



PROGRAMME
DE RECHERCHE
NUMÉRIQUE
POUR L'EXASCALE

Exa-MA project

WP2: Model order, Surrogate, Scientific Machine Learning methods

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WP2 feedback

WP2 feedback

Intra-WP2 discussion

- Discuss internally and share our efforts on leveraging multiple GPUs in PINNs and NOs
- Exchange on technical questions about using ML/DL (Slack+MyBox or Discord)
- Organize the “WP2 café-in”, an informal meeting, for students (Interns, PhDs, postdocs and engineers) in the first place. Once a month, between 1 pm to 2 pm. Daria Hrebenshchykova and Vincent Italiano
- Organize WP2 events in 2026 (at least 2, one of them being on JAX for scientific computing)
- Setup a benchmarking activity to evaluate different implementations that are done in the different studies undertaken in WP2

WP2 feedback

WP2 relations with other WPs and software

- With WP1 : use Feel++ and other WP1 tools (mesh generation) for producing a variety of data sets for NO training
- With WP3 : interaction between Composyx (or C++ linear algebra libraries) and ML algorithms
- With WP6 : link with Uranie for assessing uncertainties in the training of NNs
- With Scimba
 - Interaction with mesh generation and shape optimization
 - Hybridization with numerical schemes (not necessarily with other WPs)
- With PC5 : setup of a working group on hybrid workflows with numerical schemes and NNs



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