

Hongyun Deng, Master's Candidate

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Research Interests

I am a self-motivated and team-minded master's candidate with 2 years of experience in studying the numerical methods of solving the electromagnetic problems. I am interested in applying different mathematical and physical theories and methods to solve the electromagnetic problems appearing in the microwave technology.

Education

09/2020 – present	Shanghai Jiao Tong University
Shanghai, China	M. E. Electronic Engineering
09/2016 – 06/2020	Shanghai Jiao Tong University
Shanghai, China	B. E. Electronic Engineering

Research Experiences

09/2020 – present	Graduate Research Assistant
Shanghai, China	<i>Department of Electronic Engineering, Shanghai Jiao Tong University</i> Studying the electromagnetic scattering problem of the moving object in the lossy medium; Developed a fast algorithm of evaluating the Doppler effect of an arbitrarily shaped object which moves uniformly in the free space using the integral equation method; Proposed a new efficient method of computing the Sommerfeld integrals appearing in the electromagnetic problem in the planar stratified medium
09/2017 – 06/2019	Undergraduate Research Assistant
Shanghai, China	<i>Department of Electronic Engineering, Shanghai Jiao Tong University</i> Studied the principles of electromagnetic metamaterials for different uses

Skills

Analyze electromagnetic problems with the integral equation method (3 years)
Software engineering (FORTRAN, C/C++, MATLAB, Mathematica, 4 years)
Scientific Writing and Illustration (MS Office, Latex, Visio, Adobe Illustrator, 3 years)

Awards

2022	IEEE Antennas and Propagation Society Fellowship (APSF, Application)
2020 – 2021	Academic Scholarship, Shanghai Jiao Tong University, China
2021	Ceyear Scholarship, Ceyear Technologies Co., Ltd, China

Publications

Journal Papers

H. Deng, G. Xiao and G. Liu, "An Efficient Method for Calculating the Doppler Spectrum of an Arbitrarily Shaped Object in Uniform Motion," *IEEE Trans. on Antennas Propag.*, 2022, doi: 10.1109/TAP.2022.3191188. (**Early Access**)
H. Deng, G. Xiao, and S. Huang, "New Approximate Expressions for Evaluating the Fields of a Vertical Magnetic Dipole in a Dissipative Half Space", *ACES Journal*, vol. 36, no. 11, pp. 1393–1400, Dec. 2021.

Conference Papers

H. Deng, G. Xiao, “The Numerical Analysis of the Doppler Effect of an Arbitrarily Shaped PEC Object in Uniform Motion,” *2022 Asia-Pacific International Symposium on Electromagnetic Compatibility (AP EMC)*, 2022. **(Accepted)**

H. Deng, S. Huang and G. Xiao, “A Fast Algorithm for Computing Fields of a Vertical Magnetic Dipole in a Dissipative Half-Space,” *2021 International Applied Computational Electromagnetics Society (ACES-China) Symposium*, 2021, pp. 1-2.