Emine YILDIRIM

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EDUCATION	*PhD. in Mathematics,* Université du Québec à Montréal, Canada. Advisor : Hugh Thomas	August 2015–May 2018
	MSc. in Mathematics, Abant Izzet Baysal University, Turkey. Advisor : Tahire Ozen Ozturk	February 2010–June 2011
	BSc. in Mathematics, Abant Izzet Baysal University, Turkey.	September 2006–January 2010
WORK EXPERIENCE	*Coleman Postdoctoral Fellow* Queen's University, Canada.	July 2018–June 2021
	Teaching Assistant University of New Brunswick, Canada.	January 2014–August 2015
	Lecturer Istanbul Arel University, Turkey.	September 2012–December 2013

PAPERS

C. Paquette, E. Yıldırım, *A Completion of Discrete Cluster Categories of type A*, (to appear in) Transactions of the London Mathematical Society.

V. Bazier-Matte, G. Douville, K. Mousavand, H. Thomas, E. Yıldırım, *ABHY Associahedra and Newton Polytopes of F-polynomials for finite type cluster algebras*, arXiv:1808.09986.

V. Bazier-Matte, G. Douville, A. Garver, R. Patrias, H. Thomas, E. Yıldırım, *Leading Terms of SL_3 Web Invariants*, International Mathematics Research Notices, (2020), rnaa110.

T. Brüstle, G. Douville, K. Mousavand, H. Thomas, and E. Yıldırım, *On the combinatorics of gentle algebras*, (2020) Canadian Journal of Mathematics, 72(6), 1551-1580.

E. Yıldırım, *Coxeter transformation on cominuscule posets.* Algebra and Representation Theory, Vol. 22 (2019), No. 3, pp. 699-722.

T. Ozen and E. Yıldırım, *$\mathcal{X}$-Injective and $\mathcal{X}$-Projective Complexes.* Bull. Iranian Math. Soc.Vol. 42 (2016), No. 5, pp. 1221-1235.

AWARDS

- Queen's University Post-Doctoral Travel Award, 2018.
- ISM Scholarships for Outstanding PhD Candidates, 2018.
- ISM Graduate Scholarships at UQAM. 2016, 2017, 2018.

- Tuition Exemption Scholarships at UQAM. 2015, 2016, 2017, 2018.
- President's Doctoral Tuition Award at UNB. 2014.
- International Differential Scholarship at UNB. 2014.
- Graduate Scholarship from Prime Ministerial Office in Turkey. 2010-2011.
- Undergraduate Scholarship from Prime Ministerial Office in Turkey. 2006-2010.

ORGANIZING I am a co-organizer of the following conference and seminars.
- Virtual Advances in Representation Theory of Algebras 2021 - Online Conference in Honor of Andrzej Skowroński, May 17-May 28 2021.
- Algebra & Geometry Working Seminars Queen's University at the math department, 2020-2021.
- Geometry and Representation Theory Seminars, Queen's University at the math department, 2019-2020.
- Quantum Groups Learning Seminars, Queen's University at the math department, 2019-2020.

PRESENTATIONS
- *The manifestations of Rowmotion in Representation Theory of Algebras*, Summer School of Algebraic Combinatorics, June 2021 (online).
- *Composition of the rowmotion and the Coxeter transformation*, Virtual Advances in Representation Theory of Algebras, May 2021 (online).
- *Webs and Modules*, TRAC Online Seminars, University of Sherbrooke, April 2021 (online).
- *Generalized Associahedra*, Algebra Seminar, University of Leeds, March 2021 (online).
- *Tilting theory and Quiver mutation*, LPA Seminars, Turkey, February 2021 (online).
- *Discrete cluster categories of type A and beyond*, Flash Talks in Representation Theory, NTNU, January 2021 (online).
- *The orbits of the Coxeter Transformation and Rowmotion for cominuscule posets*, Dynamical Algebraic Combinatorics, Banff International Research Station, October 2020 (online).
- *Graphs and Combinatorics in Representation Theory of Algebras.*, Queen's University Colloquium, October 2020 (online).
- *Associahedra and Quiver Representations*, Gebze Technical University, October 2020 (online).
- *The Coxeter Transformation and Rowmotion for cominuscule posets*, Kentucky Discrete Math Seminar, September 2020 (online).
- *Cluster categories*, Uluslararası Cebirsel Geometri Neşesi, 2020 (online).
- *Cluster categories capturing combinatorics of infinite cluster variables*, Algebra Seminar, University of Sherbrooke, Quebec, February 2020.
- *The Coxeter Transformation and Promotion*, Algebra Seminar, University of Toronto, Toronto, January 2020.
- *A completion of discrete cluster categories of type A*, Seventh Conference on Geometric Methods in Representation Theory, University of Missouri, Columbia, November 2019.

