

GWENDOLYN J. CHEE

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EDUCATION

PhD	University of Illinois at Urbana-Champaign Nuclear, Plasma and Radiological Engineering Research focus: Predictive Analytics to Optimize Nuclear Reactor Designs.	2019 - Present
MS	University of Illinois at Urbana-Champaign Nuclear, Plasma and Radiological Engineering <i>Thesis: Sensitivity Analysis of Nuclear Fuel Cycle Transitions</i>	2017 - 2019
BASc	Queen's University at Kingston, Canada Engineering Physics <i>Thesis: Designing a System to Gaseous Hydrogen Charge Zirconium Alloys</i>	2013 - 2017

RESEARCH EXPERIENCE

Argonne National Laboratory May 2019 - Aug 2019
Research Aide Lemont, IL
Advisor: Dr. Bo Feng
Coupled Dymond with Dakota to perform sensitivity analysis on nuclear fuel cycle transitions.

University of Illinois at Urbana-Champaign 2017 - Present
Research Assistant, Advanced Reactors and Fuel Cycles Urbana, IL
Advisor: Professor Kathryn D. Huff

Queen's University at Kingston 2016 - 2017
Research Assistant, Nuclear Materials Research Group Kingston, ON
Advisor: Professor Mark Daymond
Designed a Sieverts Apparatus to gaseously charge hydrogen gas into zirconium alloys to mimic hydrogen embrittlement of zirconium alloys used in nuclear reactors.

National University of Singapore May 2016 - Aug 2016
Research Assistant, Centre for Advanced 2D Materials Singapore
Advisor: Professor Jens Martin
Developed a MATLAB script to study the effect of Berry Curvature on electrons in graphene and the effects of changing the geometry of graphene devices on their electric fields.

Nanyang Technological University May 2015 - Aug 2015
Research Assistant, Polymeric Biomaterials Group Singapore
Conducted experiments to characterize nanoparticle enhanced polymer materials to determine the material combination that best increases the mechanical properties of biodegradable heart stents.

ENGINEERING EXPERIENCE

4th Year Engineering Physics Capstone Project 2016
Self Sorting Recycling Bin Kingston, ON
Developed a neural network to sort between recycling and garbage through image recognition and sound profiling. Led the mechanical team to prototype the physical design which used feedback from the neural network to physically separate the items.

TEACHING EXPERIENCE

Queen's University at Kingston

2015 - 2017

Teaching Assistant, Physics Department

Kingston, ON

Conducted weekly help sessions for students who required extra guidance in first year physics courses (PHYS 104/106).

SERVICE

U.S. Women in Nuclear

2018 - Present

President

Urbana, IL

Leads the UIUC WiN chapter to uplift the mission of professional development, educational outreach, and a sense of community amongst our members.

WiN CV: <https://github.com/gwenchee/wincv>

CONFERENCE PRESENTATIONS

ANS Winter Meeting

Nov 2018

Presentation

Orlando, FL

G.J. Chee, G. Park and K.D. Huff. "Validation of Spent Nuclear Fuel Output by CYCLUS, a Fuel Cycle Simulator Code".

ANS Student Conference

Mar 2018

Presentation

Gainesville, FL

G.J. Chee, J.W. Bae and K.D. Huff. "Numerical Experiments for testing Demand-Driven Deployment Algorithms".

TECHNICAL REPORTS

Advanced Reactors and Fuel Cycles Report Series

Apr 2018

Report UIUC-ARFC-2018-01

Urbana, IL

G.J. Chee, J.W. Bae and K.D. Huff. "Numerical Experiments for testing Demand-Driven Deployment Algorithms".

SELECTED AWARDS AND RECOGNITION

Queens University Deans Scholar

2014-2017

TECHNICAL STRENGTHS AND OTHER RELEVANT SKILLS

Computer Languages

Python, C++, MATLAB, LabVIEW, Solid Edge, HTML

Protocols & APIs

XML

Tools

L^AT_EX, Mathematica, shell, vim, bash, atom, Jupyter, MS Word, MS Excel

Databases

MySQL

Nuclear Software

CYCLUS, PyNE

Languages

English, Mandarin