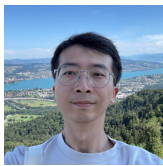


# Yuan YIN

 yuan-yin-nn  yuan-yin.github.io  French, English, Mandarin  Paris, France



## PROFESSIONAL PROFIL

Passionate about cutting-edge AI technologies, especially in **Machine Learning** (ML) and **Deep Learning** (DL), I specialize in pioneering **neural network** methods for analyzing physical dynamics. This expertise allows me to develop DL/AI solutions for complex real-world challenges by innovating upon existing methods, and integrating DL approaches into existing non-ML systems.

## EXPERIENCE

- Valeo.ai** *Paris, France*
- ▶ **AI Researcher** Dec 2024  Now
  - ▶ **Postdoctoral AI Researcher** Apr 2024  Nov 2024  
Ego-centric accident generation for robust self-driving cars
- Sorbonne Université, ISIR, MLIA Team** *Paris, France*
- ▶ **Postdoctoral Researcher** Jul 2023  Dec 2023  
Supervising ongoing research projects & making a tutorial on physics-aware DL
  - ▶ **PhD Student, Teaching Assistant** Oct 2019  Jun 2023  
Supervised by Patrick GALLINARI & Nicolas BASKIOTIS  
*Physics-Aware DL and dynamical systems*: DL-physics hybrid modeling; Out-of-distribution generalization for dynamics modeling; Continuous dynamics modeling
  - ▶ **Research Intern in Deep Learning** Feb 2019  Sep 2019  
Imputing spatiotemporal data with generative models
- Inria Paris Research Intern in NLP** Feb 2018  Jul 2018
- Beihang Univ. Research Intern in CV** May 2015  Jun 2016

## EDUCATION

- Sorbonne Université** *aka UPMC (Paris-6)* *Paris, France*
- ▶ **PhD** in Machine Learning and Deep Learning Jun 2023
  - ▶ **MSc2 DAC** *Master Data Science Paris* 2019
- Université Paris Cité** *aka Paris-Diderot (Paris-7)* *Paris, France*
- ▶ **MSc1 MPRI** *Parisian Research Master in Comp. Sci.* 2018
  - ▶ Univ. Dipl. in French Language and Civilization 2017
- Beihang University** *#12 University in China* *Beijing, China*
- ▶ **BSc** in Computer Science 2016

## TECHNICAL SKILLS

- OS & Platform** Linux servers equipped with GPUs
- Programming** Python (PyTorch, JAX, etc.), C/C++, Java,  $\LaTeX$ , Matlab, OCaml
- Tools** Git, Emacs, VS Code, Eclipse

## LANGUAGES

- French** Bilingual *last exam* ▶ C1 (2017) ●●●●●●●●
- English** Full Professional *last exam* ▶ B2 (2015) ●●●●●●●●
- Mandarin** Native ●●●●●●●●

## DISTINCTIONS

**Accessit for the 2024 AI Thesis Prize** from the **French Association for Artificial Intelligence (AFIA)**

**Top Reviewer** at NeurIPS 2023

## COMMUNITY SERVICE

**Conference Reviewer** at NeurIPS 2021-25, ICLR 2023-26, ICML 2022-25, CVPR 2025, ICRA 2026, ECML-PKDD 2021, and ACM Multimedia 2021

**Workshop Reviewer** at CCFM at NeurIPS 2025, ML4PS at NeurIPS 2022-24, Physics4ML at ICLR 2023, SynS&ML at ICML 2023, and ROAM at ECCV 2024

**Teaching** in French at Sorbonne Université (2019-22) in Engineering Department (UFR 919). For undergrads: C Programming (L1), Algorithmics (L2), Probabilities (L3). For postgrads: ML Research Methodology (M2)

## PUBLICATIONS

- Conference Papers** *\* Equal contribution*
- L. Le Boudec, E. de Bézenac, L. Serrano, R. D. Regueiro-Espino, **Y. Yin**, and P. Gallinari. Learning a neural solver for parametric PDE to enhance physics-informed methods. In *ICLR 2025*.
  - A. Kassai Koupai, J. Mifsut-Benet, **Y. Yin**, J.-N. Vittaut, and P. Gallinari. Boosting generalization in parametric PDE neural solvers through adaptive conditioning. In *NeurIPS 2024*.
  - **Y. Yin\***, M. Kirchmeyer\*, J.-Y. Franceschi\*, A. Rakotomamonjy, and P. Gallinari. Continuous PDE dynamics forecasting with implicit neural representations. In *ICLR 2023*. **(Spotlight)**
  - L. Serrano, L. Le Boudec, A. Kassai Koupai, **Y. Yin**, T. X. Wang, J.-N. Vittaut, and P. Gallinari. Operator learning with neural fields: Tackling PDEs on general geometries. In *NeurIPS 2023*.
  - M. Kirchmeyer\*, **Y. Yin\***, J. Donà, N. Baskiotis, A. Rakotomamonjy, and P. Gallinari. Generalizing to new physical systems via context-informed dynamics model. In *ICML 2022*. **(Spotlight)**
  - **Y. Yin**, I. Ayed, E. de Bézenac, N. Baskiotis, and P. Gallinari. LEADS: Learning dynamical systems that generalize across environments. In *NeurIPS 2021*.
  - **Y. Yin\***, V. Le Guen\*, J. Donà\*, E. de Bézenac\*, I. Ayed\*, N. Thome, and P. Gallinari. Augmenting physical models with deep networks for complex dynamics forecasting. In *ICLR 2021*. **(Oral, also in J. Stat. Mech.: Theory Exp.)**