- *Rowmotion and Coxeter transformation*, Applied Algebra Seminar, York University, Toronto, September 2019.

- *A slight extension of discrete cluster categories*, Cluster Algebras and Quiver Representations, Centre de Recherches Mathématiques (CRM), August 2019.

- *Cluster categories for an infinite rank cluster algebra*, Summer Day of Representation Theory of Algebras, Université de Sherbrooke-Bishop's University, QC, July 2019.

- *The bounded derived category for cominuscule posets*, Maurice Auslander Distinguished Lectures and International Conference, Woods Hole, MA, April 2019.

- *The Web Basis and Preprojective Algebras*, American Mathematical Society Sectional Meeting, Hartford, CT, April 2019.

- *Associahedra and Newton Polytopes of F-Polynomials*, Cluster structures in geometry, physics, combinatorics and representation theory, Jerusalem, December 2018.

- *The bounded derived category for cominuscule posets*, Algebra seminar, Queen's University, Kingston, ON, September 2018.

- *Generalized Associahedra and Newton polytopes of F-polynomials*, Algebra seminar, Carleton University, Ottawa, ON, September 2018.

- *Associahedra via quiver representations*, Canadian Mathematical Society Summer Meeting, Fredericton, NB, June 2018.

- *The periodicity of the Coxeter transformation*, The XXIe Colloque panquébécois des étudiants de l'Institut des Sciences mathématiques (ISM), Université de Sherbrooke, QC, May 2018.

- *The Coxeter transformation on cominuscule posets*, Séminaire de combinatoire, Université du Québec à Montréal, LaCIM, QC, February 2018.

- *The Coxeter transformation on cominuscule posets*, Department seminar, Mimar Sinan University, Istanbul, December 2017.

- *The Coxeter transformation on grid posets*, Department seminar, Istanbul Technical University, Istanbul, December 2017.

- *Cluster Monomials in Web Basis*, Algebra seminar, University of Sherbrooke, QC, November 2017.

- *Cluster Monomials in Web Basis*, Cluster algebras seminar, University of Connecticut, CT, November 2017.

- *Coxeter transformation on cominuscule posets*, Cluster algebras seminar, University of Connecticut, CT, October 2017.

- *Coxeter transformation on cominuscule posets*, Combinatoric seminar, University of Minnesota, MN, September 2017.

- *Auslander-Reiten translation on cominuscule posets*, Advances in Representation Theory of Algebras VI: Geometry and Homology (ARTA), Luminy, September 2017.

- *Periodic behavior of Auslander-Reiten translation*, The Mathematical Congress of the Americas (MCA), Montreal, QC, July 2017.

- *On the combinatorics of gentle algebras*, XXVIIIth Meeting on Representation Theory of Algebras, Sherbrooke, QC, September 2016.

- *Coxeter transformation of the poset of order ideals in a grid*, International Conference on Representations of Algebras, Syracuse, NY August 2016.

- *Cluster Algebras*, graduate seminar, University of New Brunswick, NB, April 2015.
- *Two dimensional Yetter-Drinfeld modules over $U_q(sl_2)$ are trivial*, Hopf Algebras in (Co)Action workshop, NB, June 2014.
- *Monomial ideals of path algebras*, research seminar, University of New Brunswick, NB, March 2014.

CONFERENCES ATTENDED

- Summer School of Algebraic Combinatorics, June 2021 (online).
- Virtual ARTA 2021 - Online Conference in Honor of Andrzej Skowroński, May 2021 (online).
- Additive categories between algebra and functional analysis, March 2021 (online).
- Flash Talks in Representation Theory, NTNU, January 2021 (online).
- Dynamical Algebraic Combinatorics, Banff International Research Station, October 2020 (online).
- Winter School "Connections between representation theory and geometry", Hausdorff Research Institute for Mathematics, October 2020 (online).
- Meeting on Representation Theory of Algebras – Corona Edition, Sherbrooke, QC, September 2020 (online).
- Categorifications in Representation Theory, September 2020 (online).
- Cluster Algebras 2020 (online).
- McKay correspondence, mutation and related topics, Kavli IPMU, August 2020 (online).
- Dimers in Combinatorics and Cluster Algebras, University of Michigan, August, 2020 (online).
- Seventh Conference on Geometric Methods in Representation Theory, University of Missouri, Columbia, November 2019.
- The 29th Annual Route 81 Conference on Commutative Algebra and Algebraic Geometry, Kingston, ON, October 2019.
- The XXXIst Meeting on Representation Theory of Algebras, Sherbrooke, QC, September 2019.
- Quiver Varieties and Representation Theory, Centre de Recherches Mathématiques (CRM), Montreal, QC, August 2019.
- Maurice Auslander Distinguished Lectures and International Conference, Woods Hole, Massachusetts, MA, April 2019.
- American Mathematical Society Sectional Meeting, Hartford, CT, April 2019.
- Cluster structures in geometry, physics, combinatorics and representation theory, Jerusalem, December 2018.
- The 28th Annual Route 81 Conference on Commutative Algebra and Algebraic Geometry, Syracuse, September 2018.
- The XXXth Meeting on Representation Theory of Algebras, Sherbrooke, QC, September 2018.
- Canadian Mathematical Society Summer Meeting, Fredericton, NB, June 2018.
- The XIXe Colloque panquébécois des étudiants de l'ISM, Université de Sherbrooke, QC, May 2018.

