ADVANCED DATA TECHNOLOGIES

SUPER SUMMER SCHOOL

10-13 July and 17 July 2023

Welcome to the first edition of the ATHENA Advanced Databases Super Summer School!

Objective and background

This Super Summer School (SSS) organised by the ATHENA European University offers you the core knowledge and practice to start exploring advanced data technologies topics in cooperation with professors and colleagues from all over Europe in a hybrid learning environment.

You will be attending short courses on advanced database concepts together with colleagues from your home university in a local lab as well as with students from other universities attending remotely. From Monday to Thursday, a lecturer from one of the partner universities will lead the day. All activities will be run in hybrid mode with students attending face-to-face and others attending online via the Teams videoconferencing platform. All activities are held in international teams.

You will acquire knowledge and practice on how to use data analytics in decision-making contexts, on graph databases using the Neo4j Database Management System, on multidimensional data bases and Online Analytical Processing (OLAP), on Data Streaming concepts and on big data architecture design. The courses are designed for people who have acquired the basic concepts and skills related to databases and programming.

Distinguished lecturers will lead each of the first 4 days of the school, the last one being devoted to assignments to be carried out by international groups of students: **Dr. Martina Šestak** from the Institute of Informatics, Faculty of Electrical Engineering and Computer Science (University of Maribor, Slovenia), **Prof. Carlo Drago** from the University Niccolò Cusano, Rome, Italy, **Prof. Nuno Escudeiro** and **Prof. Bruno Oliveira** from the Instituto Politécnico do Porto (IPP), Portugal.

Participants in the super summer school will receive a **certificate of participation** and the winning group will be offered the opportunity to **present their work in the next ATHENA European University conference** which will be held in Heraklion, Greece in September 2023.

Convenors

Dr. Michel Haritopoulos (University of Orléans, France), **Dr. Martina Šestak** (University of Maribor, Slovenia), **Prof. Tatjana Welzer** (University of Maribor, Slovenia), **Prof. Carlo Drago** (University Niccolò Cusano, Italy), **Prof. Nuno Escudeiro** (IPP, Portugal), **Prof. Bruno Oliveira** (IPP, Portugal).

Program

DATES:	10/07/2023	11/07/2023	12/07/2023	13/07/2023	17/07/2023
	MONDAY	**TUESDAY**	**WEDNESDAY**	**THURSDAY**	**MONDAY**
	TOPIC 1 - Title: **Multidimensional Databases**	TOPIC 2 - Title: **Data Analytics for Decision Making**	TOPIC 3 - Title: **Graph Databases**	TOPIC 4 - Title: **Data Streaming**	TOPIC 5 - Title: **Data Pipeline Implementation**
	Nuno ESCUDEIRO (IPP)	**Carlo DRAGO (Cusano)**	**Bruno Moisés OLIVEIRA (IPP)**	**Martina ŠESTAK (Maribor)**	**ALL LECTURERS**
MAIN SUBJECTS	Multidimensional Databases, OLAP	Data and Big Data, Data Analysis, Data Cleaning and Pre-processing, Decision-Making	Graph Databases	Data Streaming, lambda and kappa architectures	Debrief of Days 1-4 and Practical assignments
TIME SLOTS					
9:30 AM	Welcoming	Welcoming	Welcoming	Welcoming	Welcoming
9:45 AM	**TOPIC 1 + discussion**	**TOPIC 2 + discussion**	**TOPIC 3 + discussion**	**TOPIC 4 + discussion**	**SUMMARY of all 4 TOPICS Announce the assignment**
11:00 AM	Virtual coffee break	Virtual coffee break	Virtual coffee break	Virtual coffee break	Virtual coffee break
11:15 AM	**Practice session 1**	**Practice session 2**	**Practice session 3**	**Practice session 4**	**WGs start work on the assignment**
1:30 PM	Concluding remarks	Concluding remarks	Concluding remarks	Concluding remarks	Presentation of each WG work
2:00 PM	End of **DAY 1**	End of **DAY 2**	End of **DAY 3**	End of **DAY 4**	End of **DAY 5**

Click on the following links to obtain detailed program for each topic:

- **DAY 1**: Multidimensional Databases
- **DAY 2**: Data Analytics for Decision Making
- **DAY 3**: Graph Databases
- **DAY 4**: Data Streaming

Registration

Registered auditors **must attend all days** of the summer school.

Participation is free but requires mandatory registration until the 5th July 2023. Once registered you will receive further details for your participation on the event. Please follow the link below to register:

https://forms.office.com/e/8uMZ7LiTm8

You can also scan this QRCode:

Super Summer School on Advanced Databases