

David Soukup

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UCLA Math Department, 520 Portola Plaza, Math Sciences Building, Los Angeles CA 90095

RESEARCH INTERESTS

Enumerative Combinatorics
Combinatorics on words and groups
Computational complexity in combinatorics

EDUCATION

University of California, Los Angeles (UCLA) Sep 2018 - present

- M.A. in Mathematics, Dec 2019
- C.Phil. in Mathematics, Dec 2022
- Ph.D. in Mathematics, expected Jun 2024
- Advisor: Igor Pak

University of Rochester Sep 2014 - Jun 2018

- B.S. in Mathematics with Honors
- Advisor: Alex Iosevich

AWARDS

Stoddard Prize Jun 2016

- University of Rochester award for top sophomore mathematics major

Gale Prize Jun 2018

- University of Rochester award for top senior mathematics major

UCLA Graduate Dean's Scholar Award 2018-2020

- Fellowship for incoming graduate students

PUBLICATIONS

Igor Pak and **David Soukup**, Algebraic and arithmetic properties of the cogrowth sequence of nilpotent groups. Submitted.

Mike Desgrottes, Steven Senger, **David Soukup**, and Renjun Zhu, A general framework for studying finite rainbow configurations. *Combinatorial and additive number theory. III*, 55–63, in Springer Proc. Math. Stat., 297, Springer, Cham, (2020).

David M. Soukup, Embeddings of weighted graphs in Erdős-type settings. *Mosc. J. Comb. Number Theory* 8 (2019), no. 2, 117–123.

INVITED TALKS

Combinatorics of Cogrowth Feb 2023

- University of Southern California Combinatorics Seminar

TEACHING EXPERIENCE

Teaching Assistant, Fall 2018 - present

UCLA Math 31A: Differential and Integral Calculus

UCLA Math 31B: Integration and Infinite Series [x2]

UCLA Math 32A: Calculus of Several Variables (part 1) [x4]

UCLA Math 32B: Calculus of Several Variables (part 2)

UCLA Math 33A: Linear Algebra and Applications [x3]

UCLA Math 61: Introduction to Discrete Structures

UCLA Math 110A: Algebra (part 1)

UCLA Math 115A: Linear Algebra (part 1)

UCLA Math 115B: Linear Algebra (part 2)

UCLA Math 167: Mathematical Game Theory [x2]

UCLA Math 170A: Probability Theory

UCLA Math 170E: Introduction to Probability

UCLA Math 170S: Introduction to Statistics [x2]

UCLA Math 177: Theory of Interest and Applications [x2]

UCLA Math 180: Graph Theory [x3]

UCLA Math 184: Enumerative Combinatorics [x3]

Total: 29 classes, approximately 1500 students.

OUTREACH

Directed Reading Program. Mentored undergraduate students in reading advanced topics which would not normally be covered in the course of undergraduate education.

Sasha Kononova, Fall 2021: Linear algebra methods in combinatorics.

Isaac Li, Fall 2021: Pattern avoidance.

Ruiqi Zhang, Fall 2022: Bayesian statistics.