Tangi Migot
Email:
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Personal Webpage:
tmigot.github.io
ResearchGate:
Tangi-Migot
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Google Scholar:
profile
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General skills:
Problem solving
Analytical skills
Fast learner
Verbal and written communication

Programming skills:
Julia (expert)
Github, Git (expert)
Matlab (expert)
Python (good)
C++, Java (academic)

Mathematics skills:
Numerical optimization (expert)
Numerical analysis (ODE/PDE) (expert)
Implementation, benchmarking and optimization of algorithms (expert)
Operations research (good)
Game theory (good)

Languages:
English (fluent)
French (native)
German (academic)

Personal interests:
International Master of chess

Ph.D. Tangi Migot

Computational Mathematician

I defended a Ph.D. in numerical optimization in 2017 at IRMAR in France. Since then, I have been a postdoctoral research associate in several research institutes in France and Canada. Currently, I am a postdoctoral research associate funded by IVADO in Montréal studying solvers for large scale optimization and their implementation in Julia.
I am a specialist in numerical analysis and optimization with a special interest in the efficient implementation of algorithms in modern programming languages. Proven efficiency with an ability to quickly learn and navigate any computer system, I am interested in joining a team eager to apply cutting-edge tools for scientific applications.

Employement History

Since October 2020, Postdoc. researcher at Polytechnique Montréal
in the Department of Mathematics and Industrial Engineering funded by a grant from IVADO. My main project is to study large scale optimization solvers in Julia for data science, in particular, PDE-constrained optimization problems.

I am also an active contributor on open source Julia packages, in particular in the *JuliaSmoothOptimizers* organization. This includes being the main developer of a solver for nonlinear optimization DCISolver.jl, and a modeling API for PDE-constrained optimization problems PDENLPModels.jl.

2018 Oct. - 2020 Apr., Postdoc. researcher at University of Guelph
in the department of Math. & Statistics. I was mainly studying novel numerical algorithms for generalized Nash equilibrium problems (game theory) using optimization and nonsmooth dynamical systems.

2018 July. - Sep., Postdoc. researcher at Université de Sherbrooke
financially supported by a grant of excellence for foreign researches from the FRQNT. The goal was to code a Julia solver for degenerate non-linear optimization problems.

2018 Apr. - Jun., Postdoc. researcher at INRIA de Rennes
I was studying numerical aspects of dynamical complementarity problems and reactive transport problems applied in geochemistry.

Research Summary

Publications of 19 articles in research journal
in numerical optimization, numerical analysis, complexity theory, geochemistry, game theory and operations research. My statistics are available on my Google scholar profile.

29 talks in scientific conferences
including online talks, presenting my research in English and French.

230hrs of teaching from bachelor to Ph.D.
including being responsible of 2 bachelor courses in mathematics (over 100 students) with supervision of teaching assistants. During my postdoctoral experiences, I also co-supervised master and Ph.D. students.

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Personal interests:
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Education

2014 - 2017, IRMAR-INSA de Rennes
Ph.D. in applied mathematics/numerical optimization.

2011 - 2014, INSA de Rouen
Engineer diploma in computer science, and applied mathematics.

2013 - 2014, Université de Rouen
MRes in fundamental mathematics.

Scientific Outreach Activities

2021, Montréal IVADO/MILA
Natural Language Processing Workshop Series: Question answering: from the document to the excerpt. Siva Reddy (McGill University - MILA) for 2 sessions of 3hrs.

2021, Montréal IVADO/MILA
6th IVADO/Mila Deep Learning School. School with 45hrs from March 30 to April 29, 2021, with online courses and laboratories on: machine learning, deep learning and optimization - convolutional neural networks, recurrent neural networks - biais and discrimination in AI. By Gaëtan Marceau Caron, Golnoosh Farnadi, AJung Moon, Jeremy Pinto, Mirko Bronzi.

Ph.D. Schools
2019, Berlin. Summer school at the TU Berlin: *Large scale and PDE constrained optimization* par J.-C. De los Reyes and T. Munson, *Optimization and Machine Learning* by P. Richtàrik.
2016, Rome. COST/MINO Ph.D. School on Advanced Optimization Methods: *Polyhedral Combinatorics* by S. Dey, *Interior Point methods* by J. Castro, *Structured Dantzig-Wolfe Decomposition* by A. Frangioni, *Semidefinite Programming* by V. Piccialli.

SEME: 1 week mathematical challenge on industrial problems
2016, Nice. *Re-calibration de modèles pharmacocinétiques.* for ExactCure.
2014, Rouen. *Modelling Gas Regulators* for GCE group.

References

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