Daniel Dema

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Education

York University Sep. 2024 – Aug. 2025 (Expected)
Master of Arts - Pure Mathematics *Toronto, ON*

University of Toronto Sep. 2019 – Apr. 2024
Honours Bachelor of Science - Mathematics Specialist Program *Toronto, ON*

Relevant Coursework: *Measure Theory, Dynamics of Transformation Groups and Structural Ramsey Theory, Set Theory, Readings on the Continuum Hypothesis, Readings on Descriptive Set Theory, Topics in Set Theory: Forcing and its Applications, K-Theory and C*-Algebras*

Teaching Experience

Teaching Assistant Sep. 2021 – Present
University of Toronto *Toronto, ON*

Courses TAed:

- MAT240H5 - Algebra I (Winter 2023, Winter 2024)
- MAT224H5 - Linear Algebra II (Fall 2021, Winter 2022, Winter 2023)
- MAT137Y5 - Calculus (Winter 2022)
- MAT136H5 - Integral Calculus (Winter 2024)
- MAT135H5 - Differential Calculus (Summer 2022)
- MAT102H5 - Introduction to Mathematical Proofs - (Fall 2022, Summer 2023, Fall 2023, Summer 2024)
- MATA22H3 - Linear Algebra I for Mathematical Sciences (Summer 2023)

Private Tutor Sep. 2021 – Present
Toronto, ON

- Provided one-on-one lessons to students for courses in calculus and linear algebra at the University of Toronto
- Introduced students to new ideas and reinforced their understanding of concepts learned in class
- Ran sessions both in person and remotely through Zoom

Talks

An Introduction to Descriptive Set Theory (University of Toronto, 2023): A crash course on Polish spaces, followed by an introduction to the notions of measure and category, with a discussion of how classical theorems on Polish spaces can be used to prove the Erdős-Sierpiński duality between measure and category.

Basic Embedding Results in Descriptive Set Theory (University of Toronto, 2023): A brief introduction to Polish spaces, followed by a discussion of classical embedding results involving the the Hilbert Cube, the Cantor space, and the Baire space.

Professional Development

Extended French Certificate With Specialization May 2019
Toronto Catholic District School Board

References

Professor Stevo Todorčević *University of Toronto*
stevo@math.toronto.edu

Professor Ivan Khatchatourian *University of Toronto*
ivan.khatchatourian@utoronto.ca

Professor Jaimal Thind *University of Toronto*
jaimie.thind@utoronto.ca