

# 9th Advanced Course on Data science & machine Learning – ACDL 2026

## from Generative Artificial Intelligence to Agentic AI

*Riva del Sole Resort & SPA – Castiglione della Pescaia (Grosseto) Tuscany, Italy*

8 – 12 June 2026

<https://acd12026.icas.events/>

[lod@icas.cc](mailto:lod@icas.cc)

*Schedule Ver. 0.2 (5 pages) March 23, 2026*

	Mon, 8 June	Tue, 9 June	Wed, 10 June	Thu, 11 June	Fri, 12 June
09:00 – 09:50	Lecture	Lecture	Lecture	<b>Free time</b>	Lecture
09:50 – 10:40	Lecture	Lecture	Lecture		Lecture
10:40 – 11:20	Coffee break	Coffee break	Coffee break		Coffee break
11:20 – 12:10	Lecture	Lecture	Lecture		Lecture
12:10 – 13:00	Lecture	Lecture	Lecture		Lecture
13:00 – 15:00	Lunch	Lunch	Lunch	Lunch	Lunch
15:00 – 15:50	Lecture	<b>Free time</b>	Lecture	Lecture	Lecture
15:50 – 16:40	Lecture		Lecture	Lecture	Lecture
16:40 – 17:20	Coffee break		Coffee break	Coffee break	Oral Presentation & Poster Session
17:20 – 18:10	Lecture		Lecture	Lecture	
18:10 – 19:00	Lecture		Lecture	Lecture	
20:00	Dinner	Dinner	Dinner	Dinner	Social Dinner*



## 9<sup>th</sup> Advanced Course on Data Science & Machine Learning

*from AI agents to Agentic AI*

**Directors**

*Giuseppe Di Fatta / University of Bolzano, Italy*

*Giuseppe Nicosia / University of Catania, Italy*

*Panos Pardalos / University of Florida, USA*

**Lecturers**

*Lucas Beyer / Meta, Zürich, Switzerland*

*Anirudh Goyal / Google DeepMind & Mila, Université de Montréal, Canada*

*Arthur Gretton / UCL & Google DeepMind, UK*

*Katja Hofmann / Microsoft, UK*

*Arnulf Jentzen / University of Münster, Germany*

*Pushmeet Kohli / Google DeepMind, UK*

*Panos Pardalos / University of Florida, USA*

*Michal Valko / Stealth Startup, INRIA, MVA at ENS Paris-Saclay, France*

*David van Dijk / Yale University, USA*

*Jason Weston / META, USA*

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Riva del Sole Resort & SPA - Tuscany - Italy  
June 8-12, 2026

acd12026.icas.events  
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Lectures

*Pushmeet Kohli, VP of Science, Google DeepMind, UK*

Lecture TBA

*Lucas Beyer, Meta, Zürich, Switzerland*

Lecture 1/3 **”Transformers & Vision Transformers”**

Lecture 2/3 **”Transformers & Vision Transformers”**

Lecture 3/3 **”Transformers & Vision Transformers”**

*Sven Giesselbach, T Systems International & Fraunhofer Institute - IAIS, Germany*

Lecture 1/3 **”Agentic AI”**

Lecture 2/3 **”Agentic AI”**

Lecture 3/3 **”Agentic AI”**

*Anirudh Goyal, Google DeepMind & Mila, Université de Montréal, Canada*

Lecture 1/3 **”Metacognition as a Control Plane for Reasoning”**

Lecture 2/3 **”Metacognition as a Control Plane for Reasoning”**

Lecture 3/3 **”Metacognition as a Control Plane for Reasoning”**

*Arthur Gretton, UCL, UK*

Lecture 1/2 **”Causal Effect Estimation with Context and Confounders (Part 1 )”**

Lecture 2/2 **”Causal Effect Estimation with Context and Confounders (Part 2)”**

*Mario R. Guarracino, University of Cassino and Souther Lazio, Italy*

Lectures TBA

*Katja Hofmann, Microsoft Research Cambridge, UK*

Lecture 1/3 **”World Models 1”**

Lecture 2/3 **”World Models 2”**

Lecture 3/3 **”World Models 3”**

*Arnulf Jentzen, University of Münster, Germany*

Lecture 1/3 **”Mathematical Introduction to Stochastic Gradient Descent Optimization”**

Lecture 2/3 **”Error Analyses for Adam and further Accelerated and Adaptive Optimizers”**

Lecture 3/3 **”Deep Learning for High-Dimensional Partial Differential Equations”**

