

Tom M. Ragonneau, Ph.D. Candidate

Computational Mathematics, The Hong Kong Polytechnic University

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Education

- Ph.D.**, The Hong Kong Polytechnic University, Hong Kong 2019–2022
Supported by the [University Grants Committee](#) of Hong Kong under the Hong Kong Ph.D. Fellowship Scheme.
Supervised by Dr. [Zaikun Zhang](#) and co-supervised by Prof. [Xiaojun Chen](#).
Subject of the dissertation: [Model-Based Derivative-Free Optimization Methods and Software](#).
- M.Sc.**, Toulouse INP-ENSEEIH, Toulouse, France 2018–2019
Graduated in [Performance in Software, Media, and Scientific Computing](#).
- M.Eng.**, Toulouse INP-ENSEEIH, Toulouse, France 2016–2019
Graduated in High Performance Computing and Big Data.
- CPGE**, Carnot high-school, Dijon, France 2014–2016
Two-year program of profound studies for acquiring elementary but crucial scientific knowledge.

Working experience

- Research associate**, The Hong Kong Polytechnic University, Hong Kong 2022
Continued the development of the derivative-free optimization solver [COBYQA](#).
- Research assistant**, The Hong Kong Polytechnic University, Hong Kong 2019
Early development of the MATLAB and Python package [PDFO](#).
- Trainee engineer**, Axians Cloud Builder, Toulouse, France 2018
Prediction of the load balancing of a computing cluster managed by a GPFS system via machine learning tools.

Publications

Peer-reviewed journals

- [1] A deep learning approach for estimation of the nearshore bathymetry
R. Benschila, G. Thoumyre, M. Al Najjar, G. Abessolo Ondoa, R. Almar, E. Bergsma, G. Hugonnard, L. Labracherie, B. Lavie, T. M. Ragonneau, S. Ehouarn, B. Vieuble, and D. Wilson
J. Coast. Res. 95.sp1 (2020), pp. 1011–1015

Technical and institutional publications

- [1] Model-Based Derivative-Free Optimization Methods and Software
T. M. Ragonneau
Ph.D. thesis, Hong Kong: Department of Applied Mathematics, The Hong Kong Polytechnic University, 2022
- [2] PDFO: cross-platform interfaces for Powell's derivative-free optimization solvers
T. M. Ragonneau, and Z. Zhang,
URL: <https://www.pdfo.net/>, version 1.2, 2021
- [3] COBYQA: constrained optimization by quadratic approximations
T. M. Ragonneau, and Z. Zhang,
URL: <https://www.cobyqa.com/>, version 1.0.dev0, 2022

Presentations

- [1] PDFO: a cross-platform MATLAB/Python interface for Powell's derivative-free optimization solvers
SIAM Conference on Optimization (OP21), online, July 21, 2021

Teaching

- Revision tutorial sessions**, The Hong Kong Polytechnic University, Hong Kong 2020–2021
Calculus, Probability & Statistics, and Linear Algebra.
- Examination invigilations**, The Hong Kong Polytechnic University, Hong Kong 2019–2022
Monitored examinations and marked assignments for various subjects.

Languages

Mother tongue
Other languages

French

Understanding				Speaking				Writing	
Listening		Reading		Interaction		Production			
C2	Fluent	C2	Fluent	C1	Fluent	C1	Fluent	C1	Fluent
B1	Independent	B1	Independent	B1	Independent	A2	Basic	B1	Independent
A2	Basic	A1	Basic	A1	Basic	A1	Basic	A1	Basic

Common European Framework of Reference for Languages (CEFR)

English
German
Cantonese

Personal interests

Science, technology, music, movies, hiking, scuba diving.