

Yonghyun Peter Cho

MASTER'S COURSE · COM:FORT LAB · DEPARTMENT OF FASION AND TEXTILES · SEOUL NATIONAL UNIVERSITY



About me

Background in aerospace engineering with experience in solid-propellant rocketry and spacesuit thermal management systems. Passionate about interdisciplinary research at the intersection of aerospace engineering and human physiology. Main research interest in developing spacesuits for extra- and intra-vehicular activities.

Interests

- Space Exploration
- Human Spaceflight
- Aerospace Physiology
- Systems Engineering
- STEM Education

Contact

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Seoul, 08826, South Korea

Personal

Nationality: Korean, American
Military Status: Completed

Links

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🌐 [yonghyun-cho-rocketman](https://www.linkedin.com/in/yonghyun-cho-rocketman)
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EDUCATION

- 2026 - Present **M.S. in Fashion & Textiles**
COM:FORT LAB, DEPARTMENT OF FASHION AND TEXTILES, SEOUL NATIONAL UNIVERSITY
Research Project: *Developing Korean Spacesuits for Extra- and Intra-Vehicular Activities in Manned Space Programs*
- 2017 - 2026 **B.S. in Engineering**
DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING, SEOUL NATIONAL UNIVERSITY
Thesis: *"A Review of Air-Breathing Electric Propulsion: Overview and Recent Development Trends"*

ACADEMIC EXPERIENCE

- 2025 - 2026 **Undergraduate Research Intern**
COM:FORT LAB, DEPARTMENT OF FASHION AND TEXTILES, SNU 📍 SEOUL, SOUTH KOREA
 - Led thermal resistance experiments to explore graphene-reinforced PVC tubing as a candidate material for EVA liquid cooling garments (LCGs).
 - Assisted in sleep, spacesuit, and marine drysuit experiments, gaining experience in human-clothing thermal comfort interaction research.
- 2026.04 **Research Assistant & Interpreter**
SEOUL NATIONAL UNIVERSITY, UNIVERSITY OF UTAH 📍 JEJU ISLAND, SOUTH KOREA
 - Assisted Prof. Melissa Ilardo (Superhuman Lab, University of Utah) as a bilingual research assistant during field research on Jeju haenyeo (woman divers) diving practices.
- 2024 - 2025 **Undergraduate Research Intern**
CAMP EPM, GRADUATE SCHOOL OF ENGINEERING PRACTICE, SNU 📍 SEOUL, SOUTH KOREA
 - Research Topic: Engineering Project Management
 - Instructor: Professor Changwoo Park, Ph.D.
- 2017 - 2023 **SNU Rocket Team HANARO**
SEOUL NATIONAL UNIVERSITY 📍 SEOUL, SOUTH KOREA
 - Propulsion Team Leader (2018), Team Leader (2021 - 2023)
 - Instructor: Professor Youngbin Yoon (1st KASA Administrator) & Professor Bok-jik Lee
- 2023.06 **Spaceport America Cup**
ESRA (EXPERIMENTAL SOUNDING ROCKET ASSOCIATION) 📍 NEW MEXICO, USA
 - Participated as the Project Leader of Team SNU (Category: 10K COTS)
 - Developed and Launched an H-class Rocket
 - Presented the team's rocket design and concept of operations (CONOPS) during the official video review, evaluated by international judges.
 - Youtube video title: '2023 SA Cup Team 89 Seoul Nat'l Univ Video Safety Review'
 - Secured sponsorships and coordinated interdisciplinary communication within the team
- 2018.02 **Sounding Rocket Technology Exchange Program**
KAIST (KOREA ADVANVED INSTITUTE OF SCIENCE & TECHNOLOGY) 📍 DAEJEON, SOUTH KOREA
 - Participated in a rocketry program focused on propulsion, combustion engineering, and trajectory fundamentals, with access to restricted rocket technology and facilities
 - Instructor: Professor Sejin Kwon
- 2014 - 2015 **14th Korea Astronomy Olympiad**
KOREA ASTRONOMICAL SOCIETY 📍 SOUTH KOREA
 - Attended the Weekend School as the 1st-round qualifier
 - Attended the Winter Camp as the 2nd-round qualifier
 - Participated in the national team selection process

