NEP Summer School on Data Management and Virtual Access: basics and motivations

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NFFA Europe Pilot

- Nanoscience Foundries and Fine Analysis (NFFA) – Europe Pilot (NEP)
- Access to nanoscience research infrastructure
- Integrate synthesis, growth and manipulation of nanostructures with fine analysis, theory and simulation
- 22 international partners, 180 techniques

What about the data?
Data-related research use cases

You might want to:

- Compare your results with similar ones in the literature
- Reproduce/reuse results available in the literature
- Take delivery of the project handed over by a student/colleague who left
- Exchange data with your colleagues to collaborate on a research project
- Allow others to reproduce/reuse your results to be cited
- Analyse your data without installing additional software
Data-related research questions

• Which data do support the results in this paper?
• How can I reproduce the data?
• How were these measures achieved/performed?
• How was the sample prepared?
• How can I search for data with specific features?
• What further info can I get from my data?
Reproducibility crisis

Baker (2016) [https://doi.org/10.1038/533452a](https://doi.org/10.1038/533452a)
A data management horror story

“A data management horror story” by Karen Hanson, Alisa Surkis and Karen Yacobucci.
Focus of the Summer School

• **Data Management**
  • FAIR Principles
  • How to store/publish/find data
  • Tools available in NEP
  • Real use cases
  • Open discussion
  • Theory, demo, hands-on

• **NEP Virtual Access services**
  • MetaRepo
  • TriDAS
  • Nanostructures Predictive Service and Materials Modeling
  • Materials Cloud
  • MRI contrast prediction and NMR Spectra Graph
# Program of the Summer School

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Feedback, questions, doubts

• Survey on the last day at the end of the session

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• Irene Modolo: modolo@iom.cnr.it

• Local organizers: training@nffa.eu
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