Taylor Daniels

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Publications

T. Daniels, *Legendre-signed partition numbers*, submitted for publication; Feb. 2024 preprint: arXiv:2402.12466; 40 pp.

T. Daniels, *Vanishing coefficients in two q-series related to Legendre-signed partitions*, submitted for publication; Jan. 2024 preprint: arXiv:2401.07956; 10 pp. [A Mathematica notebook implementing the methods in this paper may be found on my personal webpage.]

T. Daniels, *Biasymptotics of the Möbius- and Liouville-signed partition numbers*, submitted for publication; Oct. 2023 preprint: arXiv:2310.10617; 38 pp.

T. Daniels, *Bounds on the Möbius-signed partition numbers*, submitted for publication; Oct. 2023 preprint: arXiv:2310.10609; 35 pp.

T. Daniels and D. Smith-Tone, *Differential Properties of the HFE Cryptosystem*, Post-Quantum cryptography, 2014, 59–75

Talks

"Periodic vanishings of some Legendre-signed partition numbers", Purdue Analytic Number Theory and Harmonic Analysis Seminar, W. Lafayette IN; Apr. 2024

"Signed partition numbers", UT Tyler Number Theory and Combinatorics Seminar, Tyler TX; Mar. 2024

"Some results on signed partition numbers", COmbinatorial Number Theory And Connected Topics (CONTACT – III); [online conference] Mar. 2024

"Signed partition numbers", MTU Seminar in Partition Theory, *q*-Series and Related Topics, Houghton MI; Mar. 2024

"Legendre-signed partition numbers", Southern Regional Number Theory Conference 2024, Baton Rouge LA; Mar. 2024

"The asymptotics of some signed partition numbers", UIUC Number Theory Seminar, Urbana IL; Nov. 2022

"Möbius-signed partition numbers", *Geometry, Arithmetic, and Groups, in honor of Alan Reid's 60th birthday.* Austin TX; June 2022

"Differential Properties of the HFE Cryptosystem", *Post-Quantum Cryptography – 6th Intl. Workshop, PQCrypto 2014*, Univ. of Waterloo, Waterloo ON, Canada; Sept. 2014

Additional conferences attended

MAGNTS 2023, Univ. of Michigan, Ann Arbor MI; Oct. 2023

CANT 2023 – Combinatorial and Additive Number Theory, CUNY (virtual), New York NY; May 2023

AMS Spring Central Virtual Sectional Meeting, Purdue Univ. (virtual), West Lafayette IN; Mar. 2022

6th Annual Grad. Stud. Conf. in Geometry, Topology, and Algebra, Temple Univ. (virtual), Philadelphia PA; May 2021

Maurice Auslander Intl. Conf., Woods Hole MA; Apr. 2018

Employment

Aug. 2023 –	Graduate Research Assistant, Purdue Univ. Mathematics; funded by Prof. Trevor Wooley.
2015 – 2023	Graduate Teaching Assistant, Purdue Univ. Mathematics
2015	Instructor, STARTALK Summer Program, Louisville KY [Accelerated summer course in Mandarin Chinese for students grade 6-8.]
2012 – 2015	Teaching Assistant, Univ. of Louisville Mathematics

Education

2015 –	Ph.D. Candidate, Mathematics, Purdue Univ.
2014 – 2015	M.S., Mathematics, Univ. of Louisville
2009 – 2014	B.S., Mathematics, Univ. of Louisville
2008 – 2009	Guangxi Normal Univ. [See Awards]

Awards

2021 – 2022	Miscellaneous Scholarship, Purdue Univ. Mathematics
Fall 2020	Excellence in Teaching Award, Purdue Univ. Mathematics
2009 – 2014	Trustee's Scholarship, Univ. of Louisville
2013 – 2014	Bickel Scholarship, Univ. of Louisville Mathematics
2012 – 2013	Pedigo Scholarship, Univ. of Louisville Mathematics
2009 – 2012	Humana Scholarship, Humana Inc., Louisville KY
2008 – 2010	[Untitled National Scholarship]: Scholarship awarded by Chinese government to study Mandarin for two years in Guangxi, China. Ended after one year in order to accept Trustee's Scholarship above.

Organizations

2014 – 2015	Vice President, Math Club, Univ. of Louisville
2012 – 2014	Math Club, Univ. of Louisville
2009 – 2012	Chinese Learner's Society, Univ. of Louisville
2010 – 2011	President, Chinese Learner's Society, Univ. of Louisville

LETTERS OF REFERENCE

Prof. Bruce Berndt, UIUC Mathematics, berndt at illinois dot edu

Prof. David B. McReynolds (PhD co-advisor), Purdue Univ. Mathematics, dmcreyno at purdue dot edu

Dr. Dominic Naughton*, Purdue Univ. Mathematics, dnaughto at purdue dot edu

Prof. Robert C. Vaughan FRS, Penn. State Mathematics, rcv4 at psu dot edu

Prof. Trevor Wooley FRS (PhD co-advisor), Purdue Univ. Mathematics, twooley at purdue dot edu

Prof. Alexandru Zaharescu, UIUC Mathematics, zaharesc at illinois dot edu

*To provide a letter concerning teaching.