Zhuowei Cai

Education

07/2013–Present **Visiting Student**, *Institute of Advanced Integration Technology*, Cooperated by Chinese Academy of Sciences and the Chinese University of Hong Kong.
Supervisor: Yu Qiao link

09/2009–07/2013 **Bachelor of Science**, *Department of Mathematics*, Zhejiang University.
Thesis Supervisor: Jianlan Wu link

Academic Standing

Overall GPA **91.36/100, 190 credits** *Rank 1st out of 60 in Applied Mathematics*

Major GPA **95.20/100, 77 credits** *Rank 1st out of 120 in the Department of Mathematics*

Research Experience

07/2013–Present **Research Assistant**, *Multimedia Laboratory*, Institute of Advanced Integration Technology, Chinese Academy of Sciences and The Chinese University of Hong Kong.

- Implemented Vision Classification System with Product Quantization
- Improve Subspace Decomposition in Product Quantization for Vision Classification and Image Retrieval task

05/2012–07/2013 **Research Assistant**, *Bio-X Lab*, Department of Physics, Zhejiang University.

- Improved and Implemented Super-resolution Optical Fluctuation Imaging (SOFI) algorithm for the use of Microscopic Image Resolution Enhancement
- Probed the Effect of Urea Concentration on the Aggregation Behavior of Type II Diabetes related NFGAIL Peptides using Molecular Dynamics Simulation
- Implemented Bayesian Optimization algorithm to Optimize Sampling Position in Molecular Dynamics Simulation

Awards

2010-2012 National Student Scholarship (Top 1% students, Highest Student Award in China)

2009-2012 Outstanding Students Scholarship (Top 5% students in Zhejiang University)

2011 The Second Prize, College Physics Competition, Zhejiang University

2011 The Third Prize, College Student C Programming Competition, Zhejiang University

Languages

Native **Mandarin/Cantonese**

Fluent **English** *TOFEL 111/120, Speaking 23/30*

Intermediate **Japanese** *JLPT N2, Reading 60/60*

Publications

Computational Biology

2013 Effect of Urea Concentration on Aggregation of Amyloidogenic Hexapeptides (NFGAIL), Submitted to The Journal of Physical Chemistry, B part

2012 Molecular Mechanism of the Early Stage of Amyloidogenic Hexapeptides (NFGAIL) Aggregation, **Accepted** by Communications in Theoretical Physics (IF 0.954)

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