

Quqiming (Danica) Duan

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Education

- October 2020—Present* **Degree:** MRes in Computational Methods in Ecology and Evolution
Location: Imperial College London, UK
- September 2019—September 2020* **Degree:** MSc in Pollution & Environmental Control
Location: The University of Manchester, UK
Classification: Distinction (Overall: 73.8%; Final Project: 74%)
- September 2015—September 2019* **Degree:** BSc in Environmental Science (Chemistry)
Location: Jilin University, China
Dissertation mark: 92% (ranked top 10%)

Research Experience

March 2020—September 2020

Project: Impacts of Injection of Nanoscale Zero Valent Iron on Groundwater Microbial Communities During In-Situ Remediation Trials

Location: The University of Manchester, UK

Supervisor: Prof. Jonathan Lloyd

- Statistical and bioinformatics analysis of the shifting composition and diversity of groundwater bacterial community, on field collected 16S rRNA sequencing and environmental data from nZVI in-situ remediation application.
- Analysis were performed on R and Galaxy platform.

June 2018—July 2019

Project: Shift of Bacterial Community Structure and Composition During the Enrichment of Ofloxacin Degradation Bacteria

Location: Jilin University, China

Supervisor: Dr. Jincal Ma

- Enhancing enrichment of potential degradation bacteria strains, and analysis on the composition and diversity shifts of bacterial community at different enhancing enrichment stages.
- Designed and conducted the entire experiment on my own and drafted a scientific report in English as the lead author, which is now in preparation for submission.

March 2017—June 2018

Project: Separation of Ofloxacin Degradation Bacteria Strain and Analysis on the Bio-degradation Dynamics of Ofloxacin

Location: Jilin University, China

Supervisor: Dr. Jincal Ma

- Laboratorial enrichment, culturing and selection of possible degradation bacteria strains; then the degradation dynamics of Ofloxacin was calculated using detected concentrations at different culturing time stages.
- Co-designed the experiments with my project supervisor, instructed and conducted the experiments as the team leader.
- This project was awarded the University Outstanding Award in the National Innovation Training Program for College Students at Jilin University.

July 2018—August 2018

Project: Discharge Data Collection and Statistical Analysis of 34 Provincial Level Regions of China for Improving Chinese Wastewater Discharge Regulations (Internship)

Location: Chinese Academy of Environmental Planning, Ministry of Ecology and Environment of the People's Republic of China, Beijing, China

Supervisor: Prof. Wenjing Zhang

- Statistical analysis and data processing of reported wastewater discharge data from 34 provincial level regions of China.
- Assisted in drafting environmental regulations for several cities.

Related Awards

- Outstanding Final Year Student of New Energy and Environment Department, Jilin University (2019).
- The University Outstanding Reward in the National Innovation Training Program for College Students at Jilin University (2018).
- 3rd prize in Biology Experimental Skills Competition of Jilin University (2017).
- 2nd prize in Science and Technology Research Competition, Jilin University (2016).

Skills

- **Software skills:** Microsoft Office (Word, Excel, Powerpoint), Visual Basic, SPSS, MATLAB, ChemDraw, ArcGIS, Origin, Unix and Linux & Shell Scripting, Python, L^AT_EX, R, Jupyter Notebooks.
- **Research skills:**
 - 1) Three year of laboratory experience with aerobic bacteria.
 - 2) Familiar with performing DNA extraction, operating Polymerase Chain Reaction (PCR) and High-performance liquid chromatography (HPLC).
 - 3) Familiar with 16S rRNA sequencing and environmental data analysis.
 - 4) Mathematical modelling and data analysis in Python and R.
- **Communication and team leadership:**
 - 1) Deputy Minister of Research and Learning of Department Student Union, Jilin University.
 - 2) Team leader in all university activities participated in, including Bridge+ national business simulation competition.
 - 3) Gained high compliments and received further work invitation from internship position.
 - 4) Volunteer for 5 weeks in North Africa, teaching English and world culture and helping children who are vulnerable to extremism. (Sidi Moumen Cultural Center)
 - 5) Champion in high school speech competition.