



Amirkabir University of Technology  
(Tehran Polytechnic)

# Application of Wavelet on Electromagnetic Integral Equation

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**Purpose:** Why are wavelets significant in solving electromagnetic integral equations?

- Basics of wavelets.
- Overview of electromagnetic integral equations.
- Applications and results.

# Wavelet's Overview

- Definition of wavelets.
- Key properties: localization in time and frequency, multi-resolution analysis.

# Electromagnetic Integral Equations

- Basic form and significance.
- Challenges in solving them, e.g., computational complexity.

**Tip:** Use diagrams to explain abstract concepts.

## How wavelets are applied to electromagnetic integral equations:

- Why wavelets are suitable for these equations.
- Highlight the steps or algorithm involved.

**Equations:** Show key equations sparingly, explaining the meaning of each term.

## Real-world examples:

- Antenna design.
- Signal propagation.

**Broader impact:** Potential applications in acoustics and signal processing.

- Computational resource requirements.
- Specific cases where wavelets are less effective.

**Future Work:** Discuss areas for improvement or future research.



- Benefits of wavelets for electromagnetic integral equations.
- Main results of your study.

**Ending Note:** Vision for future work and practical implications of findings.

- Acknowledge your professor, university, and anyone else who contributed.

**Thank you for your attention!**



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