Languages

Korean	Native
English	Native
• Dual U.S.-Korean citizen • U.S. resident from birth to age 8 • TEPS (March 2026) ▸ Total Score 533, Level 1+ Percentile Rank 96.95	

WORK EXPERIENCE

- 2026.08 **English Space Camp Korean Staff**
SONGAM SPACE CENTER 📍 YANGJU, SOUTH KOREA
• Collaborated with NASA JPL staff in planning and conducting a 4-day English space camp
• Supervised elementary school students, and provided Korean-English interpretation
- 2025 **Foward Deployed Engineer**
MORPH SYSTEMS 📍 SEOUL, SOUTH KOREA
• Designed ontology models using Palantir Foundry to integrate fragmented supply chain data for defense and manufacturing clients
• Analyzed client sales data to identify patterns and support data-driven business decisions
- 2021 **Research Assistant**
SATREC INITIATIVE 📍 DAEJEON, SOUTH KOREA
• Conducted and presented research on air-breathing electric propulsion (ABEP) systems
• Operated vacuum chambers & supported electric propulsion tests (FEPP, Hall Thrusters)
• Assisted in assembly and integration of small satellites in a cleanroom environment
- 2018 - 2020 **Republic of Korea Air Force**
2ND AIR DEFENSE MISSILE BRIGADE 📍 CHUNCHEON, SOUTH KOREA
• Sergeant, Completed mandatory military service
- 2017 - 2018 **Tutoring Instructor**
JINMYUNG ACADEMY 📍 SEOUL, SOUTH KOREA
• Tutored middle and high school students in mathematics, physics, and Earth science

AWARDS

- 2026 **Best Paper Award**
THE SOCIETY OF FASHION & TEXTILE INDUSTRY 📍 SEOUL, SOUTH KOREA
• Awarded for poster presentation (healthcare division) at the 2026 SFTI Spring Conference
- 2018 **Gold Award, 27th National Universities' Rocket Launch Competition**
THE NATIONAL UNIVERSITIES' ROCKET ASSOCIATION (NURA) 📍 GOHEUNG, SOUTH KOREA
• Awarded for outstanding performance in rocket launch, recovery, and data retrieval
- 2017 **Gold Award, 26th National Universities' Rocket Launch Competition**
THE NATIONAL UNIVERSITIES' ROCKET ASSOCIATION (NURA) 📍 GOHEUNG, SOUTH KOREA
• Awarded for outstanding performance in rocket launch, recovery, and data retrieval

CERTIFICATES

- 2024 **Star Project Manager**
CAMP EPM, GRADUATE SCHOOL OF ENGINEERING PRACTICE, SNU 📍 SEOUL, SOUTH KOREA
Demonstrated expertise in engineering and business management.

SKILLS

Computer-Aided Design (CAD) & Digital Fabrication

AUTODESK FUSION, SOLIDWORKS, 3D PRINTING, LASER CUTTING, CNC

Composite Manufacturing (Glass Fiber Reinforced Plastic, GFRP)

WET LAYUP, VACUUM INFUSION

Programming & Scientific Computing

PYTHON, C++, MATLAB, SIMULINK, LABVIEW, SPSS

Data Pipeline & Ontology Design

PALANTIR FOUNDRY

Computational Fluid Dynamics (CFD)

