

Looking for post-doc opportunities starting January 2023.

## Education

- 2019 – now **PhD in Optimization and Machine Learning.**  
Supervised by [Franck Iutzeler](#) and [Jérôme Malick](#), *Université Grenoble Alpes*, Grenoble, France.
- 2018 – 2019 **MS in Math, Vision and Learning (MVA).**  
*ENS Cachan*, Cachan, France.
- 2015–2019 **ENSTA Paris, Engineering school.**  
Optimization and Data Science track, Palaiseau, France.
- 2013 – 2015 **Classes Préparatoires scientifiques.**  
*Lycée Fermat*, Toulouse, France. Intensive training in Math and Physics.
- 2013 **Baccalauréat – Science track.**  
*Lycée René Billières*, Argelès-Gazost, France. High honors.

## Publications

- [1] Gilles Bareilles, Franck Iutzeler, and Jérôme Malick. Harnessing structure in composite nonsmooth minimization. *arXiv:2206.15053*, 2022.
- [2] Gilles Bareilles, Franck Iutzeler, and Jérôme Malick. Newton acceleration on manifolds identified by proximal-gradient methods. To appear in *Mathematical Programming*, 2022.
- [3] Gilles Bareilles and Franck Iutzeler. On the interplay between acceleration and identification for the proximal gradient algorithm. *Computational Optimization and Applications*, 77(2):351–378, 2020.
- [4] Gilles Bareilles, Yassine Laguel, Dmitry Grishchenko, Franck Iutzeler, and Jérôme Malick. Randomized progressive hedging methods for multi-stage stochastic programming. *Annals of Operations Research*, 295(2):535–560, 2020.

## Work experience

- March 2018 **Internship, Artelys, Paris.**  
5 months Analysis and improvements of the MINLP algorithm of the Artelys Knitro solver. Implementation of the Lasserre hierarchy for optimization of sparse and complex polynomials.
- Sept. 2017 **Internship, RTE – French TSO, Versailles.**  
5 months Study of direct methods for solving quadratic systems; conception of a modeler for power transmission systems and polynomial optimization problems in complex variables.
- May 2017 **Research internship, University of Manchester, Manchester.**  
3 months Conception and implementation of a rational approximation technique for matrix exponential.

## Internship supervision

- 2021 **Mouad Benlahsen, UGA M1**, implementation of SQP routines in Julia (2 months).

## Prizes

- 2022 **“Prix Dodu” for best young researcher talks, SMAI MODE 2022.**  
*Newton methods for nonsmooth composite optimization.*

## Service

- 2021 - now **Organizer of GORGeous (Grenoble Optimization Reading Group).**  
<https://sites.google.com/view/gorgeous-optim/home>

2021 - now **Reviewing for SIAM Journal on Optimization.**

2021 - now **Elected member of the laboratory council.**

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## Talks

June 2022 **Conjuguer Newton et gradient proximal pour l'optimisation non lisse**, *CANUM*, Evian, [Abstract](#) & [Slides](#).

June 2022 **Newton methods for nonsmooth composite optimization**, *Journées MODE*, Limoges, [Abstract](#) & [Slides](#).

Dec. 2020 **Harnessing Structure in Optimization for Large-scale Learning**, *LJK PhD day*, Grenoble.

Sept. 2020 **On the Interplay between Acceleration and Identification for the Proximal Gradient algorithm**, *Journées MODE*, (virtual), [Abstract](#) & [Slides](#).

February 2020 **Randomized Progressive Hedging methods for Multi-stage Stochastic Programming**, *ROADEF*, Montpellier, [Abstract](#) & [Slides](#).

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## Teaching activities

2021 - 2022

**Numerical Optimization (M1)**, *Teaching Assistant*, 20.5h.

**Advanced methods for Operations Research (M2)**, *Lecturer*, 6h.

**Statistiques pour la biologie (L2)**, *Teaching Assistant*, 22.5h.

**Python refresher (M2)**, *Teaching Assistant*, 12h.

2020 - 2021

**Numerical Optimization (M1)**, *Teaching Assistant*, 22.5h.

**Advanced methods for Operations Research (M2)**, *Lecturer*, 6h.

**Statistiques pour la biologie (L2)**, *Teaching Assistant*, 22.5h.

**Python refresher (M2)**, *Teaching Assistant*, 3h.

2019 - 2020

**Numerical Optimization (M1)**, *Teaching Assistant*, 18h.

**Advanced methods for Operations Research (M2)**, *Lecturer*, 6h.

**Statistiques pour la biologie (L2)**, *Teaching Assistant*, 22.5h.

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## I.T. knowledge

Languages Julia, Python, C++, C

OS Windows, GNU/Linux

Software L<sup>A</sup>T<sub>E</sub>X, git, CI tools

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## Miscellaneous

On my free time, I like to climb (bouldering and lead climbing), hike, and practice music.