## Journal Papers

- E. Le Naour, L. Serrano, L. Migus, **Y. Yin**, G. Agoua, N. Baskiotis, P. Gallinari, and V. Guigue. Time series continuous modeling for imputation and forecasting with implicit neural representations. *TMLR*, 2024.
- C. Metta, A. Beretta, R. Guidotti, **Y. Yin**, P. Gallinari, S. Rinzivillo, and F. Giannotti. Improving trust and confidence in medical skin lesion diagnosis through explainable deep learning. *Int. J. Data. Sci. Anal.*, 2023.

D. Huang, R.K. Zhang, **Y. Yin**, Y.D. Wang, and Y.H. Wang. Local feature approach to dorsal hand vein recognition by centroid-based circular key-point grid and fine-grained matching. *Image Vis. Comput.*, 2017.

### Workshop Papers

- Y. Yin**, S. Venkataramanan, T.-H. Vu, A. Bursuc, and M. Cord. IPA: An information-preserving input projection framework for efficient foundation model adaptation. In *NeurIPS 2025 Workshop on CCFM*.
- Y. Yin**, P. Khayatan, É. Zablocki, A. Boulch, and M. Cord. ReGentS: Real-world safety-critical driving scenario generation made stable. In *ECCV 2024 Workshop on W-CODA*.
- L. Serrano, L. Migus, **Y. Yin**, J. A. Mazari, J.-N. Vittaut, and P. Gallinari. INFINITY: Neural field modeling for reynolds-averaged navier-stokes equations. In *ICML 2023 Workshop on SynS & ML*.
- L. Migus, **Y. Yin**, J. A. Mazari, and P. Gallinari. Multi-scale physical representations for approximating PDE solutions with graph neural operators. In *ICLR 2022 Workshop on GTRL*.
- Y. Yin**, A. Pajot, E. De Bézenac, and P. Gallinari. Unsupervised inpainting for occluded sea surface temperature sequences. In *CI 2019*.

### Preprints *not peer-reviewed*

- Y.H. Xu\*, **Y. Yin**\*, T.-H. Vu, A. Boulch, É. Zablocki, and M. Cord. PPT: Pre-training with pseudo-labeled trajectories for motion forecasting, 2024.
- Y. Yin**, A. Pajot, E. de Bézenac, and P. Gallinari. Unsupervised spatiotemporal data inpainting, 2020.

## PRESENTATIONS AND INVITED TALKS

Please find the details of the talks on [my website](#)

In-Person Poster Session at ECCV 2024	Sep 2024
<a href="#">Workshop on Mathematical Foundations of AI at DATAIA-SCAI</a>	Jan 2024
Seminar at <a href="#">Valeo.ai</a>	Jan 2024
Seminar <a href="#">UMR MIA Paris-Saclay</a> at <a href="#">AgroParisTech</a>	Nov 2023
Seminar <a href="#">LAGA-MCS</a> at <a href="#">Univ. Sorbonne Paris Nord</a>	Nov 2023
Tutorial at <a href="#">ECML-PKDD 2023</a>	Sep 2023
PhD Defense	Jun 2023
Seminar of <a href="#">Signal Processing Lab (LTS4)</a> at <a href="#">EPFL</a>	May 2023
Spotlight Conference Presentation at <a href="#">ICLR 2023</a>	May 2023
<a href="#">AI4Science Talks</a> at <a href="#">ML for Simulation Lab</a> at <a href="#">Univ. of Stuttgart &amp; NEC Labs Europe</a>	Apr 2023
<a href="#">SIG LearnFluidS</a> at <a href="#">d'Alembert, Sorbonne Univ.</a>	Mar 2023
Medical Biology Engineers Day of <a href="#">AP-HP</a>	Mar 2023
Seminar at <a href="#">Criteo AI Lab</a>	Nov 2022
Seminar <a href="#">Sorbonne-ISAE-CERFACS</a>	Oct 2022
Spotlight Conference Presentation at <a href="#">ICML 2022</a>	Jul 2022
Seminar at <a href="#">Extrality</a> (Now <a href="#">Ansys SimAI</a> )	Feb 2022
Conference Piresentation at <a href="#">NeurIPS 2021@Paris</a>	Dec 2021
<a href="#">AAAI 2021 Spring Symposium MLPS</a>	Mar 2021