Oscar E. González

Personal Information	Department of Mathematics University of Illinois at Urbana-Champaign Urbana, IL 61801	Email: oscareg2@illinois.edu Office: 110 Altgeld Hall Website: math.illinois.edu/~oscareg2

Education

University of Illinois at Urbana-Champaign — May 2023 (expected)
Ph.D. in Mathematics

University of Illinois at Urbana-Champaign — May 2019
M.S. in Mathematics

University of Puerto Rico, Río Piedras Campus — August 2017
Bachelor of Science in Mathematics

Awards, Scholarhips & Fellowships

Sloan Scholar — Awarded in 2017-18
Alfred P. Sloan Foundation's Minority Ph.D. (MPHD) Program

GAANN Fellowship — August 2017 - July 2018
Graduate Assistance in Areas of National Need, U.S. Department of Education

Mellon-Mays Fellow — May 2015 - May 2017
Mellon-Mays Undergraduate Fellowship Program

Claude Shannon Scholarship — August 2014- May 2017
Scholarship Fund for Excellence in Computer Science and Mathematics (NSF-DUE 1356474), University of Puerto Rico, Río Piedras Campus

CURM Mini-Grant Award — August 2014 - December 2014
Center for Undergraduate Research in Mathematics, Bringham Young University

Publications

An observation of Rankin on Hankel determinants
Authors: Oscar E. González
Integers, **19**, #A31, 2019.
http://www.integers-ejcnt.org/t31/t31.pdf

An improvement to Chevalley's theorem with restricted variables
Authors: Francis N. Castro, Oscar E. González and Luis A. Medina
Finite Fields and Their Applications, **58**, 216–221, 2019.
https://doi.org/10.1016/j.ffa.2019.04.005

Diophantine equations with binomial coefficients and perturbations of symmetric Boolean functions
Authors: Francis N. Castro, Oscar E. González and Luis A. Medina.
IEEE Transactions on Information Theory, **64**(2), 1347–1360, 2018.
https://doi.org/10.1109/TIT.2017.2750674

On smoothing singularities of elliptic orbital integrals on GL(n) and Beyond Endoscopy
Authors: Oscar E. González, Chung Hung Kwan, Steven J. Miller, Roger Van Peski and Tian An Wong. *Journal of Number Theory*, **183**, 407–427, 2018.
https://doi.org/10.1016/j.jnt.2017.08.004

Generalized exponential sums and the power of computers
Authors: Francis N. Castro, Oscar E. González and Luis A. Medina.
Involve, a Journal of Mathematics, **11**(1), 127–142, 2018.
https://doi.org/10.2140/involve.2018.11.127

New families of balanced symmetric functions and a generalization of Cusick, Li and Stănică's conjecture
Authors: Rafael A. Arce-Nazario, Francis N. Castro, Oscar E. González, Luis A. Medina and Ivelisse M. Rubio.
Designs, Codes and Cryptography, **86**(3), 693–701, 2018.
https://doi.org/10.1007/s10623-017-0351-7

On the tree cover number of a graph
Authors: Chassidy Bozeman, Minerva Catral, Brendan Cook, Oscar E. González and Carolyn Reinhart.
Involve, a Journal of Mathematics, **10**(5), 767–779, 2017.
https://doi.org/10.2140/involve.2017.10.767

The p-adic valuation of Eulerian numbers: trees and Bernoulli numbers
Authors: Francis N. Castro, Oscar E. González and Luis A. Medina.
Experimental Mathematics, **24**(2), 183–195, 2015.
https://doi.org/10.1080/10586458.2014.981899

A divisibility approach to the open boundary cases of Cusick-Li-Stănică's conjecture
Authors: Francis N. Castro, Oscar E. González and Luis A. Medina.
Cryptography and Communications, **7**(4), 379–402, 2015.
https://doi.org/10.1007/s12095-015-0124-y

Selected Talks & Presentations	**An observation of Rankin on Hankel determinants** *Analytic and Combinatorial Number Theory: The Legacy of Ramanujan* Urbana, IL	June 2019

An observation of Rankin on Hankel determinants
Analytic and Combinatorial Number Theory: The Legacy of Ramanujan   June 2019
Urbana, IL

