EDWARD KIM

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EDUCATION

University of North Carolina at Chapel Hill **2019 -**
Ph.D Candidate

University of California at Berkeley **2013 - 2017**
B.A in Computer Science
Honors B.A in Pure Mathematics

RELEVANT COURSE WORK

Mathematics: Recursion Theory, Model Theory, Graduate Algebra, Introduction to Smooth Manifolds, Graduate Real Analysis, Functional and Fourier Analysis, Topological Data Analysis, Lie Algebras and their Representations, A First Course in Homological Algebra, Elementary Algebraic Geometry, Mathematical Logic, Numerical Analysis, Complex Analysis

Computer Science: Quantum Algorithms and Computation, Computational Complexity Theory, Theory of Computation, Algorithms in Computational Biology, Structural Complexity Theory, Boolean Function Complexity

RESEARCH INTERESTS

Quantum Computation Theory: Quantum Complexity Theory, Quantum Information Theory, Theoretical Quantum Computation Models

Computational Complexity Theory Geometric Complexity Theory, Interactive Protocols and Probablisitically-checkable Proofs

RESEARCH EXPERIENCE

University of North Carolina at Chapel Hill **2019 -**
Research Assistant- Providing research assistance to projects pertaining to the formal verification of nonlinear hybrid systems. Contributing to the development of HyLAA, a formal verification tool computing simulation-equivalent reachable sets for linear dynamical systems. Supervised by Parasara Sridhar Duggirala.

University of South Carolina **2016**
Research Assistant- Garnered experience with proactive remote communication to publish some basic results concerning fundamental inequalities. This paper is joint-work with Professor Wei-Kai Lai.
Paper: Some inequalities involving geometric and harmonic means

TEACHING AND VOLUNTEER EXPERIENCE

Calculus Tutor **2018**
Tutored Calculus to students at South Carolina State University. Stressed geometric intuition and visual approaches rather than rote memorization of formulae and concepts.

Programming Languages Tutor **2018**
Provided discussions for South Carolina State University Computer Science students attending summer courses. Discussions pertained to Python, Java, and C.

EXTRACURRICULAR ACTIVITIES

Personal Lecture Notes
Created extensive lecture Notes for personal edification. Covers wide va- riety of topics from algebraic topology to recursion theory.
`https://github.com/ekim1919/Notes`

Expository Notes and Presentation on Hopkins-Levitzski Theorem
Wrote an expository paper on the Hopkins-Levitzski Theorem as a primer on Artinian Rings. Presented it to the Elementary Algebraic Geometry class (Math 143).
`https://github.com/KitToast/Research/blob/master/143/paper.pdf`