Chi-Kin Tam | Curriculum Vitae

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Education

Western Michigan University
Ph.D in Nuclear physics
2021 - now
Michigan, US

Western Michigan University
M.S. en route to PhD (GPA : 4.0)
2019 - 2021
Michigan, US

The University of Hong Kong
B.S. in Science (Physics)
2015 - 2019
Hong Kong

Technical Skills

- **Nuclear-Physics**
  - ROOT
  - Geant4
- **Machine Learning & Data Science**
  - *PyTorch* and *TensorFlow* for time-series prediction
  - *PyMC* for inference and MCMC
- **Software-Development**
  - containerize applications with *Docker*, singularity for development in *HPC*
  - CI-CD with *GitHub-Actions*
  - code testing with *doctest*, *pytest*
  - code coverage with *Codecov*
- **Programming Languages**
  - Proficient in C++, Python, BASH
  - Exploring Rust

Publications

C.K. Tam, P. Nzabahimana, Z. Chajecki and P. Danielewicz [In preparation] — **2024**
Extracting source function from two-particle correlation function through entropy-regularized Richardson-Lucy algorithm

C.K. Tam et al. [In preparation] — **2024**
Constraining the in-medium cross section in transport model simulations with single particle spectra for light clusters in Ca + Ni collisions at 56, 140 MeV/A

DRHBc Mass Table Collaboration — **2022**
Nuclear mass table in deformed relativistic Hartree-Bogoliubov theory in continuum, I: Even-even nuclei

DRHBc Mass Table Collaboration — **2021**
Possible bound nuclei beyond the two-neutron drip line in the $50 \leq Z \leq 70$ region

DRHBc Mass Table Collaboration   **2020**
- *Deformed relativistic Hartree-Bogoliubov theory in continuum with a point-coupling functional: Examples of even-even Nd isotopes*

Presentations

17th Workshop on Particle Correlations and Femtoscopy   **Nov 6, 2024**
- *Extracting source function from two-particle correlation function through entropy-regularized Richardson-Lucy algorithm*   Toulouse, France

Dense Nuclear Matter Equation of State from Theory and Experiments   **29 Oct, 2024**
- *Constraining the in-medium cross section in transport simulations with Ca+Ni collisions at 140 MeV/nucleon*   IRL-NPA FRIB, US

Equation of State of Dense Nuclear Matter at RIBF and FRIB   **24 May, 2023**
- *Effect of in-medium crosssection on particle production in low energy nuclear collisions*   RIKEN, Japan

15th Workshop on Particle Correlations and Femtoscopy   **20 July, 2022**
- *Probing the equation of state of nuclear matter with two-particle correlation functions*   FRIB, US

Selected Projects

pulse current (Time-series) prediction of Z-machine at SANDIA   link
- *Prediction of current profile and the underlying machine configuration with an attention-based neural network in Pytorch*

Awards

Leo R. Parpart Physics Scholarship   **2023,2024**
- *Teaching or research position in the physical sciences*   WMU, US

George and Jean Bradley Graduate Physics Scholarship   **2020**
- *Exceptional overall performance with particular emphasis on excellence in research*   WMU, US

Luk Kam-Biu Prize in Experimental Physics   **2019**
- *Best performance in "PHYS4999 Physics Project" in the area of experimental physics or astrophysics.*   HKU

Teaching Experience

PHYS2080-University Physics II Laboratory   **2019 - 2021**
- *Instruct undergraduates on electronics experiment and data analysis with Python*   WMU