Yu-Tsung Tai (戴淯琮)
LinkedIn: https://www.linkedin.com/in/yu-tsung-tai-9aa30551
GitHub: https://github.com/yuttai **HackerRank:** https://www.hackerrank.com/yuttai

EDUCATION

Indiana University Bloomington (IUB) (GPA: 3.802/4.0)   **2010 – Present**

- Ph.D. double-majoring in Mathematics and Computer Science   April 2019
- Master of Science in Computer Science   May 2016
- Master of Arts in Mathematics   December 2012

National Taiwan University (NTU) (GPA: 3.68/4.0)   **2002 – 2006**

- Bachelor of Science in Mathematics (Rank: 4/48)   June 2006

PUBLICATIONS

[1] Y.-T. Tai, A. J. Hanson, G. Ortiz, and A. Sabry, "Quantum interval-valued probability: Contextuality and the Born rule," *Phys. Rev. A,* vol. 97, no. 5, p. 052121, May 2018.

[2] A. J. Hanson, G. Ortiz, A. Sabry, and Y.-T. Tai, "Discrete Quantum Theories," *J. Phys. A: Math. Theor.,* vol. 47, p. 115305, 2014.

[3] A. J. Hanson, G. Ortiz, A. Sabry, and Y.-T. Tai, "Geometry of Discrete Quantum Computing," *J. Phys. A: Math. Theor.,* vol. 46, p. 185301, 2013. Erratum "Corrigendum: Geometry of Discrete Quantum Computing," *J. Phys. A: Math. Theor.,* vol. 49, p. 039501, 12 2016.

CONFERENCES AND SEMINARS

Quantum Interval-Valued Probability: Contextuality and the Born Rule

- Talk in Interdisciplinary Logic Seminar, IUB   August 2017
- Poster Session in Contextuality: Conceptual Issues, Operational Signatures, and Applications, Perimeter Institute for Theoretical Physics   July 2017

Introduction to Discrete Quantum Theories and Computing

- Talk in Theory Seminar, Department of Computer Science, IUB   March 2017

Real Computation

- Talk in Theory Reading Group, Department of Computer Science, IUB   Feb 2016

TEACHING EXPERIENCE

Taught with Full Responsibility

- MATH-T101 Mathematics for Elementary Teachers I, IUB   Fall 2017
- MATH-M216 Calculus II (Online), Indiana University East   Summer 2012

Designed and Edited Online Courses, Data Science Program, IUB

- Introduction to C++ (Designer)   Summer 2016 – Fall 2018
- Basic Linear Algebra and Calculus with Python (Designer)   Summer 2017 – Spring 2018
- Machine Learning with Python (Editor)   Fall 2016 – Spring 2018

Taught Recitation Sessions, IUB

- MATH-M211 Calculus I   Fall 2016
- MATH-M212 Calculus II   Summer 2014, Fall 2014, Fall 2015
- CSCI-B501 Theory of Computing   Spring 2015

Assisted and Graded, IUB

- [CSCI-B609](#) Topics in Algorithms and Computing Theory (AlphaGo)   Spring 2018
- INFO-I231 Introduction to the Mathematics of Cybersecurity   Spring 2017
- CSCI-B503 Algorithms Design and Analysis   Spring 2016
- MATH-M119 Brief Survey of Calculus I   Fall 2013, Spring 2014
- MATH-M303 Linear Algebra for Undergraduates   Spring 2013
- MATH-M118 Finite Mathematics   Fall 2010, Fall 2012
- MATH-M301 Linear Algebra and Applications   Spring 2012
- MATH-M365 Introduction to Probability and Statistics   Fall 2011
- MATH-M120 Brief Survey of Calculus II   Spring 2011
- MATH-S312 Honors Course in Calculus IV   Spring 2011

Taught Mini-Courses in NTU Math Camps

- There is No Formula for General Quintic Equations in Terms of Radicals   2005
- Game Theory   2004

RESEARCH APPOINTMENTS

- Research Assistant, Department of Computer Science, IUB   July 2018 – Present
- Research Assistant, Kelley School of Business, IUB   May 2016
- Research Assistant, Department of Computer Science, IUB   Summer 2015
- Research Associate, Department of Computer Science, IUB   Summer 2013
- Research Assistant, Department of Economics, NTU   January 2008 – July 2009

TECHNICAL SKILLS

- Programming Languages:

  Python (with NumPy, matplotlib, SymPy, pandas, and TensorFlow), Mathematica, Visual Basic for Application, HTML, C/C++, LaTeX, MATLAB, Isabelle, Agda, Scheme, SQL

- Platforms:

  Microsoft Windows (7, 10, 8, XP, 98, 95, 3.1), Cygwin, Android, Red Hat Linux, MS-DOS 6.22

- Office Software:

  Microsoft Outlook, Microsoft PowerPoint, Microsoft Excel, Microsoft Word,

  Adobe Acrobat, Adobe Dreamweaver CC, Adobe Captivate 9,

  LyX, Google Docs, Google Sheets, emacs, Overleaf, Foxit Reader

- Version Control and Project Management:

  Git/GitHub, Apache Subversion, Agile, Trello, Slack

- Integrated Development Environments:

  Eclipse, PyCharm, Visual Studio 2013

- Fluency of Languages:

  Chinese (Native), English (Fluent), Japanese (Beginning), French Reading (Beginning)

AWARDS AND HONORS

- Studying Abroad Scholarship, Ministry of Education, Taiwan, R.O.C.   2010 – 2012
- Presidential Award, NTU   Spring 2005, Fall 2005, Spring 2006
- Distinction Award, 1st Taiwan Mathematical Contest of Modeling for Undergraduate Students   September 2003

CLUB ACTIVITIES

- Account Administrator of ptt2.cc   2006 – 2009
- NTU Go Club   2002 – 2006