Zekui Jia

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Education

Tsinghua University, Beijing, China 2018 – 2023

PhD in Electronic Engineering
Advisor: Prof. Maokun Li

Xidian University, Shaanxi, China 2014 – 2018

B.S. in Physics and Optoelectronic Engineering

Working Experience

Purdue University, West Lafayette, Indiana, United States 2023 – Present

Post Doctoral Research Associate

Schlumberger, Houston, Texas, United States Jun. 2020 – Sep. 2020

Internship

Honors and Awards

- The Comprehensive Scholarship, Tsinghua University 2022
- Honorable Mention Papers, IEEE AP-S/URSI 2022 Student Paper Competition 2022
- Outstanding Graduates, Xidian University 2018
- National Scholarship, Xidian University 2016
- Special Scholarship, Xidian University 2015
- The Third Prize Scholarship, Xidian University 2015

Teaching Experience

- Computational Electromagnetics, Tsinghua University Fall 2020
- Theory and Methods in Electromagnetic Inverse Problems, Tsinghua University Spring 2022

Publications

- Jia, Zekui, Maokun Li, Fan Yang, and Shenheng Xu. "Estimation of the Born data in inverse scattering of layered media." Inverse Problems (2024).
- Jia, Zekui, and Maokun Li. "Direct Imaging of Layered Media with SISO Data Using Reduced Order Models." In 2023 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (USNC-URSI), pp. 461-462. IEEE, 2023.
- Shao, Tianchen, Zekui Jia, Maokun Li, Fan Yang, and Shenheng Xu. "Inversion of 2D Permittivity Distribution with Iterative Data to Born Method." In 2023 International Applied Computational Electromagnetics Society Symposium (ACES-China), pp. 1-2. IEEE, 2023.
- Jia, Zekui, Maokun Li, Fan Yang, and Shenheng Xu. "Linearization of 2d inverse scattering problems based on reduced order models." In 2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI), pp. 1714-1715. IEEE, 2022.
- Jia, Zekui, Rui Guo, Maokun Li, Guojun Wang, Zhiqu Liu, and Yun Shao. "3-D model-based inversion using supervised descent method for aspect-limited microwave data of metallic targets." IEEE Transactions on Geoscience and Remote Sensing 60 (2021): 1-10.

- Jia, Zekui, Rui Guo, Maokun Li, Fan Yang, and Shenheng Xu. "Enhanced born approximation for wave equations." In 2021 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI), pp. 1817-1818. IEEE, 2021.
- Jia, Zekui, Rui Guo, Maokun Li, Fan Yang, Shenheng Xu, Guojun Wang, and Zhiqu Liu. "3D Model-based Inversion with Limited Microwave Data Using Supervised Descent Method." In 2020 International Conference on Microwave and Millimeter Wave Technology (ICMMT), pp. 1-3. IEEE, 2020.
- Guo, Rui, Zekui Jia, Xiaoqian Song, Maokun Li, Fan Yang, Shenheng Xu, and Aria Abubakar. "Pixel-and model-based microwave inversion with supervised descent method for dielectric targets." IEEE Transactions on Antennas and Propagation 68, no. 12 (2020): 8114-8126.
- Guo, Rui, Zekui Jia, Xiaoqian Song, Maokun Li, Fan Yang, Shenheng Xu, and Aria Abubakar. "Supervised descent method for full-wave microwave imaging." In 2019 Photonics & Electromagnetics Research Symposium-Fall (PIERS-Fall), pp. 624-631. IEEE, 2019.
- Guo, Rui, Zekui Jia, Xiaoqian Song, Maokun Li, Fan Yang, Shenheng Xu, and Aria Abubakar. "Microwave inversion for sparse data using descent learning technique." In 2019 13th European Conference on Antennas and Propagation (EuCAP), pp. 1-4. IEEE, 2019.
- Guo, Rui, Zekui Jia, Xiaoqian Song, Maokun Li, Fan Yang, Shenheng Xu, and Aria Abubakar. "Application of Supervised Descent Method to Parametric Level-set Approach." In 2019 IEEE International Conference on Computational Electromagnetics (ICCEM), pp. 1-2. IEEE, 2019.