Victor Trappler, Elise Arnaud, Arthur Vidard, and Laurent Debreu. Robust calibration of numerical models based on relative regret, February 2020.

Victor Trappler

PhD Student in the AIRSEA team

Research interests

I am currently a PhD student of Grenoble-Alpes University in the AIRSEA team (Inria), under the supervision of Arthur Vidard, Élise Arnaud, and Laurent Debreu. My research interests revolve mainly around **Uncertainty Quantification**, and **Inverse Problems**. More specifically, I am interested in Robust Optimization and Optimization under Uncertainties (OUU), in the context of the **estimation of parameters under uncertainties**.

Education

2017–Current **PhD Student**, *AIRSEA, Inria/LJK*, Grenoble, France.
Title: Parameter control in the presence of uncertainties
Abstract: Classical methods of parameter estimation usually imply the minimisation of an objective function, that overlooks the role of uncertain parameters. Strategies taking into account these uncertainties need to be defined
Keywords: Parameter Estimation; Optimisation under Uncertainties; Data Assimilation
Advisors: A. Vidard, É. Arnaud, L. Debreu

2015–2017 **MSc Mathematical Modelling and Computation**, *Danmarks Tekniske Universitet*, Kgs. Lyngby, Denmark.
Focus points: Applied mathematics analysis, Dynamical Systems, Scientific Computing, Statistical modelling

2013–2017 **Engineering Degree**, *École Centrale Lyon*, Écully, Interests and courses oriented toward applied mathematics.

Experience

Internships/Master thesis

2017 **Master Thesis**, *AIRSEA, Inria/LJK*, Grenoble, France.
Title: Parameter control in the presence of uncertainties: Robust estimation of bottom friction
Advisors: Uffe Høgsbro Thygesen (DTU), Élise Arnaud, Arthur Vidard, Laurent Debreu (Inria)

2015 **Intern**, *EDF R&D*, Chatou, France.
Developement of MATLAB tools for hydrodynamical model TELEMAC3D, with the purpose of estimating the residence time

Teaching experience

2017–2019 **Teaching assistant**, *Grenoble-Alpes University*.
Lectures in calculus, algebra, and computer lab sessions in statistics for undergraduates students. Teaching time adding up to 138h:
- L2 STA301: 90h of lab work on statistics using the R language
- L1 MIASHS: 20h of exercise sessions on calculus
- L1 MAT104: 28h of lectures and exercise sessions on geometry and algebra

2017–20120 **Research and Teaching Label**, *Grenoble-Alpes University*.
Specific doctoral training for students wanting to pursue an academic career, mostly on specific teaching methods and reflexions on higher education

7 rue Louis Le Cardonnel – 38100 Grenoble, France
(+33) 6 45 75 14 68 • victor.trappler@univ-grenoble-alpes.fr
team.inria.fr/airsea/en/victor-trappler/ • vtrappler.github.io

Publications and preprints

Publications

Victor Trappler, Elise Arnaud, Arthur Vidard, and Laurent Debreu. Robust calibration of numerical models based on relative regret, February 2020.

Presentations and poster presentations

2020 (Expected) Oral presentation at the annual GdR MASCOTNUM PhD meeting (postponed from march 2020), Grenoble, France

2019 Oral Presentation at the Applied Inverse Problems Conference, in the mini-symposium "Dimension reduction in inverse problems", Grenoble, France

2018 Oral Presentation at the National Colloquium for Data Assimilation, Rennes, France

2018 Poster at the Workshop on Sensitivity Analysis and Data Assimilation in Meteorology and Oceanography, Aveiro, Portugal

Relevant skills

Languages	French (Fluent)	*Mothertongue*
	English (Fluent)	*TOEFL IBT score: 105/120 (2015)*
	German (Intermediate)	*Adapted for casual conversations*
Computing	Python 2.7, 3.5+	*Advanced, numpy, scipy, scikitlearn, wrote custom packages*
	R	*Intermediate*
	Matlab	*Intermediate*
	FORTRAN	*Basic*
	C++	*Basic*
Utilitaries	LaTeX	
	bash	
	git	

Miscellaneous

2020 **Representative of non-permanent employees**, *LJK, Grenoble*.
Elected as a representative of the non-permanent employees (PhD, interns, postdocs fellows, engineers) of the Jean Kuntzmann Laboratory. Participation at the lab council

7 rue Louis Le Cardonnel – 38100 Grenoble, France
(+33) 6 45 75 14 68 • victor.trappler@univ-grenoble-alpes.fr
team.inria.fr/airsea/en/victor-trappler/ • vtrappler.github.io