

Taejung Lim (임태중)

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RESEARCH INTERESTS

- **Computational Mechanics:** Nonlinear Finite Element, Partition of Unity Finite Element, Nonlinear Modal Analysis, Hyperelastic Material, Contact
- **Optimal structural design:** Nonlinear stress analysis, fatigue life analysis, Derivation of optimal design variables

SKILLS

Programming Language: Fortran 90, Matlab, MATLAB, Python

Finite Element Software: ADINA, ANSYS

3D CAD: Spaceclaim, FreeCad, Gmsh

Scientific Visualization: Abode Illustrator, Tecplot, Paraview, Origin, Engauge Digitizer, Flir Thermal Studio

EDUCATION

2023. 03 – Present **Jeonbuk National University**

M.Sc., Department of Mechanical System Engineering

(Supervisor: Prof. Hyungmin Jun)

2023. 02 **Jeonbuk National University**

B.Sc., Department of Mechanical System Engineering

EXPERIENCES

2023.07 – 2023.08 **George Washington University**

Research and commercialization program, Korea Innovation Center Washington DC(KIC DC) Tech Frontier
Technology commercialization training and market research

2023.03 – Present **Jeonbuk Natition University**

Undergraduate Research Program, Mutiphysics System Design Labotory

Development of a Hyperelastic Finite Element Model based on Partition of Unity and Nonlinear Modal Analysis;
Optimal design of 20MW wind turbine drive system according to wind speed changes

2021.11 – 2023.02 **Jeonbuk Natition University**

Undergraduate Research Program, Mutiphysics System Design Labotory

Development of nonlinear finite element contact analysis model; Optimal design of 20MW wind turbine main bearing based on fatigue and stress analysis

2017.09 – 2018.12 **Kunsan National Univrsity**

President-certified excellent talent training class

AWARDS AND HONORS

우수상, 한국청년기업가정신재단(과기정통부 주최) (2024.01.31)

최우수상, 광주과학기술원 (2024.01.17)

우수발표상, 한국풍력 에너지학회 (2023.11)

우수발표상, 한국풍력 에너지학회 (2022. 06)

Jeonbuk Natition University Scholarship (2021.03 –)

Scholarship Award by Naju Nonghyup President (2017.08)

Prime outstanding student scholarship recommended by the president of Kunsan National University (2017.03 – 2018.12)

TEACHING ASISTANT

Jeonbuk Natitional University

Finite Element Analysis of Structure, Mechanical (System) Design 1 & 2

- Guiding students with individual homework problems and helping them understand lecture content. Also prepare a workbook for the exam.

PRESENTATIONS

[5] 임태중, 전형민 Partition of Unity 기반 초탄성 유한요소 개발 및 비선형 모달 분석, *한국전산구조공학회 정기학술대회*, 2023.04.17

[4] **임태중**, 전형민 초탄성재료 해석을 위한 PU 기반 유한요소 개발, *한국전산구조공학회 학술심포지엄*, 춘천 베어스 호텔, 2023.11.17

[3] **임태중**, 전형민 한반도 풍속 변화에 따른 20MW 급 풍력터빈 구동계 최적설계, *한국풍력에너지학회 추계학술대회*, 제주 메종글래드 제주, 2023. 11.14

- [2] **임태중**, 송필무, 이병효, 전형민 한반도 풍속데이터 변화에 따른 대형풍력 메인 베어링의 피로수명 예측에 관한 연구, *한국풍력에너지학회 춘계학술대회*, 제주 라마다프라자호텔, 2023.06.13
- [1] 송필무, 이병효, **임태중**, 전형민 대형 메인베어링의 기계적성질예측에 관한 연구, *한국풍력에너지학회 춘계학술대회*, 제주 라마다프라자호텔, 2022. 06. 21

PROJECTS

- [2] 딥러닝 컴퓨터비전 기반 과산계 선별 시스템, 공공기술기반 시장연계 창업탐색 지원사업, 창업진흥원.과기정통부, 2023-04-01 ~ 2024-02-29, 18,000 천원, 연구 대표자
- [1] 한반도 해역에 적합한 20 MW 급 초대형 해상풍력 발전 시스템 개념설계, 사외공모 기초연구, 한국전력공사, 2021-02-01 ~ 2024-01-31, 120,000 천원(총사업비 600,000 천원), 연구원