

CURRICULUM VITAE

MÜGE TAŞKIN AYDIN

Boğaziçi Üniversitesi, Matematik Bölümü, 34342 Bebek İstanbul

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RESEARCH INTEREST

Algebraic Combinatorics, Combinatorial Representation Theory, Schubert Calculus.

EDUCATION

PH.D. in Mathematics, University of Minnesota, MN, USA (2006).

Advisor: Prof. Victor Reiner.

Thesis title: Properties of four partial orders on standard Young tableaux.

MS in Mathematics, Boğaziçi Üniversitesi, İstanbul, Türkiye (2000).

Advisor: Prof. İlhan İkedâ, Co-Advisor: Prof. Ayşe Soysal.

Thesis title: Construction of Kazhdan-Lusztig polynomials on Coxeter groups.

BS in Mathematics, Boğaziçi Üniversitesi, İstanbul, Türkiye (1997).

PROFESSIONAL EXPERIENCE

Matematik Bölümü, Boğaziçi Üniversitesi, İstanbul, Türkiye.

Associate Professor (December 2013-Present).

Assistant Professor (December 2008-2013).

The Fields Institute, Toronto, ON, Canada.

Visiting Member (August 2006-June 2008).

Department of Mathematics and Statistics, York University, ON, Canada.

Postdoctoral Faculty (August 2006-June 2008).

Lecturer (2007-2008 Fall Semester).

School of Mathematics, University of Minnesota, MN, USA.

Teaching Assistant (2000-2006).

Lecturer (2003 Summer School).

PUBLICATIONS IN JOURNALS

1. M. Taşkın, *Properties of four partial orders on standard Young tableaux*, J. of Combin. Theory Ser. A., 113, (2006), 1092-1119.
2. K. Aker, M. B. Can and M. Taşkın, *R-polynomials of finite monoids of Lie type*, Int. J. Algebra and Computation 20, 6, (2010), 793–805.
3. M. Taşkın, *Plactic relations for r-domino tableaux*, Electron. J. Combin. 19, 1, (2012), Paper 38, 30 pp.
4. M. Taşkın, *Inner tableau translation property of the weak order and related results*, Proc. Amer. Math. Soc. 141, 3, (2013), 837–856.
5. O. Coşkun, M. Taşkın, *Tower Tableaux*, J. Combin. Theory Ser. A, 120, 4, (2013), 843-871.
6. O. Coşkun, M. Taşkın, *Tower tableaux and Schubert polynomials*, J. Combin. Theory Ser. A, 120, 8, (2013), 1976–1995.
7. O. Coşkun, M. Taşkın, *Sorting and generating reduced words*, Archiv der Mathematik, 101, (2013), 427-436.
8. O. Coşkun, M. Taşkın, *Tower diagrams and Pieri's rule*, Discrete Mathematics, 341, 11, (2018), 3089-3105.
9. R.B. Gümüş, M. Taşkın, *Lower bounds for nonzero Littlewood Richardson coefficients*, Submitted.
10. G. Karaali, I. Senturia, M. Taşkın, *a new partial order on SYT*, Submitted.

PROJECTS

Kule Tabloları ile Schubert Polinomları, TÜBİTAK/1001/115F156, Principal Researcher, (01.09.2015–01.09.2018).

Littlewood-Richardson katsayılarını saymak, BAP/7702, Principal Researcher, (04.11.2013–04.11.2015)

Permütasyonların indirgenmiş sözcük biçimi sayımı, BAP/6029, Principal Researcher, (06.04.2011–06.04.2013).

Lie tipi sonlu grupların adlanımları, TÜBİTAK/3501/109T661, Researcher, (15.03.2010–15.03.2013).

GRADUATE THESIS SUPERVISED

Resül Bedii Gümüş *Methods of calculating Littlewood-Richardson coefficients*, (Expected January 2023)

Kütsev Bengisü Altuğ, *Combinatorics of Schubert polynomials*, (January 2017).

Songül Aslan, *Representation theory of symmetric groups*, (June 2013).

TALKS

Bounds for nonzero Littlewood-Richardson coefficients, Pomona College, California, April 2022.

Littlewood-Richardson Rule and an Alternative Approach, Gebze Technical University, December 2019.

Kule tabloları, 26.Ulusal Matematik Sempozyumu, Dicle Üniversitesi, September 2013.

Tower tableaux, Galatasaray Üniversitesi, Mathematics seminars, November 2011.

The role of Young tableaux in representation theory and Schubert calculus, Karatekin Mathematics Days, June 2011.

Simetrik grupların temsil kuramı, Grup/Temsil Kuramından Kesitler, Tubitak-Feza Gürsey Enstitüsü, February 2010.

Kazhdan-Lusztig Theory and Standard Tableaux, Algebra Workshop, IMBM, June 2009.

An introduction to matroid theory, İstanbul Discrete Mathematics Meetings, IMBM, June 2009.

Standard Young and domino tableaux in combinatorial representation theory, İstanbul Bilgi Üniversitesi Matematik Seminerleri, October 2008.

Plactic relations for r -domino tableaux at

Antalya Cebir Günleri, May 2009.

The Fields Institute, Toronto, Canada, April 14, 2008.

LACIM, University of Québec at Montréal, Canada, April 11, 2008.

University of Western Ontario, Canada, February 2008.

Properties of four partial orders on standard Young tableaux at

CMS Winter 2006 Meeting, Toronto, December 2006.

AMS Southeastern Section Meeting, Arkansas, November 2006.

Departmental seminar, York University, Canada, February 2006.

Departmental seminar, Bilgi Üniversitesi, January 2006.

Departmental seminar, Boğaziçi Üniversitesi, January 2006.

Combinatorics seminar, University of Minnesota, October 2005.

A connection of Hopf algebras of permutations and standard Young tableaux to representation theory, Student Combinatorics seminar, University of Minnesota, October 2005.

The weak and KL orders on standard Young tableaux, 16th Annual International Conference on Formal Power Series and Algebraic Combinatorics, Vancouver-Canada, June 28, 2004.

The weak order on standard Young tableaux, Faculty Combinatorics seminar, University of Minnesota, May 2004.

Hopf algebras and Combinatorics, Student Combinatorics seminar, University of Minnesota, March 2004.

The Ferrers shapes of finite posets and Robinson-Schensted correspondence, Junior Colloquium, University of Minnesota, February 2004.

REFEREEING FOR

Turkish Journal of Mathematics

Hacettepe Journal of Mathematics and Statistics

International Journal of Number Theory

Annals of Combinatorics