

CANT 2023

Twenty-first Annual Workshop on Combinatorial and Additive Number Theory

CUNY Graduate Center

May 23 - 26, 2023

Speakers

- (1) **Ruben Ascoli**, Princeton University
Email: rascoli@princeton.edu
Title: Sum and difference sets in generalized dihedral groups
Time: Thursday, 5:30 PM (In person)
- (2) **Emma Bailey**, CUNY Graduate Center
Email: ebailey@gc.cuny.edu
Title: Atypical behaviour of the Riemann zeta function
Time: Thursday, 1:30 PM (In person)
- (3) **Jonathan Chapman**, University of Bristol, UK
Email: jonathan.chapman@bristol.ac.uk
Title: Ramsey properties of polynomial equations
Time: Tuesday, 8:00 AM (Zoom)
- (4) **Robert Donley**, Queensborough Community College (CUNY)
Email: rdonley@qcc.cuny.edu
Title: Path enumeration for antimagic squares
Time: Friday, 2:00 PM (In person)
- (5) **Jin-Hui Fang**, Nanjing Normal University, PR China
Email: fangjinhui1114@163.com
Title: On the density of bounded bases
Time: Tuesday, 8:30 AM (Zoom)
- (6) **Leonid Fel**, Technion – Israel Institute of Technology, Israel
Email: lfel@cv.technion.ac.il
Title: Symmetric (not complete intersection) numerical semigroups and syzygy identities
Time: Wednesday, 11:00 AM (Zoom)
- (7) **Mikhail Gabdullin**, Steklov Mathematical Institute, Moscow, Russia
Email: gabdullin.mikhail@yandex.ru
Title: Prime avoiding numbers is a basis of order two
Time: Thursday, 9:30 AM (Zoom)

- (8) **Krystian Gajdzica**, Jagiellonian University, Krakw, Poland
Email: krystian.gajdzica@im.uj.edu.pl
Title: Beyond the log-concavity of the restricted partition function
Time: Tuesday, 10:30 AM (Zoom)

- (9) **Zhenchao Ge**, ShanghaiTech University, China
Email: gezc@shanghaitech.edu.cn, gezhenchao@gmail.com
Title: A Weyl-type inequality for irreducible elements in function fields, with applications
Time: Tuesday, 9:30 AM (Zoom)

- (10) **Robert Groth**, University of South Carolina
Email: rgroth@email.sc.edu
Title: Constructing generalized Sierpinski numbers
Time: Tuesday, 5:00 PM (Zoom)

- (11) **C. Sinan Gunturk**, Courant Institute, NYU
Email: gunturk@cims.nyu.edu
Title: Density of the Bernstein lattices
Time: Friday, 3:00 PM (In person)

- (12) **Norbert Hegyvari**, Eötvös University/Rényi Institute, Budapest, Hungary
Email: hegyvari@renyi.hu
Title: Covering shrinking polynomials by progressions
Time: Thursday, 10:30 AM (Zoom)

- (13) **Harald Helfgott**, Universität Göttingen, Germany and CNRS, France
Email: harald.helfgott@gmail.com
Title: Explicit bounds on sums of the Möbius functions
Time: Friday, 12:00 PM (Zoom)

- (14) **Russell Jay Hendel**, Towson University
Email: rhendel@towson.edu
Title: Recursions, closed forms, and characteristic polynomials of the circuit array
Time: Wednesday, 5:00 PM (In person)

- (15) **Robert Hough**, Stony Brook University
Email: robert.hough@stonybrook.edu
Title: Subconvexity of Sato-Shintani zeta functions
Time: Wednesday, 3:30 PM (In person)

- (16) **Alex Iosevich**, University of Rochester
Email: iosevich@gmail.com
Title: Point configurations in vector spaces over finite fields
Time: Friday, 5:00 PM (In person)

- (17) **Brad Isaacson**, NYC College of Technology (CUNY)
Email: brad.isaacson71@citytech.cuny.edu
Title: On some polynomial reciprocity formulas
Time: Tuesday, 4:30 PM (Zoom)
- (18) **Ryan Jeong**, University of Pennsylvania
Email: rsjeong@sas.upenn.edu
Title: Progress on relative sizes of generalized sumsets and their complements
Time: Friday, 11:30 AM (Zoom)
- (19) **Mizan Khan**, Eastern Connecticut State University
Email: khanm@easternct.edu
Title: Interior hulls and continued fractions
Time: Thursday, 5:00 PM (In person)
- (20) **Gergely Kiss**, Alfréd Rényi Institute of Mathematics, Budapest, Hungary
Email: kigergo57@gmail.com
Title: Recent progress on Fuglede's conjecture on \mathbb{Z}_p^3
Time: Tuesday, 11:30 AM (Zoom)
- (21) **Sándor Kiss**, Budapest University of Technology and Economics, Hungary
Email: ksandor@math.bme.hu
Title: Problems and results on additive representation functions associated to linear forms
Time: Tuesday, 2:30 PM (Zoom)
- (22) **Sergei Konyagin**
Email: konyagin@mi-ras.ru
Title: Large gaps between sums of two squarefull numbers
Time: Wednesday, 10:30 AM (Zoom)
- (23) **Tomasz Kowalczyk**, Jagiellonian University in Cracow, Poland
Email: tomek.kowalczyk@uj.edu.pl
Title: On Waring numbers of henselian rings
Time: Friday, 9:30 AM (Zoom)
- (24) **Noah Kravitz**, Princeton University
Email: nkravitz@princeton.edu
Title: Lonely runner spectra, revisited
Time: Wednesday, 3:00 p.m. (In person)
- (25) **Andrzej Kukla**, Jagiellonian University, Cracow, Poland
Email: andrzej.kukla@student.uj.edu.pl
Title: Practical sets and A -practical numbers
Time: Wednesday, 9:30 AM (Zoom)