ANSYS FLUENT, EDISON CFD

PUBLICATIONS

- 2026 J. Jung, **Y. Cho**, S. Chung, and J. Lee*, "Effects of a Cervical Pillow on Sleep Quality, Physiological and Psychological Responses During a 7-Hour Nocturnal Sleep", *J Korean Soc Living Environ Sys* 33(2):117-137, 2026, doi: 10.21086/ksles.2026.4.33.2.117.
- J. Jung, **Y. Cho**, S. Chung, and J. Lee*, "Head-Neck Alignment-Based Cervical Pillow Enhances Sleep Physiology and Comfort: A Controlled Sleep Study", *16th International Conference on Innovation in Clothing*, Sep. 16-18, Katowice, Poland, 2026.
- M. Stenkina, H. Lee, **Y. Cho**, and J. Lee*, "Comparative Analysis of Thermoregulatory and Cardiovascular Responses in Fully Encapsulated Protective Clothing During Seated Rest, Upper-Limb Exercise, and Treadmill Walking", *16th International Conference on Innovation in Clothing*, September 16-18, Katowice, Poland, 2026.
- J. Jung, **Y. Cho**, S. Chung, and J. Lee*, "Effect of a Cervical Pillow on Sleep Quality, Psycho-physiological Responses During a 7-Hour Nocturnal Sleep", *21st International Conference on Environmental Ergonomics (ICEE)*, Aug 17-21, Kuching, Malaysia, 2026.
- Y. Cho**, H. Lee, M. Stenkina, and J. Lee*, "Uniform Moisture Accumulation but Regional Differences in Thermal Sensation during Arm and Leg Exercise in Fully Encapsulated Protective Clothing", *21st International Conference on Environmental Ergonomics (ICEE)*, Aug 17-21, Kuching, Malaysia (Poster), 2026.
- Y. Cho**, H. Lee, M. Stenkina, and J. Lee*, "Thermal Performance of Graphene-Reinforced PVC for Spacesuit Liquid Cooling Garment Applications", *7th ICSPP 2026 (International Congress on Soldiers' Physical Performance)*, June 16-18, 2026, Beffroi De Montrouge, Paris, France, 2026.
- H. Lee, M. Stenkina, **Y. Cho**, and J. Lee*, "Thermal strain during arm and leg exercise in multi-layer fully encapsulated whole-body protective clothing", *7th ICSPP 2026 (International Congress on Soldiers' Physical Performance)*, June 16-18, 2026, Beffroi De Montrouge, Paris, France, 2026.
- 이호준, **조용현**, M. Stenkina, S. Salsabila, and 이주영*, "다층 구조의 전신밀폐형 보호복 착용 시 액체냉각수트의 튜브 재료에 따른 인체 냉각 성능 및 생리적 정신심리적 반응", 한국생활환경학회 춘계학술대회, 2026년 5월 22일(금), 세종대학교, 서울 (구두) (구두발표상), 2026.
- 조용현**, 손기영, 홍병희, and 이주영*, "우주복용 액체순환 체온조절복 적용을 위한 그래핀-강화 PVC의 열 전달률과 열저항 성능 분석", 한국의류산업학회 춘계학술대회, 2026년 5월 16일(토), 건국대학교, 서울 (포스터) (포스터 발표상), 2026.
- 이호준, M. Stenkina, M. Soatova, S. Salsabila, **조용현**, and 이주영*, "다층 구조의 전신 밀폐형 보호복 착용이 상하지 운동 시 생리적 및 정신심리적 반응에 미치는 영향", 한국의류산업학회 춘계학술대회, 2026년 5월 16일(토), 건국대학교, 서울 (구두), 2026.
- 정재연, **조용현**, 정수빈, and 이주영*, "7시간 야간 수면 중 경추베개 사용이 수면의 질 및 생리 심리 반응에 미치는 영향", 한국의류산업학회 춘계학술대회, 2026년 5월 16일(토), 건국대학교, 서울 (구두), 2026.
- 2025 **Y. Cho**, and B. Lee*, "A Review of Air-Breathing Electric Propulsion: Overview and Recent Development Trends", *Seoul National University, Dept. of Mechanical & Aerospace Engineering — Bachelor's Thesis*, 2025.
- 2023 **Y. Cho**, Y. Song, I. Moon, J. Yang, J. Kang, H. Kang, *et al*, "Comprehensive System Engineering of Composite Structured Payload Deployable Sounding Rocket "HARANG", Team 89 Project Technical Report for the 2023 IREC (Spaceport America Cup)", *Experimental Sounding Rocket Association*, 2023.
- Y. Cho**, "Changes in Human Skin Temperature in a Simulated Microgravity Environment: Exploring the Potential of Cooling Gloves for Body Temperature Reduction", *Seoul National University, Dept. of Fashion & Textiles — Course Report for Understanding and Experiments of Spacesuits*, 2023.
- 2022 Seoul National University Rocket team HANARO, and **Y. Cho***, "Improvement of the Combustion Characteristics of Ammonium Nitrate Based Composite Propellants Using PTFE", *Journal of the National universities' Rocket Association* vol.31, 2022.

* Corresponding author