Baptiste Kerleguer

Date of Birth 26 august 1995 **Email** baptiste.kerleguer@cea.fr
Nationality French

Personal Profile

I am a researcher in applied mathematics with a main interest in statistics. During my PhD I built surrogate models. Now I am trying to improve them and use them for uncertainty quantification. I also have other interests such as images and physics data.

Employment History

2022 - Present Commissariat à l'énergie atomique et aux énergies alternatives
Researcher

Uncertainty quantification and machin learning.
Surrogate models based on Gaussian Processes.

Projets: Numpex, Exa-Ma WP6. CIROQUO axis 1 reference

Education

2019-2022 PhD in applied mathematics - Ecole polytechnique

Multi-fidelity surrogate modeling adapted to functional outputs
Under the supervision of Josselin Garnier and Claire Cannamela

2018-2019 Master in applied mathematics - Ecole Normale Supérieure Paris-Saclay

Master Mathématiques, Vision, Apprentissage

2015-2019 Normalien - Ecole Normale Supérieure Paris-Saclay

Master in applied mathematics and in applied computer science
Bachelor in applied computer science and physics

Publications

- **A Bayesian neural network approach to multi-fidelity surrogate modeling**
  B Kerleguer, C Cannamela, J Garnier 2024
  International Journal for Uncertainty Quantification 14 (1)
- **Multifidelity Surrogate Modeling for Time-Series Outputs**
  B Kerleguer 2023
  SIAM/ASA Journal on Uncertainty Quantification 11 (2), 514-539
- **Multi-fidelity surrogate modeling adapted to functional outputs for uncertainty quantification of com**
  B Kerleguer 2022
  Institut Polytechnique de Paris PhD thesis

Talks

- **JDS 2023 of SFdS,** *Prise en compte de contraintes physiques dans la métamodélisation pour la simulation numéri*
- **ONERA remote seminar on uncertainties quantification** *Multi-fidelity surrogate modeling for uncertainty qu*

- **JDS 2022 of SFdS,** *Méta-modélisation multi-fidélité par processus Gaussien en utilisant une base d'ondelettes*
- **SIAM UQ contributed talk** *Multi-Fidelity Gaussian Process Regression for High-Dimensional Code Outputs Usi*
- **MIA seminar** *Multi-fidelity surrogate modeling for time-series output*
- **PhD talk at ETICS 2021** *Multi-fidelity surrogate model combining Gaussian process regression and Bayesian neu*
- **UNCECOMP 2021,** *Multi-Fidelity surrogate modeling for time-series outputs.*
- **JDS 2021 of SFdS,** *Meta-modélisation multi-fidélité combinant processus Gaussiens et réseau de neurones bayésien*
- **Numerical analysis Summer school 2021,** *Multi-fidelity approaches with Claire Cannamela*
- **Talk at ETICS 2020** *Multi-fidelity modeling for time-series output*