



# CURRICULUM VITAE

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## AFFILIATION

- Graduate student –3rd semester at Combined Master-PhD Program (March 2017 - present)
- Computational Reactor Physics and Experiment Laboratory (CORE) Department of Nuclear Engineering
- Ulsan National Institute of Science & Technology (UNIST)-UNIST-gil 50, Ulsan Metropolitan City, Republic of Korea, 44919.

## EDUCATION

- **Bachelor of Engineering**
  - Major: Nuclear engineering
  - University of Dalat, Dalat, Lam Dong, Vietnam (2012.09~2017.01)

## WORK EXPERIENCE

- **Computational Reactor Physics and Experiment Lab** (UNIST, Ulsan Republic of Korea / Prof. Lee Deokjung) (March 2017 – present)
  - Depletion Libraries generation from ENDF B/VII, ENDF VII.1.
  - Validation of Monte Carlo Code MCS
  - Depletion analysis for OPR-1000 reactor core

- Depletion chain optimization for multi-purposes.
- OECD NEA Benchmarks for Shielding Modeling.

- Direct Solver for CRAM linear equations based on Gaussian elimination method.
- Depletion sensitivity analysis based on Generalized Perturbation Theory (under development).
- MOC transient for 2D model in STREAM.

### RESEARCH INTERESTS

- Reactor Criticality Analysis
- Monte Carlo Simulation - Reactor design
- Deterministic code – MOC code for reactor analysis

### CERTIFICATES

- Computer Skills: MATLAB, PYTHON, FORTRAN
- Nuclear-physics Code: MCNP, UNIST Monte Carlo Code MCS, UNIST Deterministic Code STREAM
- **Training (Domestic):** Decontamination and Decommissioning by Argonne National Laboratory held in PNU (July 2017).
- **Training (International):** Research reactor Kyoto University Critical Assembly (KUCA) Experiment, Kyoto University (Osaka, Japan, October, 2017).

## SCI JOURNAL (1 PAPER UNDER REVIEW)

1. **Khang Nguyen Hoang Nhat**, Sooyoung Choi, Matthieu Lemaire and Deokjung Lee\*, “Depletion Chain Optimization of Lattice Code STREAM for PWR Fuel Assembly Analysis,” *Annals of Nuclear Energy*, Under review (2018)

## INTERNATIONAL AND DOMESTIC CONFERENCES

1. **Khang H.N Nguyen**, Sooyoung Choi, Deokjung Lee\*, “Optimization of STREAM Burnup Chain using Depletion Perturbation Theory,” *KNS Spring Meeting*, Jeju, Korea, May 16-18 (2018).

2. **Khang H.N Nguyen**, Sooyoung Choi, Matthieu Lemaire and Deokjung Lee\*, “Endf/B-Vii Depletion Library Compression To Optimize The Computational Efficiency In Stream Code” *PHYSOR2018*, Cancun, Mexico, April 22-26, 2018.

3. **Khang H.N Nguyen**, Jiwon Choe, Sooyoung Choi, Hyunsuk Lee, Wonkyeong Kim, Matthieu Lemaire, Deokjung Lee\*, “Verification of STREAM for OPR-1000 fuel assembly depletion calculations,” *Reactor Physics Asia 2017 (RPHA17)*.

## INTELLECTUAL PROPERTY

### **\* Program registered (8 computer codes)**

1. Deokjung Lee, Peng Zhang Matthieu Lemaire, Jiankai Yu, Sooyoung Choi, Hyunsuk Lee, Chidong Kong, Jiwon Choe, Hanjoo Kim, Bamidele Ebiwonjumi, Wonkyeong Kim, Jinsu Park, Yunki Jo, Kiho Kim, Jaerim Jang, Tung Dong Cao Nguyen, **Khang Hoang Nhat Nguyen**, Woonghee Lee, Tuan Quoc Tran, Yongmin Jo, Sanggeol Jeong, Eun Jeong, Khassenov Azamat, Vutheam Dos, “XSLINK-Fuel Assembly XS Processing,” C-2018-008346, Korea Copyrights Commission (2018).

2. Deokjung Lee, Peng Zhang, Matthieu Lemaire, Jiankai Yu, Sooyoung Choi, Hyunsuk Lee, Chidong Kong, Jiwon Choe, Hanjoo Kim, Bamidele Ebiwonjumi, Wonkyeong Kim, Jinsu Park, Yunki Jo, Kiho Kim, Jaerim Jang, Tung Dong Cao Nguyen, **Khang Hoang Nhat Nguyen**, Woonghee Lee, Tuan Quoc Tran, Yongmin Jo, Sanggeol Jeong, Eun Jeong, Khassenov Azamat, Vutheam Dos, “MCS-Depletion Calculation,” C-2018-008347, Korea Copyrights Commission (2018).

