Daniel M. Kim

Updated May 14, 2021

Email: kdani90@vt.edu
Phone: (703) 870-8931
GitHub: //dan-min-kim
LinkedIn: /in/dminkim/
Office: McBryde Hall 475
Citizenship: U.S.

Research interests

Topological dynamics, complex dynamics, discrete conformal geometry, conformal tilings

Education

Virginia Polytechnic Inst. & State Univeristy Blacksburg, VA
PhD in Mathematics May 2021
Dissertation Topic: "Core Entropy of Finite Subdivision Rules"
Advisor: William J. Floyd

Virginia Polytechnic Inst. & State Univeristy Blacksburg, VA
MS in Mathematics Fall 2016
Thesis Topic: "On Nearly Euclidean Thurston Maps and the Halfspace Theorem"
Advisor: William J. Floyd

Virginia Polytechnic Inst. & State Univeristy Blacksburg, VA
BS in Physics, BS in Mathematics Spring 2014

Publications

Core Entropy of Finite Subdivision Rules
Daniel Kim
Dissertation, 2021

Realizing Polynomial Portraits
William Floyd, Daniel Kim, Sarah Koch, Walter Parry, Edgar Saenz.
In preparation, 2021.

On Nearly Euclidean Thurston Maps and the Halfspace Theorem
Daniel Kim.
Masters thesis, 2016.

Research experience

Virginia Tech Department of Mathematics
Advisor: William J. Floyd (Virginia Tech) January 2017 – May 2021
Analyzed topological entropy of a subdivision map's restriction to the 1-skeleton of its model subdivision complex. Findings available here.

Virginia Tech Department of Mathematics
Advisor: William J. Floyd (Virginia Tech) August 2014 – December 2016
Extended a theorem which facilitates the determination of obstructions for Nearly Euclidean Thurston maps.

REU: Center for High Technology Materials at Univ. of New Mexico
Advisor: Luke Lester (UNM), Sayan Mukherjee (UNM) Summer 2012
Material characterization by Hall measurements of novel semi-conducting wafers of gallium antimonide grown on semi-insulating gallium arsenide.

Virginia Tech Department of Physics
Advisor: Michel Pleimling Fall 2011
Monte carlo simulation of 2D Ising model.

Teaching experience

Graduate Teaching Assistant, Virginia Tech Spring 2015 – Fall 2019
Instructor of Record:
MATH 2204: Intro Multivariable Calculus (Fall 2019, Spring 2019, Summer 2018, Spring 2018)
MATH 1226: Calculus II (Fall 2018, Fall 2017, Spring 2017, Spring 2016)
MATH 1225: Calculus I (Summer 2017, Fall 2016, Fall 2015)
MATH 1014: Precalculus (Summer 2019)
MATH 1526: Elementary Calculus with Matrices (Summer 2015)
MATH 1026: Elementary Calculus II (Spring 2015)
MATH 1025: Elementary Calculus I (Summer 2016)

Undergraduate Teaching Assistant, Virginia Tech Fall 2013
Physics Lab Teaching Assistant
PHYS 2305: Foundations of Physics I Lab

Tutor, Math Emporium, Virginia Tech (Fall 2011 – Fall 2012)
Floor tutoring

Industry experience

Ozmo, Content Development Blacksburg, VA
Content developer Summer 2020 – Spring 2021
Wrote scripts in Ozmo's XML framework for mobile device emulation and device activity simulation.

Talks

Title of your most recent presentation Month Year
Name of conference, workshop, seminar, venue, etc., or a description

Title of your second most recent presentation Month Year
Name of conference, workshop, seminar, venue, etc., or a description

Skills

Programming
Proficient in: programming language 1, programming language 2.
Familiar with: programming language 3, programming language 4.

Languages

Language 1 (fluent), Language 2 (advanced)

Service and outreach

Title of organization you were in Month Year – Month Year
Description of your responsibilities. Integer pretium semper justo. Proin risus. Aliquam volutpat est vel massa.

Professional memberships

Name of professional society. Month Year – Present
Some things you did or conferences you attended. Aliquam volutpat est vel massa. Sed dolor lacus, imperdiet non, ornare non, commodo eu, neque.

Other interests

Some of your hobbies etc.