

Data Assimilation & ML Training Course Q&A

Data Assimilation & Machine Learning

- Our goal this week has been to provide you with a structured introduction to current DA methods for Earth System assimilation and an overview of their main application areas in operational NWP: your feedback is important to us!
- Machine Learning techniques are becoming more common in DA as in other parts of the NWP workflow
- Whether ML will become an additional set of tools in the standard DA workflow or will upend the field (e.g. DOP!) remains to be seen
- Either way, DA is changing rapidly, and it is a fascinating area to work in!

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- Where to look for material about current topics and discussion:
 - ECMWF Annual Seminar 2018: Earth System Assimilation (<https://www.ecmwf.int/en/learning/workshops/annual-seminar-2018>)
 - ECMWF Annual Seminar on Observations (2021) (<https://events.ecmwf.int/event/217/>)
 - ECMWF Annual Seminar on Reanalysis (2023) (<https://events.ecmwf.int/event/326/>)
 - ECMWF Annual Seminar 2025, with dedicated Data Assimilation Workshop (<https://events.ecmwf.int/event/428/>)

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- Where to look for material about current topics and discussion:
 - ECMWF-ESA Workshops on Machine Learning for Earth System Observation and Prediction (2020/1/2; presentations online)
 - Latest edition at ESA-ESRIN (Rome), 7-10 May 2024 (<https://www.ml4esop.esa.int/>)
 - Next edition in Bologna 13-17 April 2026

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- Where to look for material about current topics and discussion:
 - International Symposium on Data Assimilation (ISDA): quasi-yearly in person event
 - Bologna, 16-20 Oct 2023; <https://eventi.unibo.it/isda2023>)
 - Kobe, 21-25 Oct 2024; <https://www.data-assimilation.riken.jp/isda2024/#15/34.65479/135.22148>
 - International Symposium on Data Assimilation Online (running series with various thematic events: <https://isda-online.univie.ac.at/>)

Thank you!

Questions?