

Eunkyu(Q) Kim

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Languages: English, Korean

EDUCATION	The Cooper Union for the Advancement of Science and Art New York, NY <i>Bachelor of Engineering</i> - Mechanical Engineering, 2018-2024 GPA: 3.79/4.00 <i>Minor in Mathematics</i> Major GPA: 4.00/4.00, Minor GPA: 3.73/4.00
ACADEMIC INTERESTS	Applied Mathematics, Dynamic Systems & Control, Fluid Mechanics
RESEARCH EXPERIENCE	Gyroscope Controlled Dynamics Dr. Dirk Martin Luchtenburg January 2023 - May 2023 The Cooper Union Worked in-conjunction with a Norwegian Mechanical Engineering team to model, simulation, and manufacture a gyroscopic assisted smart vehicle. Specifically focused on modelling and simulating using moving frame method on $SO(3)$ to study the governing equations of motion. Co-author of the ASME-IMECE2023 Conference Paper Camera Calibration Techniques Dr. Mili Shah January 2022 - Present The Cooper Union Investigation of optimized camera calibration algorithm using numerical linear algebra approaches. Theoretical approaches using SVD and QR Factorization along with experimental validations using marker-based motion tracking system.
WORK EXPERIENCE	Physics TA, Math Tutor, Math TA The Cooper Union September 2022 - Present New York, NY Supervised and assisted students with physics labs focusing on optics. Also worked as a math department tutor teaching introductory calculus, linear algebra, and differential equations. Undergraduate Research Intern Seoul National University March 2022 - September 2022 Seoul, KR Worked as a research intern at Applied Nano and Thermo Science Lab. Published a conference proceeding at an annual Polish Nano Science conference on laser-liquid metal activation, its potential usage in stretchable devices, and applications of the technology on hydrogel reinforcement. Military Service Republic of Korea Army September 2020 - March 2022 South Korea Honorable discharge from Reconnaissance Battalion of the 6th Infantry Division as Sergeant. Specialized in active military operations in the Demilitarized Zone (DMZ)
HONORS	Half-Tuition Scholarship, Innovator Merit Scholarship, School Honors The Cooper Union 2018-2024 New York, NY Scholarship worth half of Cooper Union tuition fee with an additional merit given to students of great academic achievements
SKILLS	Programming Languages: Python, C++ Tools: Ansys, Arduino, Onshape, \LaTeX , MATLAB, Simulink
CLUB ACTIVITIES	Varsity Soccer, The American Society of Mechanical Engineers, Korean Association at Cooper Union

**RELEVANT
COURSES****Mechanical Engineering**

Statics, Dynamics, Materials Science, Solid Mechanics, Thermodynamics, Rigid Body Dynamics and Load Controls, System Dynamics, Fluid Mechanics, Applied Elasticity, Feedback Controls System, Drone Controls, Computer Aided Engineering, Mechanical Vibrations, Heat Transfer, Engineering Experimentation, Advanced Dynamics, Advanced Thermodynamics, Advanced Fluid Mechanics, Modern Control, Manufacturing Principles

Mathematics, Physics

Introduction to Linear Algebra, Calculus I, Calculus II, Vector Calculus, Ordinary and Partial Differential Equations, Probability and Statistics, Linear Algebra, Complex Analysis, Modern Algebra, Real Analysis, Mechanics, Electromagnetism, Modern Physics, Cosmology

Senior Courses

Advanced Thermodynamics, Advanced Fluid Mechanics, Modern Control, Manufacturing Principles, Real Analysis, Advanced Real Analysis, Numerical Analysis, Computational Fluid Dynamics, Calculus of Variations