	Keynote Speech
18:15 - 18:45	Intelligent educational data management – The unsupervised learning approach, Prof. Cleo Sgouropoulou – University of West Attica
18:45 - 19:15	Al in eTwinning Projects, Panagiotis Angelopoulos – GR NSO
19:15 - 20:15	Networking Activities using AI, Maria Vasilopoulou, Sophia Kouzouli, Natalia Tzitzi, Andreas Galanos – GR NSO
20:15	Transfer from the venue to the hotel
20:45	Welcome dinner at the hotel

**Venue:** Computer Technology Institute and Press "Diophantus" <a href="http://www.cti.gr/en/">http://www.cti.gr/en/</a>

Hotel: Achaia Beach <a href="https://www.airotel.gr/el/Achaia-Beach-792.htm">https://www.airotel.gr/el/Achaia-Beach-792.htm</a>

Saturday, 11 May		
09:00	Transfer from the hotel to the venue	
09:30 - 11:00	Workshop Session I*	
11:00 - 11:30	Coffee break	
11:30 - 13:00	Workshop Session II*	
13:00 - 14:00	Light Lunch	
14:00 - 15:30	Workshop Session III*	
15.30	Transfer from the venue to the hotel	
18:00	Nafpactos (Lepanto) Guided Tour	
21:00	Dinner at Nafpactos and Transfer to the hotel	

### \* Workshop Session I (09:30 - 11:00)

**Group 1:** Amphitheater

Artificial Intelligence Applications in Education for eTwinning Projects

Lead by Adil Tugyan, Ertan Kocabaş, TR NSO

Group 2: Room 1.II.8

Discovery Space: Artificial Intelligence as a Tool for Dynamic Student Assessment

Lead by Dimitris Koulentianos, Ellinogermaniki Agogi

Group 3: Room 0.1.6

Al4EDU: Practical Al Applications for a more Attractive and Efficient Educational Process

Lead by Gregory Milopoulos, Ellinogermaniki Agogi

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#### \* Workshop Session II (11:30 - 13:00)

**Group 1:** Amphitheater

Discovery Space: Artificial Intelligence as a Tool for Dynamic Student Assessment

**Lead by** Dimitris Koulentianos, Ellinogermaniki Agogi

Group 2: Room 1.II.8

Al4EDU: Practical Al Applications for a more Attractive and Efficient Educational Process

**Lead by** Gregory Milopoulos, Ellinogermaniki Agogi

Group 3: Room 0.1.6

Artificial Intelligence Applications in Education for eTwinning Projects

Lead by Adil Tugyan, Ertan Kocabaş, TR NSO

#### \* Workshop Session III (14:00 - 15:30)

**Group 1:** Amphitheater

Al4EDU: Practical Al Applications for a more Attractive and Efficient Educational Process

Lead by Gregory Milopoulos, Ellinogermaniki Agogi

Group 2: Room 1.II.8

Artificial Intelligence Applications in Education for eTwinning Projects

**Lead by** Adil Tugyan, Ertan Kocabas, TR NSO

Group 3: Room 0.1.6

Discovery Space: Artificial Intelligence as a Tool for Dynamic Student Assessment

**Lead by** Dimitris Koulentianos, Ellinogermaniki Agogi

For the optimal running of the workshops, you need to bring your devices (laptops, ipad, tablets)

Sunday, 12 May	
09:00	Transfer from the hotel to the venue
09:30 - 10:30	Twinspace and Collaboration in eTwinning Projects Sophia Kouzouli, Andreas Galanos - GR NSO
	How to plan and register an eTwinning project
10:30 - 11:00	Maria Vasilopoulou, Natalia Tzitzi - GR NSO
	Registration of projects
11:00 - 11:30	Coffee break
11:30 - 12:30	Presentation of Registered Projects
12:30 - 13:00	Closing session - GR NSO
13:00	Light Lunch

**14:00 Transfer** from the Computer Technology Institute and Press "Diophantus" directly to Athens airport

### Keynote speaker



**Cleo Sgouropoulou** is a Professor at the Department of Informatics and Computer Engineering of the University of West Attica (UNIWA), Member of the UNIWA Board of Directors, Director of the Research Laboratory "Educational Technology and E-Learning Systems" and Director of the Postgraduate Programme "Digital

Transformation and Educational Practice". She has served as Vice-Rector for Finance, Planning and Development (2019-2023), Head of the Department of Informatics and Computer Engineering, Scientific Director of the Centre for Continuing Education and Lifelong Learning of UNIWA and Secretary General of the Greek Computer Society. She is also national representative of the

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Hellenic Organization for Standardization (ELOT) at the European Committee for Standardization (CEN) and the International Organization for Standardization (ISO) in the areas of Digital Skills and ICT for Learning, Education and Training. Since 2020 she is a member of the Board of Directors of the GRNET S.A. – National Infrastructures for Research and Technology, technical advisor for Digital Skills of the Ministry of Digital Governance and Head of the Al Innovation Hub of the University of West Attica.