- (26) **Angel Kumchev**, Towson University
Email: akumchev@towson.edu
Title: New versions of old results on gaps between squarefree integers
Time: Wednesday, 1:30 PM (In person)
- (27) **Jeffrey Lagarias**, University of Michigan
Email: lagarias@umich.edu
Title: The floor quotient partial order
Time: Tuesday, 12:00 AM (Zoom)
- (28) **Noah Lebowitz-Lockard**, University of Texas, Tyler, TX
Email: nlebowitzlockard@uttyler.edu
Title: Long runs of numbers with the same number of divisors
Time: Thursday, 12:00 PM (In person)
- (29) **Paolo Leonetti**, Università degli Studi dell'Insubria, Varese, Italy
Email: leonettipaolo@gmail.com
Title: How many sets of integers have a small perturbation of the type $A + B$?
Time: Thursday, 9:00 AM (Zoom)
- (30) **Jared Duker Lichtman**, Oxford University, UK
Email: jared.d.lichtman@gmail.com
Title: Primes in large arithmetic progressions and smooth shifted primes
Time: Tuesday, 1:30 PM (Zoom)
- (31) **Florian Luca**, University of the Witwatersrand, South Africa
Email: florian.luca@wits.ac.za
Title: Carmichael numbers of the form $2^n k + 1$
Time: Thursday, 11:30 AM (Zoom)
- (32) **Ariane Masuda**, New York City College of Technology (CUNY)
Email: amasuda@citytech.cuny.edu
Title: Involutions over finite fields
Time: Friday, 1:30 PM (In person)
- (33) **Karyn McLellan**, Mount Saint Vincent University
Email: karyn.mclellan@msvu.ca
Title: Counting n^{th} differences of the floor of an irrational sequence
Time: Tuesday, 4:00 PM (Zoom)
- (34) **Nathan McNew**, Towson University
Email: nmcnew@towson.edu
Title: The distribution of intermediate prime factors
Time: Thursday, 4:30 PM (In person)

- (35) **Piotr Miska**, Jagiellonian University in Kraków, Poland
Email: piotr.miska@uj.edu.pl
Title: On Waring numbers of henselian rings I
Time: Friday, 9:00 AM (Zoom)
- (36) **Md Ibrahim Molla**, Ramakrishna Mission Vivekananda Educational and Research Institute (RKMVERI), India
Email: mdibimya@gmail.com
Title: Some zero-sum constants and their associated inverse problems
Time: Tuesday, 11:00 AM (Zoom)
- (37) **Mel Nathanson**, Lehman College (CUNY)
Email: melvyn.nathanson@lehman.cuny.edu
Title: Patterns in the iteration of an arithmetic function
Time: Friday, 4:30 PM (In person)
- (38) **Miquel Ortega**, Universitat Politècnica de Catalunya, Barcelona, Spain
Email: miquel.ortega.sanchez-colomer@upc.edu
Title: Product-free sets in the free group
Time: Wednesday, 12:00 PM (Zoom)
- (39) **Cormac O’Sullivan**, Bronx Community College (CUNY)
Email: cormac.osullivan@bcc.cuny.edu
Title: A hidden link between two of Ramanujans approximations
Time: Thursday, 3:30 PM (In person)
- (40) **Péter Pál Pach**, Budapest University of Technology and Economics, Hungary
Email: p.p.pach@gmail.com
Title: The Alon-Jaeger-Tarsi conjecture via group ring identities
Time: Thursday, 2:30 PM (In person)
- (41) **Firdavs Rakhmonov**, University of Rochester
Email: frakhmon@ur.rochester.edu
Title: Distribution of similar configurations in subsets of \mathbb{F}_q^d
Time: Friday, 4:00 PM (In person)
- (42) **Alex Rice**, Millsaps College
Email: riceaj@millsaps.edu
Title: Generalized arithmetic progressions and diophantine approximation by polynomials
Time: Friday, 10:30 AM (Zoom)
- (43) **Asher Roberts**, CUNY Graduate Center
Email: aroberts@gradcenter.cuny.edu
Title: The rate of convergence for Selberg’s multivariate CLT
Time: Wednesday, 4:30 PM (In person)

