

# YIZHAO GUAN

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Age: 24

Nationality: Chinese

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My site: <https://lgyz123.github.io/yizhao/cv/>

## EDUCATION

### **The University of Tokyo**

*October 2019 - September 2021(Expected)*

- Precision Engineering.

### **Tohoku University**

*October 2015 - September 2019*

- Mechanical and Aerospace Engineering (IMAC Program, an international course taught in English).

### **High School Affiliated to China Fudan University**

*September 2012 - August 2015*

## RESEARCH EXPERIENCE

(Work with professors and doctors as several international groups from British, India, Indonesia, Thai, etc.)

Fluid Dynamic (Ohnishi Lab)

*Fall Semester 2016*

- Simulation of the airflow around the wing under applied laser beam and analyses lift improvement.

Fine Nano- Mechanics (Miura / Suzuki lab)

*Academic year 2017*

- Ab initio simulation for Graphene

Optical super-resolution (Takahashi / Michihata lab)

*Academic year 2019-2021*

- FDTD simulation for standing-wave illumination microscopy

## CONFERENCES IN JAPAN

Japan Society of Mechanical Engineers (JSME) Tohoku

*September 2018*

First Principle Calculation on the Electrical Conductivity of Dumbbell-shape Graphene Nano-Ribbon.

Japan Society of Mechanical Engineers Computational Mechanics Division (CMD)

*September 2019*

Effect of Strain on the Gas Adsorption of Graphene: A First Principle Study

The Japan Society for Precision Engineering (JSPE)

*September 2020*

The FDTD Analysis of Near-field Response for Microgroove Structure with Standing Wave Illumination

The Japan Society for Precision Engineering (JSPE)

*March 2021*

The FDTD Analysis of Near-field Response for Microgroove Structure with Standing Wave Illumination (2nd)

-The Relationship of Microgroove Depth and Near-field Phase Response

Optics & Photonics Japan (OPJ)

*September 2020*

Optical FDTD Analysis of Surface Microstructure for Coherent Structured Illumination Microscopy

## INTERNATIONAL CONFERENCES

Manufacturing Science and Engineering Conference (MSEC)

*2021*

The FDTD Analysis of near-field response for microgroove structure with standing-wave illumination for the realization of coherent structured illumination microscopy (Accepted)

OPTICS & PHOTONICS International Congress (OPIC)

*April 2021*

The FDTD Analysis for Diffraction Limited Microgroove Structure with standing-wave illumination for the realization of coherent structured illumination microscopy

## TEAM WORKS

### **Team-based Research**

*Fall semester 2016*

- We proposed a line navigation robot and realized this idea using Robolab. I participated in the assembling and programming.

### **Professional development Consortium for**

#### **Computational Materials Scientists (PCoMS)**

*September 2018*

- In this seminar, the topic "Computer-based DFT (Density functional theory) simulation for corrosion resistance of aluminum" was proposed by our team. I did the final presentation while team members (an assistant professor and a doctoral student) combined their ideas.

## PART-TIME JOBS

Convenient store (Ministop Co., Ltd.) staff

*September 2017 - October 2018*

- Be promoted from C level to A level staff in 3 months.

Freshman tutor

*October 2017 - August 2018*

- Support a new international student from Singapore in his study and daily life.

MEKO Education Group

- Application Tutor

*March 2020 -*

## **SKILLS & INTERESTS**

- Technical            Microsoft Office, C Language, Python, Matlab, Solid works (Design software), Blender.
- Language           Native Chinese, Fluent in English (TOEFL 98 / GRE 324) and Japanese (JLPT N1 level).
- Interests            Basketball, Taichi (Martial Arts), Badminton, Guitar

## **Personal Achievements & Honors**

- Graduation GPA: 2.7/3
- Scholarship from Sumitomo Electric Industries Social Contribution Foundation
- Finish undergraduate graduation courses in the 6th semester (normally 8<sup>th</sup> semester), and start taking graduate school lectures.
- Undergraduation GPA: 3.34/4    Core courses: Obtain AA (GPA=4) in lectures below:  
Heat Transfer (I,II), Control Engineering (I,II), Quantum Mechanics, Computer seminar.
- Tohoku University Honor President Fellowship.
- The Monbukagakusho Honors Scholarship (JASSO).
- Membership of The Japan Society of Mechanical Engineers.
- Enrolled in "elite training program" a study tour in Zhangye High school, Gansu, China.
- Participated in voluntary support education in Xiji, Ningxia, China.