# Alexandre **Pasco**

$3^{rd}$ 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).