# 杨哲乙 (YANG Zheyi)

**Gender:** Male **Ethnicity:** Han **Nationality:** Chinese
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**Birth place and date:** Haikou, Hainan Province, China, 17 July 1995

**Ph.D. Student in applied mathematics at ENSTA Paris**
**Apply for Post-Doc position**

## Education

10.2020-12.2023 (Expected) **Ph.D. in applied mathematics at ENSTA Paris**
Research field: diffusion MRI, Bloch Torrey equation, numerical simulation, estimation method
Thesis title: Numerical methods to estimate brain micro-structure from diffusion MRI data.
Coursework: Calculus of variations, Transport optimal, Parallel computing, Numerical technologies and algorithms for boundary element method, Introduction to medical imaging
Advisor: Dr. Jing-Rebecca LI

09.2017-07.2020 **Master and Diplôme d'ingénieur in École Centrale de Pékin, Beihang University**
Major: Electromagnetism and microwave engineering GPA: 82/100
Research field: Microstrip filter design, Dielectric resonator antenna design, plan wave generator optimization (complex value optimization)
Thesis title: Research and Design of Wideband Multi-Beam Circular Polarized Dielectric Resonant Antenna Array

09.2016-02.2017 **Exchange study in Université Libre de Bruxelles, Belgium for one semester**
Major: Electric and electronic engineering. China Scholarship Council Scholarship (CSC)

09.2013-07.2017 **Bachelor in École Centrale de Pékin, Beihang University**
Major: Mathematics and applied mathematics GPA: 83/100

## Publication and Patent

2023.08 **Journal article, IEEE Transactions on Medical Imaging (Under review)**
Title: SpinDoctor-IVIM: An in-silico imaging framework for intravoxel incoherent motion MRI (2nd author)

2023.08 **Journal article, Medical Image Analysis (Under review)**
Title: A simulation-driven supervised learning framework to estimate brain-microstructure using diffusion MRI (2nd author)

2023.08 **Journal article, Physics in Medicine and Biology**
Title: Incorporating interface permeability into the diffusion MRI signal representation while using impermeable Laplace eigenfunctions (1st author). DOI: 10.1088/1361-6560/acf022

2023.03 **Conference talk, SIAM CSE2023**
Title: Morphological parameter estimation of neuron using a machine learning algorithm on diffusion MRI data (1st author)

2022.09 **Journal article, Mathematics In Action**
Title: Asymptotic models of the diffusion MRI signal accounting for geometrical deformations (1st author)

2021.06 **Conference article, ASME Turbo Expo 2021**
Title: Constraint handling in Bayesian optimization – A comparative study of support vector machine, augmented Lagragian and expected feasible improvement (2nd author) DOI: https://doi.org/10.1115/GT2021-58562

2020.09 **Journal article, IEEE Access**
Title: Robust Plane Wave Generator Design in Small Anechoic Chamber Setup Using Parameterized Field Method (1st author) DOI: 10.1109/ACCESS.2020.3029265

2020.02 **Conference article, ASME Turbo Expo 2020**
Title: Prediction of non-linear mechanical behavior with deep neural network-application on low pressure turbine disc (3rd author) DOI: 10.1115/GT2020-14382

2019.04 **Conference article, European Association on Antennas and Propagation (Eucap2019)**
Title: Wideband circularly polarized coplanar waveguide fed rectangular frustum dielectric resonator antenna (1st author)

2017.08 **Patent, Configurable band-pass filter based on liquid metal, Microwave engineering Lab, Beihang University**
A bandpass filter whose resonant frequency can be changed by changing the coupling line (in liquid metal) length.

## Prize

2019.09 **2019-2020 Beihang University Academic Scholarship** **First prize**
2018.09 **2018-2019 Beihang University Academic Scholarship** **First prize**
2016.09 **Beihang 'Fengru' Innovation Competition** **Third prize**
Project: Portable solar charge system (5 members)

## Intern Experience

2019.05-2019.11 **BSS TurboTech Ltd, joint-company of Safran Aircraft Engine (Snecma) and AECC SI Last year of Master internship, numerical optimization algorithm**
Tasks: Bayesian optimization for turbine design, codes implementation and comparative analysis; Reinforcement learning model implementation

2016.06-2016.08 **High Frequency and High Voltage Center, Institute of Microelectronics of Chinese Academy of Sciences Production intern**
Tasks: Solar panel encapsulation

**Language** | **Skills** | **Hobbies**
Chinese: Native, English: TOEFL 98(r:29 l:27 s:19 w:23), French: TCF B2 | MATLAB, Python(Pytorch,Flask), Julia | Films, Swimming, Tennis