Jongwon Kim

276 Hamilton Street, APT 2H
New Brunswick, NJ 08901
email: sikjw13059@gmail.com
webpage: http://reu.dimacs.rutgers.edu/∼jkim/

Education

Rutgers University, New Brunswick
B.S. in Mathematics, Minor in Computer Science *May 2017*
-*Honors in mathematics* with GPA: 3.94

Interests

Algebraic combinatorics, Representation theory, Finite group theory, Partition identities

Relevant Coursework

Real analysis I,II, Abstract algebra I,II, Topology, Complex variables, *Undergraduate*
Probability, Numerical analysis, History of mathematics, Abstract linear algebra,
Data structure, Computer architecture, Databases

Measure theory and integration, Algebraic geometry, *Graduate*
Vertex operator algebra theory

Measure theory and integration II, Algebraic geometry II, Algebra II, *Graduate, Spring 2017*
Representation theory

Independent Studies

Directed Reading on Representation theory with graduate student Alejandro Ginory *Summer 2015*
Text: *Linear Representations of Finite Groups* by J.-P. Serre

Independent Study on Finite group theory with Professor Richard Lyons *Spring 2016*
Text: *Finite Group Theory* by I.M. Isaacs

Independent Study on Symmetric functions with Professor Siddhartha Sahi *Spring 2016*
Text: *Symmetric Functions and Hall Polynomials* by I.G. Macdonald

Research Experience

Experimental Math: Haar integration *Aresty Research Program, Rutgers, 2015-2016*
Advisor: Professor Siddhartha Sahi, Rutgers University

Partition Identities *DIMACS/Math REU, Summer 2016*
Advisor: Professor James Lepowsky, Rutgers University
Matthew Russell, recent Ph.D., Rutgers University

"Motivated Proofs" via Affine Weyl Group *DIMACS/Math REU, Summer 2016*
Advisor: Professor James Lepowsky, Rutgers University
Bud Coulson, recent Ph.D., Rutgers University

Publications

Preprints and some notes are posted on my website.

Preprints:

A. Ginory, J. Kim. *Weingarten calculus optimization and the* `IntHaar` *package.* 21 pp. arXiv:1612.0764

In preparation:

T. Coelho, J. Kim, M. Russell. *A complete generalization of Göllnitz's "Big Theorem"*. 17 pp.

B. Coulson, J. Kim. *A motivated proof of an overpartition analogue of the Rogers-Ramanujan-Gordon identities*. 14 pp.

A. Ginory, J. Kim. *Coset and cycle type decomposition of list stabilizers*. 10pp.

Professional Activities

Poster Presentations

Aresty Research Symposium, Rutgers University — *Apr 2016*
Title: *Integration with respect to Haar measure*

Undergraduate Math Symposium, University of Illinois at Chicago — *Oct 2016*
Title: *A complete generalization of Göllnitz's "Big Theorem"*

Talks

Directed Reading Program, Rutgers University — *Sep 2015*
Title: *Computing character tables of the symmetric groups with Young's lattice*

Class presentation in Abstract Algebra I, Rutgers University — *Nov 2015*
Title: *Compact groups and Haar measure*

Class presentation in Abstract Algebra II, Rutgers University — *Apr 2016*
Title: *Notes on Algebras: Wedderburn's theorem and group algebras*

Graduate Student Vertex Operator Algebra Seminar, Rutgers University — *Nov 2016*
Title: *Representation theory of vertex algebras and modules*

Teaching Experiences & Activities

Instructor at Honors Review Learning Center, East Brunswick, NJ — *Sep 2014 - Jun 2015*
Peer Mentor for calculus classes at Rutgers University — *Sep 2015 - May 2016*
Grader for Math history and Abstract linear algebra at Rutgers University — *Jan 2016-*
Treasurer of the Rutgers Undergraduate Mathematics Association (**RUMA**) — *Sep 2015-*

Honors & Awards

Scarlet Scholarship, Rutgers University — *2013 - 2017*
Academic Excellence Award, Rutgers University — *2014 - 2015*
Alan Marc Schreiber Memorial Scholarship, Rutgers University — *2015 - 2017*
Weil Scholarship, Math Department, Rutgers University — *2015 - 2017*
John Bogart Scholarship, Math Department, Rutgers University — *2016*

Skills

Experienced with `C`, `MAPLE`, `Mathematica`, LaTeX
Basic knowledge in `JAVA`, `HTML`, `SQL`

Last modified on 12/27/2016