Alexandre **Pasco**

3rd YEAR PHD STUDENT · GRADUATED ENGINEER · APPLIED MATHEMATICS

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My research is mainly about dimension reduction methods for high-dimensional approximation. I try my best to promote open science.

Education

Ph.D. applied mathematics ECOLE CENTRALE DE NANTES   *Dec. 2022 - today*

(Master's) Engineer's degree: applied mathematics and research ECOLE CENTRALE DE NANTES   *Sep. 2019 - Sep. 2022*

Prepa Mathematics-Physics LYCÉE CLÉMENCEAU   *Sep. 2017 - Aug. 2019*

Experience

Teacher assistant ECOLE CENTRALE DE NANTES   *Feb. 2023 - Mar. 2025*

Researcher internship LABORATOIRE JEAN LERAY   *Apr. 2022 - Sep. 2022*

Actuarial internship UNION MUTUALISTE RETRAITE   *Apr. 2021 - Aug. 2021*

Publications

Journal Articles

- Nouy, A., Pasco, A. Dictionary-based model reduction for state estimation. Adv Comput Math 50, 32.   *Apr. 2024*
  DOI:10.1007/s10444-024-10129-4

Preprints

- Nouy, A., Pasco, A. Surrogate to Poincaré inequalities on manifolds for dimension reduction in nonlinear   *May. 2025*
  feature spaces. Preprint submitted. arXiv.2505.01807

Presentations

Talks

- Séminaire des doctorants du LMJL   *Mar. 2023*
- Young Mathematicians in Model Order Reduction Conference (YMMOR)   *Mar. 2023*
- Mascot-Num Conference   *Apr. 2023*
- Séminaire de Mathématiques Appliquées du LMJL   *Apr. 2023*
- Congrès des Jeunes Chercheuses et Chercheurs en Mathématiques et Applications (CJC-MA)   *Sep. 2023*
- SIAM Conference on Uncertainty Quantification   *Feb. 2024*
- Young Mathematicians in Model Order Reduction Conference (YMMOR)   *Mar. 2024*
- Rencontres Doctorales Lebesgue (RDL)   *Apr. 2024*
- 46ème Congrès National d'Analyse Numérique (CANUM)   *May. 2024*
- Young Mathematicians in Model Order Reduction Conference (YMMOR)   *May. 2025*
- RT-UQ PhD-day   *May. 2025*

Posters

- Mascot-Num Conference   *Apr. 2023*
- 46ème Congrès National d'Analyse Numérique (CANUM)   *May. 2024*

Societal Activity

Doctoral student representative LABORATOIRE JEAN LERAY LABORATORY BOARD   *Sep. 2024 - Jun 2025*

Referent Researcher in middle schools MATH.EN.JEANS   *Oct. 2023 - Mar 2025*

Volunteer tutor in Maths and Physics ECOLE CENTRALE DE NANTES   *Oct. 2019 - Apr 2021*

Skills

Programming   Python, LaTeX, MATLAB, C++, F90, SQL, SAS

Languages   French (Native), English (Advanced), Japanese (Intermediate JLPT N4), Spanish (Basic).