- Cluster Algebras: Twenty Years On, Centre International de Rencontres Mathématiques (CIRM), Luminy, 2018.
- Combinatorial Algebra meets Algebraic Combinatorics, Fifteenth Annual Meeting, Hamilton, ON, January 2018.
- The XXIXth Meeting on Representation Theory of Algebras, Sherbrooke, QC, September 2017.
- Advances in Representation Theory of Algebras VI: Geometry and Homology (ARTA), CIRM, Luminy, 2017.
- The Mathematical Congress of the Americas (MCA), Montreal, QC, July 2017.
- Maurice Auslander Distinguished Lectures and International Conference, Woods Hole, MA, April 2017.
- Combinatorial Algebra meets Algebraic Combinatorics, Fourteenth Annual Meeting, Montreal, QC, January 2017.
- The XXVIIIth Meeting on Representation Theory of Algebras, Sherbrooke, QC, September 2016.
- International Conference on Representations of Algebras, Syracuse, NY, August 2016.
- The XIXe Colloque panquébécois des étudiants de l'ISM, QC, May 2016.
- Maurice Auslander Distinguished Lectures and International Conference, Woods Hole, MA, April 2016.
- Canadian Mathematical Society Winter Meeting, Montreal, QC, December 2015.
- The XXVIIth Meeting on Representation Theory of Algebras, Sherbrooke, QC, September 2015.
- Maurice Auslander Distinguished Lectures and International Conference, Woods Hole, MA, April 2015.
- Fall Eastern Sectional Meeting Dalhousie University, Halifax, NS, October 2014.

WORKSHOPS ATTENDED

- Connections for Women: Group Representation Theory and Applications, Mathematical Sciences Research Institute, Berkeley, CA February 2018.
- School and Workshop : Algebraic and Geometric Combinatorics of Reflection Groups, Montreal, QC,June 2017.
- Sage Days 86, UQAM, Montreal, QC, April 2017.
- Workshop on Representations of Algebras, Syracuse, NY, August, 2016.
- Positive Grassmannians, CRM, Montreal, QC, July 2015.
- Cluster algebras, Poisson Structure, Networks and Integrable Systems, CRM, Montreal, QC, July 2015.
- Hopf Algebras in (Co)Action, Fredericton, NB, June 2014.
- Noncommutative Geometry and Quantum Groups, Bahcesehir University, Istanbul, September 2014.
- Path Algebras and Homology, Bahcesehir University, Istanbul, January 2013.

TEACHING   **Queen's University, Kingston, Canada:**

1. *Vector Calculus* in the Fall semesters 2018; 2019; 2020. The class size was about 150 students in 2018 and 2019. The online course in 2020 Fall have about 275 students. I have been responsible for every aspect of the teaching for each semester.

2. *Rings and Fields* in the Winter semester 2019 to 55 students.

3. *Linear Algebra* for the Winter semester 2020; 2021. I had about 120 students in 2020 and 135 students in 2021.

University of New Brunswick, Fredericton, Canada:

1. From January 2014 to August 2015, I worked as a teaching assistant for introductory calculus classes. I was responsible for preparing exercises and grading. I conducted problem solving sessions for two hours every week.

2. In addition, I worked as a tutor at the Math Help Center helping students in their homeworks and questions related to math courses.

Arel University, Istanbul, Turkey:

1. From September 2012 to December 2013, I was a full time lecturer.

2. I taught introductory calculus classes in English to first and second year engineering students.

3. I had around six sections each semester and each section included around 25 students.

4. I was responsible from every aspect of teaching; preparing and giving lectures, assigning and grading homeworks, preparing and grading exams.

SUPERVISING   *Undergraduate:*
- Elifnaz Gülsen, *Quiver representations and their interaction with algebra and combinatorics*
- Molly Liu, *Cluster algebras and combinatorics*

SKILLS   *Languages:* Turkish (native), English (fluent), French (intermediate).
Software: Sage, GAP, Pyhton, R, Jupyter.
Art: Painting, Photography.