

# Danai Deligeorgaki

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## EDUCATION

### KTH Royal Institute of Technology:

08/20-

PhD in Combinatorics and Artificial Intelligence

Supervisor: Liam Solus

### Imperial College London:

09/18-10/19

MSc in Pure Mathematics (70.73, “Distinction”)

MSc project in Algebraic Graph Theory with Prof. Martin Liebeck

Onassis Scholar: £13.100 awarded on academic merit

### Aristotle University of Thessaloniki:

09/13-03/18

BSc in Mathematics (8.83, “Excellent”)

Thesis in Algebraic Statistics with Prof. Hara Charalambous ([link](#))

Project in Formal Language Theory with Prof. George Rahonis

### 4th General Lykeio of Alexandroupolis:

09/10-06/13

Graduation (19.2, “Excellent”)

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## PUBLICATIONS AND PREPRINTS

M. M. Bayer, S. Borgwardt, T. Chambers, S. Daugherty, A. Dawkins, D. Deligeorgaki, H.-C. Liao, T. McAllister, A. Morrison, G. Nelson, A. R. Vindas-Meléndez, *Combinatorics of generalized parking-function polytopes*, arXiv:2403.07387 (submitted, 2024)

D. Deligeorgaki, D. McGinnis, A.R.Vindas-Meléndez, *Ehrhart Positivity of Panhandle Matroids and a Bound for Paving Matroids*, arXiv:2210.12271 (submitted, 2023)

M. Beck, D. Deligeorgaki, M. Hlavacek, J. Valencia-Porras, *Inequalities for  $f^*$ -vectors of Lattice Polytopes*, arXiv:2210.12271 (accepted in *Advances in Geometry*, 2023)

M. Beck, D. Deligeorgaki, M. Hlavacek, J. Valencia-Porras, *Extended abstract: Inequalities for  $f^*$ -vectors of Lattice Polytopes*, to appear in the Proceedings of FPSAC (2023)

D. Deligeorgaki, A. Markham, P. Misra, L. Solus, *Combinatorial and algebraic perspectives on the marginal independence structure of Bayesian networks*, arXiv:2210.00822 (accepted in *Algebraic Statistics*, 2023)

A. Markham, D. Deligeorgaki, P. Misra, L. Solus, *A Transformational Characterization of Unconditionally Equivalent Bayesian Networks*, 11th International Conference on Probabilistic Graphical Models (PGM 2022)

D. Deligeorgaki, *Smallest Graphs with Given Automorphism Groups*, *Journal of Algebraic Combinatorics* (open access), DOI: 10.1007/s10801-022-01125-2 (2022)

## REFeree SERVICE

Article review for *Order*

2023

Article review for *Computational Methods and Function Theory*

2024

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## TEACHING

### Teaching Assistant:

Teaching assistant for “Differential Equations” at KTH

2020-2022

Teaching assistant for “Discrete Mathematics” at KTH

2023-2024

### Voluntary tutoring:

Teaching weekly exercises for the undergraduate course ‘Algebraic Structures II’ at AUTH

2016-2017

## *INSTITUTIONAL ACTIVITIES*

### **SCI Newsletter (10% occupation):**

Newsletter editor for the school of Engineering Sciences (SCI) at KTH 05/21-

### **PhD representative (9% occupation):**

SCI PhD representative for the program "PhD in Pure Mathematics" at KTH 01/21-01/22

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## *ORGANIZATIONAL ACTIVITIES*

4th Graduate Student Meeting on Applied Algebra and Combinatorics (co-organizer) 04/23

SCI School (KTH) Science Communication workshops with Artesc (main organizer) 11/21

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## *CONFERENCE TALKS*

5th Graduate Student Meeting in Applied Algebra and Combinatorics (GSMAAC24) (Germany) 03/24

Séminaire Lotharingien de Combinatoire 91 (Spain) 03/24

Joint Mathematical Meetings (JMM) (San Francisco, USA) 01/24

SIAM Conference on Applied Algebraic Geometry (AG23) (Netherlands) 07/23

Geometry meets Combinatorics in Bielefeld (Germany) 09/22

28th Nordic Congress of Mathematicians (NCM) (Finland) 08/22

2nd Conference for Greek Mathematicians (Greece) 07/22

Nordic Combinatorial Conference (NORCOM) 2022 (Norway) 06/22

Algebraic Statistics 2022 (Hawaii, USA) 05/22

## *POSTER PRESENTATIONS*

AlCoVE: an Algebraic Combinatorics Virtual Expedition (online) 06/23

Formal Power Series and Algebraic Combinatorics (FPSAC) 2023 (California, USA) 07/23

CIMPA summer school "Mathematical Methods in Data Analysis" 2022 (Albania) 07/22

Combinatorial, Computational, and Applied Algebraic Geometry (CCAAGS) 2022 (Seattle, USA) 06/22

## *WORKSHOPS*

Algebraic Statistics and Our Changing World - long IMSI program (Chicago, USA) 09-12/23

Computations and Data in Algebraic Statistics - BIRS workshop (Oaxaca, Mexico) 05/23

Graduate Research Workshop in Combinatorics (GRWC) 2023 (Wyoming, USA) 07-08/23

Research Encounters in Algebraic and Combinatorial Topics (REACT) workshop (online) 2020-2024

## *SEMINAR TALKS*

Graduate Online Combinatorics Colloquium (GOCC) (virtual talk) 05/24

Combinatorics seminar (UC Berkeley) 02/24

Algebra and Discrete Mathematics seminar (UC Davis) 02/24

Combinatorics and Geometry seminar (University of Washington) 01/24

Algebra, Geometry, and Combinatorics Seminar (San Francisco State University) 11/23

Discrete Geometry graduate student seminar (FU Berlin) 07/22

WASP Kickoff 2022 (virtual talk) 01/22

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