WAH LOON KENG

An undergraduate theorist who loves solving real world problems in math, computer science and physics.

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EDUCATION

Lafayette College, Pennsylvania expected May 2016
B.S. in Mathematics, Minor in Computer Science Overall GPA: 3.86

AWARDS

Lafayette College Benjamin F. Barge Mathematical Prize 2014
Second, Third - *Lafayette College Barge Math Competitions* 2013 - 2014
Second - *LVAIC Regional College Math Competition* 2012
Dean's List - *Lafayette College* 2012 - 2014
Gold, Top 5 team - *National Physics Competition, Malaysia* 2010
Gold - *ICAS International Math Competitions, University of New South Wales* 2009

RESEARCHES

Lafayette College EXCEL Program Summer 2015
Computational Geometry with Dr. Ge Xia.

· The Vertex Cover problem. *In progress.*

Perimeter Institute for Theoretical Physics Summer Student Summer 2014
Quantum Foundations with Dr. Matthew Pusey and Dr. Tobiaz Fritz.

· Correlations in the C3 causal structure. Used Quantum Computation and Information theory to study the foundations and differences between quantum and classical physics.
Unpublished: `Correlations in C3` and `BlockCode and Bundled Form, W.L. Keng`.

Lafayette College EXCEL Program Summer & Fall 2013
Computational Geometry with Dr. Ge Xia.

· Delaunay Triangulation, graphs, spanner problems. Proved that the Yao-5 graph, useful in wireless networks, is a spanner, i.e. short distance always exists.
Published: `New and Improved Spanning Ratios for Yao Graphs, Barba et.al.`
GitHub: `Yao-Graph-Research`.

WORK EXPERIENCE

Email Researcher and Coder, Fulcrum Tech, Inc 2014 - Present
Graphic Designer and Proctor, Lafayette College Foreign Languages Dept. 2014 - Present
Physics Student Grader, Lafayette College 2012 - Present
Physics Supplemental Instructor, Lafayette College Spring 2014

LANGUAGES

Computer Proficient: `Java, C++, HTML/CSS/Sass, JS, Mathematica, LaTeX`
Elementary: `R, Python, Matlab`
Spoken Fluent: English, Chinese, Malay, Cantonese, Hokkien

COURSES

Freshman
MATH 263 Calculus III (A)
MATH 264 Differential Equations (A)
MATH 312 Partial Differential Equations (A)
PHYS 151 Accelerated Physics (A)
PHYS 218 Oscillatory & Wave Phenomena (A)

Sophomore
MATH 290 Transition of Theoretical Math (A)
MATH 300 Vector Spaces (A)
MATH 356 Real Analysis I (B+)
PHYS 342 Electromagnetic Fields (A)
PHYS 351 Quantum Theory (A)
PHYS 327 Advanced Classical Mechanics (A)
PHYS 338 Advanced Physics Lab (A)

Junior
CS 150 Data Structures and Algorithms (A)
CS 205 Software Engineering (A)
CS 303 Theory of Computation (A)
MATH 351 Abstract Algebra (A-)
MATH 358 Topology (B)
MATH 391 Adv. Multivariable Calculus (A)
MATH 335 Probability (A)

Anticipated (Fall 2015)
CS 202 Advanced Algorithms
CS 420 Artificial Intelligence
MATH 375 Applied Fixed and Mixed Effect Models