DONGHYUN KIM

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EDUCATION

University of California at Berkeley *September 2016 - (Expected) 2021*
Ph.D in Mathematics
Attended Harvard University as an Exchange Scholar 2018-present

Seoul National University *March 2010 - February 2016*
Bachelor of Mathematics

RESEARCH INTERESTS

Algebraic combinatorics, Ehrhart theory, ASEP (asymmetric exclusion process), Schubert polynomials, orthogonal polynomials and total positivity.

PAPERS

- **Schubert polynomials and the inhomogeneous multispecies TASEP on a ring**
Donghyun Kim, Lauren Williams, in preparation.

- $\mathbb{Z}/n\mathbb{Z}$ **equivariant generalization of the Ehrhart h*-vector of the hypersimplex**
Donghyun Kim, in preparation.

- **Combinatorial formulas for the coefficients of the Al-Salam-Chihara polynomials**
Donghyun Kim, arXiv:2002.01518.

- **A combinatorial formula for the Ehrhart h*-vector of the hypersimplex**
Donghyun Kim. J. Combin. Theory Ser. A, 173 (2020).

PRESENTATIONS

A combinatorial formula for the Al-Salam-Chihara polynomials

2020 Berkeley Combinatorics Seminar.
2020 MIT Combinatorics seminar, MIT.

A combinatorial formula for the Ehrhart h*-vector of the hypersimplex

2019 Sungkyunkwan university Combinatorics Seminar.
2019 FPSAC 2019, University of Ljubljana (Poster)
2019 Dartmouth Combinatorics seminar.
2019 MIT Combinatorics seminar, MIT.

Positive Grassmannian

2017 An Afternoon of Real Algebraic Geometry, MSRI,

TEACHING ACTIVITIES

-Spring 2020: Math 21b (Linear Algebra and Differential Equations), at Harvard

-Spring 2018: Math 1A (Calculus I)

-Fall 2018: Math 1A (Calculus I)

-Spring 2017: Math 1A (Calculus I)