*Panos Pardalos, University of Florida, USA*

Lecture TBA

*Michal Valko, Stealth Startup & Inria & ENS MVA, France*

Lecture 1/3 **”Lightspeed RL Fine Tuning for LLMs”**

Lecture 2/3 **”Online and Offline RL Considerations for LLMs“**

Lecture 3/3 **”New Advances on the Theory of Language Generation and Hallucination”**

*David van Dijk Yale University, USA TBC*

Lectures TBA

*Jason Weston, META New York, USA New York University, USA*

Lecture 1/3 **”Self-Improving Language Models”**

Lecture 2/3 **”Self-Improving Agents”**

Lecture 3/3 **”The Future of Self-Improvement & the Promise of Co-Improving AI”**

## Useful Information

**Conference Room:** *The Crown* (in the conference centre of the Riva del Sole Resort & SPA, number 7 on the resort map).

**Registration:** *June 7 @ 16:30 – 19:30* (in the foyer of the conference centre near *The Crown* conference room). Inside the Riva del Sole it is mandatory to wear the badge.

**Group Photo:** *Monday June 8 @ 13:00 Meeting point: terrace adjacent to the restaurant.*

**Certificates** will be given out on the last day of the course.

\* For the *social dinner on the June 12*, we advise everyone **to dress up** (jacket and tie, suit, etc.).

1. **Very Important:** *during lessons and Q&A sessions, absolute silence is recommended, you must not make noise, you must not disturb the Lecturer during the lesson or while she/he is answering questions posed by the audience.*
2. **Resort Map, Castiglione della Pescaia Map,** and **ACDL 2026 Poster.**
3. In the program you will find the list of **accepted abstracts**. The **Oral Session** will be held on **Fri, June 12 @ 16:40**, the **Poster Session** will be held on **Fri, 12 June @ 18:10**. The Poster Session will be held in the **Da Vinci Conference Room** (first floor of the Congress Centre, number 6 on the resort map). *Those who have problems and cannot make the poster, please send us an email now, deadline by June 3rd.*
  - a. We recommend preparing and printing a poster of **size B0** (1000 × 1414 mm or 39.4 × 55.7 inches) in VERTICAL orientation on the board (avoid landscape orientation). If for some reason the B0 size is not possible, then use the A0 size (841 mm x 1189 mm, or 33.1 inches x 46.8 inches).
  - b. **It is not possible to print posters at the course venue. When you arrive at the course venue the posters must already be printed.**
  - c. The Conference Organisers will provide all necessary supplies for mounting the posters (tape, etc).
  - d. *The poster boards will be ready each morning from 08:45.* All presenters are asked to hang their posters as soon as possible in the same morning of their assigned poster session. This way all delegates will be able to study them ahead of the poster session and come prepared with specific questions. Presenters are also asked to remove their posters at the end of the session. Any poster left unmanned on its poster boards after the poster session will be removed.
4. Obviously, *we recommend bringing your work laptop/tablet.*
5. Participants who need to take an **exam/project/oral to have the 8 ECTS** credited are asked to email [acdl@icas.cc](mailto:acdl@icas.cc) and Prof. Nicosia [giuseppe.nicosia.1@gmail.com](mailto:giuseppe.nicosia.1@gmail.com) **Please read the FAQ section “ETCS Credits Recognition”**
6. Inside Riva del Sole, **badges must be worn at all times.**
7. *For dinner on the 12th, we advise everyone to dress up* (jacket and tie, suit, etc.).
8. **Certificates** will be given out on the last day of the course. To receive the certificate you must have at least 85% of class attendance (we have CNNs/Transformers to compute and infer attendance ;-).
9. One last thing do not forget bathing suits, sunscreen, and stay hydrated.

*“But don't you see that the whole trouble lies here? In words, words. Each one of us has within him a whole world of things, each man of us his own special world. And how can we ever come to an understanding if I put in the words, I utter the sense and value of things as I see them; while you who listen to me must inevitably translate them according to the conception of things each one of you has within himself. We think we understand each other, but we never really do.”*

*Luigi Pirandello, Six Characters in Search of an Author.*

**Oral Session**

**Friday, 12 June @ 16:40 Oral Session**

**TBA**

## Poster Session

**Friday, 12 June @ 18:10 Poster Session** (Da Vinci Conf Room, 1st floor of the Congress Centre, number 6 on the resort map).

**TBA**

*“Those who have an eye find what they are looking for even with their eyes closed”*

Italo Calvino