- (44) **David A. Ross**, University of Hawai'i
Email: ross@math.hawaii.edu
Title: Some proofs about sequences in the spirit of Paul du Bois-Reymond
Time: Wednesday, 4:00 PM (Zoom)
- (45) **Misha Rudnev**, University of Bristol, UK
Email: m.rudnev@bristol.ac.uk
Title: On sums and products of integers with few prime factors
Time: Friday, 2:30 PM (Zoom)
- (46) **Anurag Sahay**, University of Rochester
Email: anuragsahay@rochester.edu
Title: The VC-dimension of multiplicative structures in finite fields
Time: Tuesday, 2:00 PM (Zoom)
- (47) **Aliaksei Semchankau**, Carnegie Mellon University
Email: asemchan@andrew.cmu.edu
Title: On the sequence $n! \bmod p$
Time: Tuesday, 9:00 AM (Zoom)
- (48) **Steven Senger**, Missouri State University
Email: stevensenger@gmail.com
Title: Recent developments in point configuration problems in vector spaces over various fields
Time: Thursday, 3:00 PM (In person)
- (49) **Sayak Sengupta**, SUNY-Binghamton
Email: ssengup1@binghamton.edu
Title: Locally nilpotent polynomials over \mathbf{Z}
Time: Thursday, 10:00 (Zoom)
- (50) **Adam Sheffer**, Baruch College (CUNY)
Email: adamsh@gmail.com
Title: Distinct distances in the complex plane
Time: Wednesday, 2:30 PM (In person)
- (51) **Liyang Shen**, New York University
Email: Liyang.Shen@nyu.edu
Title: Linear recurrences of order at most two in nontrivial small divisors and large divisors
Time: Tuesday, 3:30 PM (Zoom)
- (52) **I.D. Shkredov**, Steklov Mathematical Institute, Moscow, Russia
Email: ilya.shkredov@gmail.com
Title: On some multiplicative properties of large difference sets
Time: Tuesday, 12:30 PM (Zoom)

- (53) **Satyanand Singh**, New York College of Technology (CUNY)
Email: ssingh@citytech.cuny.edu
Title: On the Pythagorean reciprocal identity $a^{-2} + b^{-2} = d^{-2}$ and the generation of all solutions for fixed $d > 0$
Time: Thursday, 2:00 PM (In person)
- (54) **Bartosz Sobelewski**, Jagiellonian University, Kraków, Poland
Email: bartosz.sobelewski@uj.edu.pl
Title: Values of colored binary partition function represented as a sum of three squares
Time: Tuesday, 1:00 PM (Zoom)
- (55) **Gábor Somlai**, ELTE/CUNY Graduate Center
Email: zsomlei@gmail.com
Title: Cutting the positive real numbers into disjoint sets closed under addition and multiplication
Time: Wednesday, 2:00 PM (In person)
- (56) **Christoph Spiegel**, Zuse Institute Berlin, Germany
Email: spiegel@zib.de
Title: Towards flag algebras in additive combinatorics
Time: Wednesday, 11:30 AM (Zoom)
- (57) **Christian Táfula**, Université de Montréal, Canada
Email: christian.tafula.santos@umontreal.ca
Title: On the structure of t -representable sumsets
Time: Tuesday, 3:00 PM (Zoom)
- (58) **Ruiwen (Raven) Tang**, Stuyvesant High School
Email: ruiwentang@gmail.com
Title: The constant of point-line incidence constructions
Time: Tuesday, 5:30 PM (Zoom)
- (59) **Marc Technau**, Graz University of Technology, Austria
Email: mtechnau@math.tugraz.at
Title: On the Farey fraction spin chain
Time: Friday, 3:30 PM (In person)
- (60) **Ognian Trifonov**, University of South Carolina
Email: trifonov@math.sc.edu
Title: Representing positive integers as a sum of a squarefree number and a small prime
Time: Tuesday, 10:00 AM (Zoom)

- (61) **Tim Trudgian**, UNSW Canberra at the Australian Defence Force Academy
Email: t.trudgian@adfa.edu.au
Title: A hair's breadth of a half
Time: Thursday, 4:00 PM (Zoom)
- (62) **Daniel Tsai**, National Taiwan University, Taiwan (R.O.C.)
Email: tsaidaniel@ntu.edu.tw
Title: A characterization of prime v -palindromes
Time: Friday, 11:00 AM (Zoom)
- (63) **Maciej Ulas**, Jagiellonian University, Kraków, Poland
Email: maciel.ulas@gmail.com
Title: Geometric progressions in the sets of values of rational functions
Time: Thursday, 11:00 AM (Zoom)
- (64) **Aled Walker**, King's College London, UK
Email: aled.walker@kcl.ac.uk
Title: On a Bohr set analogue of Chowla's conjecture
Time: Friday, 10:00 AM (Zoom)
- (65) **Trevor Wooley**, Purdue University
Email: twooley@purdue.edu
Title: Waring's problem and Freĭman's theorem
Time: Wednesday, 10:00 AM (Zoom)
- (66) **Kiseok Yeon**, Purdue University
Email: kyeon@purdue.edu
Title: The Hasse principle for homogeneous polynomials with random coefficients over thin sets
Time: Wednesday, 9:00 AM (Zoom)