

Wael Mattar

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Profile

Applied mathematician with extensive knowledge and enthusiasm to solve real-life problems. Currently pursuing my Ph.D. at Tel Aviv University under the supervision of Prof. Nir Sharon.

Education

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| Ph.D. in Applied Mathematics at Tel Aviv University | 2022 – present |
| M.Sc. in Applied Mathematics at Tel Aviv University , Magna Cum Laude | 2018 – 2021 |
| <ul style="list-style-type: none">• 97 thesis grade and 91 GPA• Thesis topic: Multiscale Representations of Manifold-valued Data Via Subdivision Operators• Coursework: Mathematical Foundation of Machine Learning, Optimization, Spectral Methods in Data Analysis | |
| B.Sc. in Applied Mathematics at Ort Braude College , Cum Laude | 2015 – 2018 |
| <ul style="list-style-type: none">• 86 GPA• Final project: Analyticity of Semigroups• Coursework: Data Structures, Algorithms, Numerical Analysis and Approximation Theory• 2 research-level seminars in Complex Analysis | |

Experience

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| Tel Aviv University , Teaching Assistant | Tel Aviv, IL |
| <ul style="list-style-type: none">• Teaching Harmonic Analysis and Ordinary Differential Equations to Engineering students, and Scientific Computing for Mathematicians. | 2022 – present |
| Nemodata , Data Scientist | Tel Aviv, IL |
| <ul style="list-style-type: none">• Developing mathematical models to predict vehicle malfunctions based on acquired data and scheduling preventive maintenance accordingly. | 2021 – 2022 |
| Ort Braude College , Teaching Assistant | Tel Aviv, IL |
| <ul style="list-style-type: none">• Teaching Calculus, Algebra and Differential Equations to Engineering students. | 2018 – 2021 |

Publications

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| Multiscale analysis via pseudo-reversing and applications to manifold-valued sequences | 2025 |
| <i>W. Mattar</i> , N. Sharon
Journal of Computational and Applied Mathematics, Volume 474, 2025. | |
| Wavelets Are All You Need for Autoregressive Image Generation | 2025 |
| <i>W. Mattar</i> , I. Levy, N. Sharon, S. Dekel
To appear in Pure and Applied Functional Analysis | |
| Pyramid Transform of Manifold Data via Subdivision Operators | 2023 |
| <i>W. Mattar</i> , N. Sharon
IMA Journal of Numerical Analysis, Volume 43, Issue 1, Pages 387 - 413, 2023. | |

Awards and Scholarships

1. Excellence in Doctoral Research Award – granted by the School of Mathematical Sciences, TAU (July 2025)
2. The Nehemia Levtzion Scholarship for Outstanding Doctoral Students From the Periphery (August 2023)
3. Excellence in Research, granted by the faculty of Exact Sciences, TAU (April 2023)
4. The Council for Higher Education Scholarship for Arab Students in Graduate Studies (December 2018)

Skills

Programming: C, Python, MATLAB and LaTeX

Languages: Arabic as a native language, English and Hebrew in full proficiency.