Nghia Trong MAI

Trnghia1105@gmail.com

May 11th, 1989

Male

84 Heukseok-Ro, Dongjak-Gu, Seoul, Republic of Korea.

EDUCATION

Course Certificate, Machine Learning
Stanford University
2018 – 2019

Taught by: Andrew Ng, Co-founder, Coursera; Adjunct Professor, Stanford University; formerly head of Baidu AI Group/Google Brai

Ph.D. in Mechanical Engineering
Chung-Ang University, Seoul, Republic of Korea
Sep. 2014 – Feb. 2018

- 3 SCI papers

M.S. in Mechanical Engineering
University of Ulsan, Ulsan, Republic of Korea
Aug. 2012 – Aug. 2014

- 1 SCI paper

Bachelor of Engineering in Material Science
Ho Chi Minh University of Technology, Vietnam
Sep. 2007 – Aug. 2012

- Vietnamese-French Training Program of Excellent Engineers (PFIEV).
- Bachelor in Advance Materials, Atomic Structure and Functional Materials.

AWARDS

Excellent Paper Award
Dec. 2016, Korean Society of Mechanical Engineers (KSME), Republic of Korea.
Title: Mixed-mode Fracture of Grain Boundaries in Graphene

The Young Scientist Scholarship
Feb. 2016 – Feb. 2018
Chung-Ang University, Republic of Korea

The International Student Scholarship
Aug. 2012 – Feb. 2016
University of Ulsan, Republic of Korea

EXPERIENCE

Present Position

Postdoctoral Researcher at Functional Materials Applied Mechanics Lab, School of Mechanical Engineering, Chung-Ang University, Seoul, Republic of Korea.
Mar. 2018 – Present

- 1 accepted SCI paper and 3 submitted SCI papers.

Projects

2018 – present: Development of hierarchical multiscale analysis technique for microstructure and creep evolution of polycrystalline material.

- **Principle investigator (PI)**
- Implementation of the elasto-viscoplasticity equations into peridynamics to study the material behaviors and predict the remaining life time of boiler tube materials.

2016 – present: Development of creep damage and life prediction method of boiler tube materials.

- **Team leader**
- Implementation of the elasto-viscoplasticity theory into user subroutine UMAT for finite element simulations to predict the remaining life time of boiler tube materials.

2012 – 2015: Development of Nanoscale Far-Field Projection Method and Identification of Embrittlement of Grain Boundary.

- **Team member**
- A study on the effect of micro and nano-sized defects in numerical simulation and experimental measurements using the far-field projection.

SKILLS

Programming Language: Intermediate level in Matlab, Fortran, Python and C++
Software: Abaqus, Ansys, Dream.3D
English – Highly proficient in spoken and written English
Korean – Basic communication skills

International Publications

- **Nghia Trong Mai,** Phuoc Quang Phi, Vinh Phu Nguyen and Seung Tae Choi, *Atomic-Scale Mode Separation for Mixed-Mode Intergranular Fracture in Polycrystalline Metals*, Theoretical and Applied Fracture Mechanics, (IF: 2.659, JCR Top 20% in Mechanics). (Published in 2018)

- **Nghia Trong Mai** and Seung Tae Choi, *Atomic-Scale Mutual Integrals for Mixed-Mode Fracture: Abnormal Fracture Toughness of Grain Boundaries in Graphene*, International Journal of Solids and Structures, (IF: 2.760, JCR Top 20% in Mechanics). (Published in 2018)

- Ahmed Tamer Al-Motasem, **Nghia Trong Mai**, Seung Tae Choi and Matthias Posselt, *Atomistic study on mixed-mode fracture mechanism of ferrite iron interacting with coherent copper and nickel nanoclusters*, Journal of Nuclear Materials, (IF: 2.048, JCR Top 10% in Nuclear Science & Technology). (Published in 2016)

- **Nghia Trong Mai**, Seung Tae Choi, Koo-Hyun Chung, Seung Ryoon Lee, Dong Kil Shin and Youn Young Earmme, *Time-dependent adhesion of a polydimethylsiloxane (PDMS) elastomer film to a flat indenter tip characterized using a cohesive-zone law*, Philosophical Magazine Letters, (IF: 0.941, JCR Q2 in Metallurgy & Metallurgical Engineering). (Published in 2014)

- Hung Viet Tran, **Nghia Trong Mai** and Seung Tae Choi, *Molecular dynamics study on hydrogen segregation near symmetric-tilt grain boundaries in body-centered cubic iron under uniaxial strain*, The Physics of Metals and Metallography, (IF: 0.884, SCI). (Accepted for Publication, 2018)

- **Nghia Trong Mai,** Vinh Phu Nguyen and Seung Tae Choi, *Atomic Mixed-Mode Cohesive-Zone Laws of Impurity-Embrittled Grain Boundaries in Polycrystalline Solids via Nanoscale Field Projection Method*, Computer Methods in Applied Mechanics and Engineering, (IF: 4.44, JCR Top 1% in Mathematics, Interdisciplinary Applications). (Submitted in 2018)

- **Nghia Trong MAI**, Li Qui PHAM, Vinh Phu NGUYEN, Seung Tae CHOI, Tae Min JEONG, Kee Bong YOON, Keesam SHIN, and Yinsheng HE, *Heirachical Multiscale Analysis and Creep Cavitation Model-Based Creep Lifetime Prediction of New and Service-Exposed Super304H Austenitic Stainless Steel Boiler Tubes*, Materials Characterization, (IF: 2.89, JCR Top 5% in Materials Science Characterization & Testing). (Submitted in 2018)

- Li Qui PHAM, **Nghia Trong MAI**, Vinh Phu NGUYEN, Seung Tae CHOI, Moon Ki KIM, Keesam SHIN, and Yinsheng HE, *Heirachical Multiscale Analysis and Creep Cavitation Model-Based Creep Lifetime Prediction of New and Service-Exposed 9Cr-1Mo (Grade T91) Steel Boiler Tubes*, Materials Characterization, (IF: 2.89, JCR Top 5% in Materials Science Characterization & Testing). (Submitted in 2018)