Yi-Hsuan Lin, PhD

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HIGHLIGHTS

- **10+** years of research experience in theoretical and computational biophysics and bioinformatics
- **14** scientific papers in peer-reviewed journals cumulatively cited $\sim$**700** citation.
- **10** invited and colloquia in world-leading academic institutes and conferences
- Academic website: individual.utoronto.ca/yihsuanlin
- GitHub repositories: github.com/laphysique

EDUCATION

Ph.D., Physics, The Ohio State University, Ohio, USA 2015
B.Sc., Physics, University of Illinois at Urbana-Champaign, Illinois, USA (GPA 3.74) 2009

Certificates:

Financial Engineering and Risk Management I & II (Columbia Univ) 2020
Introduction to Deep Learning with Honors (Coursera.org/HSE Univ) 2020
Bayesian Methods for Machine Learning with Honors (Coursera.org/HSE Univ) 2020
Practical Reinforcement Learning with Honors (Coursera.org/HSE Univ) 2020

EXPERIENCE

Molecular Modeling Lead, HTuO Biosciences Jan 2021 – present

- Developing molecular dynamics simulation force fields
- Incorporating machine learning to optimizing simulation performance
- Implementing mathematical physics to validate stability of simulation methods

Postdoctoral Fellow, University of Toronto / Hospital for Sick Children Jul 2015 – Jul 2021

- Published **12** peer-reviewed papers in theoretical/computational physics, chemistry, and biology
- Supervised and mentored over **4** junior scientists (graduate students and trainees)
- Project: *Theories for sequence-dependent phase behaviors of biomolecular condensates*

Graduate Research Associate, The Ohio State University Jul 2012 – May 2015

- Published **2** peer-reviewed papers in theoretical physics and bioinformatics
- Established theoretical framework for online RNA-protein binding predictor **RBPBind**
- Project: *Biophysics of interactions between proteins and nucleic acids*

SKILLS

- **Math/Stat:** Numerical Analysis, Bayesian Statistics, Multivariate Linear/Nonlinear Optimization, Linear Algebra, Multivariable Calculus, Stochastic Calculus, Partial Differential Equation, Complex Analysis
- **Modelings:** Theoretical Physics, Molecular Biophysics, Bioinformatics, Monte Carlo Simulation, Molecular Dynamics Simulation, Data-Driven Statistical Modeling, Machine Learning, Deep Learning, Reinforcement Learning, Data Visualization, Principal Component Analysis, Time Series Forecasting
- **Programming:** Python, Matlab/Octave, C/C++, Mathematica, Julia, SQL
- **Tools:** Numpy, Scipy, Pandas, Matplotlib, Scikit-Learn, PyMC, TensorFlow, PyTorch, SQLite, MPI, Git

HONORS AND AWARDS

Postdoctoral Award, Intrinsically Disordered Protein Subgroup, Biophysical Society (USA) 2019
Scholarship for Study Abroad, Taiwan Ministry of Education 2007–2013
Gold Medal, The 36th International Physics Olympiad 2005