3. Deokjung Lee, Peng Zhang, Matthieu Lemaire, Jiankai Yu, Sooyoung Choi, Hyunsuk Lee, Chidong Kong, Jiwon Choe, Hanjoo Kim, Bamidele Ebiwonjumi, Wonkyeong 6 Kim, Jinsu Park, Yunki Jo, Kiho Kim, Jaerim Jang, Tung Dong Cao Nguyen, **Khang Hoang Nhat Nguyen**, Woonghee Lee, Tuan Quoc Tran, Yongmin Jo, Sanggeol Jeong, Eun Jeong, Khassenov Azamat, Vutheam Dos, “MCS-Multigroup Transport,” C-2018-008345, Korea Copyrights Commission (2018).

4. Deokjung Lee, Peng Zhang, Matthieu Lemaire, Jiankai Yu, Sooyoung Choi, Hyunsuk Lee, Chidong Kong, Jiwon Choe, Hanjoo Kim, Bamidele Ebiwonjumi, Wonkyeong Kim, Jinsu Park, Yunki Jo, Kiho Kim, Jaerim Jang, Tung Dong Cao Nguyen, **Khang Hoang Nhat Nguyen**, Woonghee Lee, Tuan Quoc Tran, Yongmin Jo, Sanggeol Jeong, Eun Jeong, Khassenov Azamat, Vutheam Dos, “MCS-Photon Transport,” C-2018-008350, Korea Copyrights Commission (2018).

5. Deokjung Lee, Peng Zhang, Matthieu Lemaire, Jiankai Yu, Sooyoung Choi, Hyunsuk Lee, Chidong Kong, Jiwon Choe, Hanjoo Kim, Bamidele Ebiwonjumi, Wonkyeong Kim, Jinsu Park, Yunki Jo, Kiho Kim, Jaerim Jang, Tung Dong Cao Nguyen, **Khang Hoang Nhat Nguyen**, Woonghee Lee, Tuan Quoc Tran, Yongmin Jo, Sanggeol Jeong, Eun Jeong, Khassenov Azamat, Vutheam Dos, “MCS-VHTR calculation,” C-2018-008344, Korea Copyrights Commission (2018).

6. Deokjung Lee, Peng Zhang, Matthieu Lemaire, Jiankai Yu, Sooyoung Choi, Hyunsuk Lee, Chidong Kong, Jiwon Choe, Hanjoo Kim, Bamidele Ebiwonjumi, Wonkyeong Kim, Jinsu Park, Yunki Jo, Kiho Kim, Jaerim Jang, Tung Dong Cao Nguyen, **Khang Hoang Nhat Nguyen**, Woonghee Lee, Tuan Quoc Tran, Yongmin Jo, Sanggeol Jeong, Eun Jeong, Khassenov Azamat, Vutheam Dos, “MCS-PWR calculation,” C-2018-008348, Korea Copyrights Commission (2018).

7. Deokjung Lee, Peng Zhang, Matthieu Lemaire, Jiankai Yu, Sooyoung Choi, Hyunsuk Lee, Chidong Kong, Jiwon Choe, Hanjoo Kim, Bamidele Ebiwonjumi, Wonkyeong Kim, Jinsu Park, Yunki Jo, Kiho Kim, Jaerim Jang, Tung Dong Cao Nguyen, **Khang Hoang Nhat Nguyen**, Woonghee Lee, Tuan Quoc Tran, Yongmin Jo, Sanggeol Jeong, Eun Jeong, Khassenov Azamat, Vutheam Dos, “MCS-Time-dependent Simulation,” C-2018-008349, Korea Copyrights Commission (2018).

8. Deokjung Lee, Peng Zhang, Matthieu Lemaire, Jiankai Yu, Sooyoung Choi, Hyunsuk Lee, Chidong Kong, Jiwon Choe, Hanjoo Kim, Bamidele Ebiwonjumi, Wonkyeong Kim, Jinsu Park, Yunki Jo, Kiho Kim, Jaerim Jang, Tung Dong Cao Nguyen, **Khang Hoang Nhat Nguyen**, Woonghee Lee, Tuan Quoc Tran, Yongmin Jo, Sanggeol Jeong, Eun Jeong, Khassenov Azamat, Vutheam Dos, “U-SNF,” C-2018-008343, Korea Copyrights Commission (2018).