Sarah Peluse

CONTACT INFORMATION

School of Mathematics
Institute for Advanced Study
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EMPLOYMENT

Princeton University/Institute for Advanced Study, Princeton, NJ

Veblen Research Instructor
Sept. 2020-Present

University of Oxford, Oxford, United Kingdom

NSF Postdoctoral Fellow
Sept. 2019-Aug. 2020

EDUCATION

Stanford University, Stanford, CA

Ph.D. in Mathematics
Sept. 2014-Sept. 2019

The University of Chicago, Chicago, IL

A.B. with Honors in Mathematics
Sept. 2011-June 2014

Lake Forest College, Lake Forest, IL

Undergraduate Coursework
Sept. 2009-June 2011

PAPERS AND PREPRINTS

S. Peluse, K. Soundararajan, *Almost all entries in the character table of the symmetric group are multiples of any given prime.* arXiv 2010.12410.

S. Peluse, *On even entries in the character table of the symmetric group.* arXiv 2007.06652.

S. Peluse, *An asymptotic version of the prime power conjecture for perfect difference sets.* arXiv 2003.04929. Submitted.

S. Peluse, S. Prendiville, *A polylogarithmic bound in the non-linear Roth Theorem.* arXiv 2003.04122. Accepted at IMRN.

S. Peluse, *Bounds for sets with no polynomial progressions.* arXiv 1909.00309. Accepted at Forum Math. Pi.

S. Peluse, S. Prendiville, *Quantitative bounds in the non-linear Roth Theorem.* arXiv 1903.02592. Submitted.

S. Peluse, *On the polynomial Szemerédi theorem in finite fields.* Duke Math. J. 168 (2019), no. 5, 749-774.

S. Peluse, *Three-term polynomial progressions in subsets of finite fields.* Israel J. Math. 228 (2018), no. 1, 379-405.

S. Peluse, *Mixing for three-term progressions in finite simple groups.* Math. Proc.

Cambridge Philos. Soc. 165(2):279-286, 2018.

S. Peluse, *Irreducible representations of $SU(n)$ with prime power degree.* Sém. Lothar. Combin. 71 (2013/2014), Art. B71d, 12 pp.

S. Peluse, *On zeros of Eichler integrals.* Arch. Math. (Basel) Vol. 102, No. 1 (2014), 71-81.

K. Monks, S. Peluse, L. Ye, *Congruence properties of Borcherds product exponents.* Int. J. Number Theory Vol. 89, No. 6 (2013) 1563-1578.

K. Monks, S. Peluse, L. Ye, *Strings of special primes in arithmetic progressions.* Arch. Math. (Basel) Vol. 101, No. 3 (2013), 219-234.

Invited Talks

(February 2021)	Recent Progress in Analytic Number Theory, AMS Spring Central Sectional Meeting
(December 2020)	London Analysis Seminar
(December 2020)	Discrete Analysis Session, CMS Winter Meeting
(November 2020)	Caltech/Berkeley/Stanford Joint Number Theory Seminar
(November 2020)	Computer Science/Discrete Math Seminar, IAS
October 2020	Analytic and Probabilistic Number Theory Web Seminar
October 2020	Midwest Model Theory Seminar
September 2020	Princeton/IAS Number Theory Seminar
July 2020	Webinar in Additive Combinatorics
May 2020	Virtual Harmonic Analysis Seminar
April 2020	DIMAP Seminar, University of Warwick
March 2020	Number Theory Seminar, ETH Zürich
February 2020	London Number Theory Seminar, UCL
February 2020	Number Theory Seminar, Utrecht University
February 2020	Combinatorics Seminar, University of Bristol
February 2020	Combinatorial Theory Seminar, University of Oxford
January 2020	Combinatorics Seminar, Hebrew University
December 2019	Algebra Seminar, Lancaster University
November 2019	Workshop in Analytic Number Theory, Oberwolfach
October 2019	Number Theory Seminar, University of Warwick
September 2019	WOMBL 1-Day Meeting, University of Oxford
September 2019	PANTS invited postdoc speaker, UNC Charlotte
April 2019	Quebec–Vermont Number Theory Seminar, Concordia University
April 2019	Analysis and Arithmetic Combinatorics Seminar, University of Georgia
January 2019	AMS Special Session on Counting Methods in Number Theory, Joint Mathematics Meetings
December 2018	Discrete Analysis Seminar, University of Cambridge
December 2018	Number Theory Seminar, University of Manchester
November 2018	Heilbronn Number Theory Seminar, University of Bristol
October 2018	Caltech/UCLA Joint Analysis Seminar, UCLA
September 2018	Arithmetic Ramsey Theory in Manchester, University of Manchester
May 2018	Special Session on Analytic Number Theory, ICOMAS 2018, University of Memphis
March 2018	Combinatorics Seminar, Stanford University
January 2018	AMS Special Session on Mathematics Research from the SMALL Undergraduate Research Program, Joint Mathematics Meetings
November 2017	Algorithms, Combinatorics, and Optimization Seminar, Carnegie Mellon University
November 2017	Number Theory Seminar, Stanford University
September 2017	BOWL 1-Day Meeting, University of Warwick

Honors and Awards

2019-2023	Mathematical Sciences Postdoctoral Research Fellowship, NSF
2017	Centennial Teaching Assistant Award, Stanford University
2014-2019	Mayfield Fellowship, Stanford University
2014-2016	EDGE-STEM Fellowship, Stanford University
2014-2019	Graduate Research Fellowship, NSF
2014	Alice T. Schafer Prize, AWM
2014	Paul R. Cohen Memorial Prize, University of Chicago
2014	Mary Jean Mulvaney Scholar-Athlete Award, University of Chicago
2014	CoSIDA Academic All-District Cross Country/Track & Field Team
2014	UAA Presidents Council Scholar-Athlete Team
2013	USTFCCCA All-Academic Team

Teaching

Winter 2019	TA for MATH 62DM: Modern Mathematics: Discrete Methods
Summer 2018	Mentor for Stanford Undergraduate Research Institute in Mathematics
Winter 2018	Algebra Qualifying Exam Preparation Seminar
Fall 2015	TA for MATH 51H: Honors Multivariable Mathematics I