An improvement to Chevalley's theorem with restricted variables
Inter-University Mathematical Sciences Research Seminar (SIDIM)   March 2019
Humacao, PR

The distribution of elementary symmetric polynomials over finite fields
Graduate student number theory seminar   October 2018
University of Illinois at Urbana-Champaign, Urbana, IL

Zeros of Eisenstein series
Graduate student number theory seminar   December 2017
University of Illinois at Urbana-Champaign, Urbana, IL

The Langlands program: Beyond Endoscopy
Young Mathematicians Conference   August 2016
Ohio State University, Colombus, OH

On a generalization of Cusick-Li-Stănică's conjecture
Inter-University Mathematical Sciences Research Seminar (SIDIM)   March 2016
Humacao, PR

Zeros of modular forms and nearly holomorphic modular forms
Mellon-Mays Undergraduate Fellowship Regional Conference   November 2015
Rice University, Houston, TX

Recent results on Cusick-Li-Stănică's conjecture
Poster presentation at the Geometry Labs United Conference   August 2015
University of Illinois at Urbana-Champaign, Urbana, IL

Exact divisibility of exponential sums associated to symmetric Boolean functions
Poster presentation at the Latinos in the Mathematical Sciences Conference   April 2015
Los Angeles, California

The p-adic valuation of Eulerian numbers: trees and Bernoulli numbers
Undergraduate Mathematics Research Conference   February 2015
Mayagüez, PR

Zeros of Maass forms of weight k
Young Mathematicians Conference   August 2014
Ohio State University, Colombus, OH

A case of a conjecture of Cusick-Li-Stănică
Inter-University Mathematical Sciences Research Seminar (SIDIM)   March 2014
Ponce, PR

Schools, Selected Conferences & Workshops

Analytic and Combinatorial Number Theory: The Legacy of Ramanujan
Urbana, IL   June 2019
In honor of Bruce C. Berndt's 80th birthday

NSF-CBMS Conference: L-functions and Multiplicative Number Theory
Oxford, MS   May 2019

Inter-University Mathematical Sciences Research Seminar (SIDIM)
Humacao, PR   March 2019
In memory of Francis N. Castro

IAS/PCMI Undergraduate Summer School
Park City, UT   Summer 2017

NSF Institutes' Modern Math Workshop
Long Beach, CA   October 2016

SACNAS Conference
Long Beach, CA   October 2016

Young Mathematicians Conference
Ohio State University, Colombus, OH   August 2016

Gainesville International Number Theory Conference
Gainesville, FL   March 2016
In honor of Krishna Alladi's 60th birthday

Inter-University Mathematical Sciences Research Seminar (SIDIM)
Humacao, PR   March 2016

SACNAS Conference
National Harbor, MD   October 2015

NSF Institutes' Modern Math Workshop
National Harbor, MD   October 2015

Latinos in the Mathematical Sciences Conference
Institute for Pure and Applied Mathematics, Los Angeles, CA   April 2015

Inter-University Mathematical Sciences Research Seminar (SIDIM)
Mayagüez, PR   2015

Joint Mathematics Meetings
San Antonio, TX   January 2015

Inter-University Mathematical Sciences Research Seminar (SIDIM)
Ponce, PR   2014

REU Programs	**SMALL Number Theory & Harmonic Analysis REU** – S. J. Miller	
	Williams College, Williamstown, MA	Summer 2016
	Iowa State University Combinatorial Matrix Theory REU – L. Hogben	
	Ames, IA	Summer 2015
	Texas A&M University Number Theory REU – M. P. Young	
	College Station, TX	Summer 2014
Teaching Experience	**Teaching Assistant**	
	University of Illinois at Urbana-Champaign	Fall 2018
	Math 221 section CD2 (Merit Calculus I)	
	Teaching Assistant	
	University of Illinois at Urbana-Champaign	Spring 2019
	Math 231 section AD1 (Merit Calculus II)	
	Tutor	
	University of Puerto Rico, Río Piedras Campus	Spring and Fall 2014
	Introduction to Discrete Mathematics	
Teaching Honors	**List of teachers ranked as excellent by their students**	
	University of Illinois at Urbana-Champaign	Fall 2018
Computer Skills	**Mathematica**	
Languages	**Spanish (native), English (fluent)**	