# Keynote Title: "Intelligent educational data management – The unsupervised learning approach"

In today's educational landscape, where the sheer volume and diversity of data continue to grow exponentially, the imperative for intelligent data management solutions becomes increasingly evident. This speech embarks on an exploration of intelligent educational data management, addressing the critical need to harness advanced methodologies amidst this data deluge. Specifically, we delve into the realm of unsupervised learning techniques, recognizing their pivotal role in navigating complex educational datasets with agility and precision. Throughout the discourse, we will delve into the pressing need for innovative approaches to educational data management, highlighting the challenges posed by data heterogeneity, scalability, and evolving educational paradigms. By understanding these challenges, we can appreciate the significance of adopting unsupervised learning methods as a means to unlock the latent value within educational data. The speech will delve into the intricacies of unsupervised learning, elucidating how these methods empower stakeholders to glean actionable insights, identify underlying patterns, and derive meaningful conclusions from unstructured datasets. We will explore real-world applications of unsupervised learning in educational contexts, showcasing its efficacy in personalized learning, adaptive assessment, and predictive analytics. Furthermore, the speech will underscore the transformative potential of intelligent data management in education, emphasizing its role in optimizing learning experiences, enhancing educational outcomes, and fostering data-driven decision-making processes. By the conclusion of this discourse, participants will gain a comprehensive understanding of how unsupervised learning methods can revolutionize educational data management, paving the way for a more insightful, adaptive, and impactful educational ecosystem.

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### **Workshops Descriptions**

#### Artificial Intelligence Applications in Education for eTwinning Projects

Presenters: Adil Tugyan, Ertan Kocabaş TR NSO

Generative AI and tools have the potential to revolutionize eTwinning projects by empowering educators and students with new ways to enhance creativity and collaboration across borders. This workshop will explore how generative AI can serve as a catalyst for innovative educational experiences, enabling participants to create unique, engaging content that can transcend language and cultural barriers. Attendees will learn how to leverage AI-powered tools to generate ideas, artworks, texts, and solutions, fostering a more inclusive, dynamic, and inspiring learning environment. The session aims to equip eTwinners with the knowledge and skills to seamlessly integrate these cutting-edge technologies into their projects, thereby enriching the educational journey and fostering a community of forward-thinking learners and educators.



Adil Tugyan is an expert teacher of English as a Second Language, certified in TESOL TEFEL TYL. IT Coordinator, EU CodeWeek Ambassador for Turkiye. eTwinning Ambassador, EU Codeweek Ambassador for Turkiye, Technology in education expert. EU Academy Course designer and moderator. Digital content developer and

trainer for The Turkish Ministry of National Education. Completed online certificate programs, Connected Leadership Yale University, and Leadership and Decision Making Harward Kennedy School and also Emerging Technologies for Lifelong Learning, New York state University. He has currently been delivering webinars and face to face workshops about technology integrated learning modalities for teachers and learning designers. He has been working in the field of AI in education since 2020. He has 19 online courses about the use of technology in education and technology integrated learning modalities for Turkish Ministry of National Education.

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Ertan Kocabaş completed his undergraduate education in the Department of Computer and Instructional Technology Education at Hacettepe University. He completed his graduate education in Computer Engineering at Karabük Universit y. He has provided training in many areas such as Digital Content

Development, Adobe Photoshop, Illustrator, Flash, Actionscript, Office, Google Tools, and Web tools. He has served as a coordinator in many fields for the Ministry of National Education such as hardware, content, conferences, and congresses. He is currently serving as the eTwinning National Support Organization coordinator for Turkiye.

# Discovery Space: Artificial Intelligence as a Tool for Dynamic Student Assessment

**Presenter:** Dimitris Koulentianos, Ellinogermaniki Agogi

The workshop "Discovery Space: artificial intelligence as a tool for dynamic student assessment" invites teachers to discover the advantages of applying Artificial Intelligence (AI) in the educational process and more specifically in the assessment of students in solving complex problems in real time.

The Erasmus+ forward-looking project Discovery Space develops a virtual Al assistant that monitors the progress of students, and depending on their performance, provides specific educational material to address the areas where they have difficulties. Thus, a first step towards personalised learning is taken with the help of Al.

The workshop will present indicative educational scenarios in which the Al virtual assistant is used, so that teachers will be able to create similar scenarios for lessons they teach.



**Dimitris Koulentianos** received his BSc in Physics from the University of Athens, Greece, his MSc in the same field from Uppsala University, Sweden and his Ph.D. in AMO Physics from the University of Gothenburg, Sweden. Accordingly, he was a postdoctoral researcher at Argonne National Laboratory, USA and DESY, Germany.

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His current research interests focus on the integration of AI in the educational process, and particularly in the development of formative assessment methods, by exploiting the benefits of AI towards that end. Moreover, he is working on the development of a trustworthiness assessment framework to identify, assess and mitigate risks associated with the upcoming use of AI in different societal sectors, such as education, transportation, public health and the media.

# Al4EDU: Practical Al Applications for a more Attractive and Efficient Educational Process

Presenter: Gregory Milopoulos, Ellinogermaniki Agogi

The workshop "Practical AI applications for a more engaging and efficient educational process" invites teachers to discover how they can enrich their teaching materials and design interactive teaching experiences with the help of AI.

Through active exploration of the Study Buddy and Teacher Workmate tools of the Erasmus+ forward-looking project AI4EDU, participants will learn how to create customized teaching materials and exercises that meet the needs and interests of their students.

This approach seeks to enhance the learning process, making it more effective and fun, while promoting a deeper understanding of the material by students.



**Gregory Milopoulos** is an Educational Technology Researcher of the R&D Department of Ellinogermaniki Agogi. He is an Expert in Project Management of large and complex projects, mainly in the field of EdTech, VR, AR, Al and Digital Storytelling. He holds a Bachelor's Degree in Business Administration from the University of Aegean and a Postgraduate Degree (MSc) in Project

Management of Techno-economic Systems from the National Technical University of Athens (School of Mechanical Engineering).