

Hao Zhang | Curriculum Vitae

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Education

PhD in Mechanical and Aerospace Engineering

Princeton University, New Jersey, 08540, USA, *Sep 2014–Present*
Department of Mechanical and Aerospace Engineering, GPA 3.875/4.0

Bachelor of Engineering

Peking University, Beijing, 100871, China, *Sep 2010–Jul 2014*
College of Engineering, Major in Engineering Structure Analysis, Minor in Economics

Graduate Curriculum

2014–2015 Fall:

- MAE501: Mathematical Methods of Eng'g Analysis I(A)
- MAE527: Physics of Gases(A-)
- MAE551: Fluid Mechanics(A)
- MAE597: Graduate Seminar in MAE(P)

2014–2015 Spring:

- COS424: Interacting with Data(B+)
- MAE433: Automatic Control Systems(A)
- MAE502: Mathematical Methods II(A)
- MAE546: Optimal Control and Estimation(A)
- MAE552: Viscous Flows and Boundary Layers(A)
- MAE598: Graduate Seminar in MAE(P)

Research Experience

Research Asistant

Research Project

Supervised by Prof. Clancy Rowley, I am currently studying the method of dynamic mode decomposition(DMD) along with its variants, and their application to empirical spectral analysis of dynamical system(typically fluid data) for the purpose of identifying characteristic dynamic property/behavior

Princeton Univeristy

May 2015–Present

Undergraduate Research Asistant

Independent work, Senior Thesis

Senior thesis title: Effects of Soret diffusion of radical on premixed flame propagation.

Peking University

Jun 2013–Jun 2014

Undergraduate Research Asistant

Research practicum program

Examined the PDF methods for turbulent reactive flows

University of New South Wales

Feb 2014–May 2014

Project participant

Research practicum project

Collaborating with University of Toronto, I participated in designing a new coolant system for the automobile engine which provides variable coolant flow rate to meet specific engine cooling needs at any speed.

Sponsored by Litens Automotive Group

Sep 2013–May 2014

Undergraduate Research Asistant

Summer research program

Finanical Engineering and Optimization

The Chinese University of Hong Kong

Jun 2013–Aug 2013

Honors and Awards

Feb 2014–May 2014: Exchange program scholarship, awarded by China Scholarship Council

Jun 2013–Aug 2013: Summer research program scholarship, awarded by Chinese University of Hong Kong

Jun 2013: First Prize (Top 0.1% with rank 20/17338) in the National Zhou Peiyuan Mechanical Competition, awarded by The Chinese Society of Theoretical and Applied Mechanics

Sep 2010, Sep 2011, Sep 2012, Sep 2013: National Motivational Scholarship, awarded by Ministry of Education of China

Sep 2012, Sep 2013: Schlumberger Scholarship, awarded by Schlumberger(China)

Sep 2011, Sep 2012: Schneider Electric Public Service Scholarship, awarded by Schneider Electric(China)

Computer skills

Programming language: C/C++, MATLAB, PYTHON

Research tools: Microsoft Office, Latex, Command line interface, Vim, Python(IDE), MATLAB

Operating system: Mac OSX, Microsoft Windows, Linux Ubuntu

Volunteer Experience

Volunteer for public service

Beijing, China

Sep 2011-Jun 2012

Volunteer for campus activities and nonprofit organizations, awarded with Schneider Electric Public Service Scholarship

Volunteer mentor

Beijing, China

June 2011

Volunteer as primary organizers of motivational summer camps for junior & senior school students and delivered inspirational speeches

Volunteer as student researcher

Mianyang, Sichuan, China

Jun 2011-Aug 2011

Participated in investigating the rural left-behind children problem, and then set up a program which invited college students to serve as the mentors of rural left-behind children

Languages

Mandarin: Mothertongue

English: Working proficiency

TOEFL: Total 108 (Reading 29, Listening 28, Speaking 22, Writing 29)

Sep 28, 2013

GRE: Verbal 155 (66%), Quantitative 167 (95%), Analytical Writing 4.0 (54%)

Sep 15, 2013

Interests

- Fitness
- Tennis
- Traveling
- History
- Running
- Pool
- Reading
- Economics