

Zhe (Peter) Zhang

**Dean, Professor, Ph.D. Supervisor, IEEE Senior Member
NSFC Excellent Young Scientists Fund Program (Overseas)
CAS “One Hundred” Talent**

DOB: 01/31/1988
ADDRESS (SUZHOU): Room B203-12, Lab 22
Suzhou Aerospace Information Research Institute
158 Dushuhu Ave, Suzhou Industrial Park, Suzhou, Jiangsu 215000, China
ADDRESS (BEIJING): Room 342, Main Bldg, Lab 1
Aerospace Information Research Institute, Chinese Academy of Sciences
19 West Beisihuan Road, Haidian District, Beijing 100190, China
ADDRESS (JINAN): Room 5402, Teaching Bldg #5, School of Electronics Information
Aerospace Information Technology University
2 Daxue Road, Zhangqiu District, Jinan, Shandong 250200, China
TEL: +86-512-69836908; +86-13466717625; +1-(202)531-7210
EMAIL: zhangzhe01@aircas.ac.cn; nagatokana@gmail.com
HOMEPAGE: <https://people.ucas.ac.cn/~zhe>.

Working Experience

2025.08-	Dean
2025.08-	Professor, Ph.D Supervisor School of Electronics Information, Aerospace Information Technology University , Jinan, Shandong 250200, China <i>Interest Field: Sparse signal processing, Sparse Microwave Imaging, Synthetic aperture radar, Three-dimensional SAR imaging, Combination of signal processing and deep learning.</i>
2023.01-	Lab Vice Director, Academic Leader
2022.04-	Professor, Ph.D Supervisor
2021.01–2022.04	Associate Professor Aerospace Information Research Institute, Chinese Academy of Sciences , Beijing 100190, China National Key Laboratory of Microwave Imaging , Beijing 100190, China Suzhou Aerospace Information Research Institute , Suzhou, Jiangsu 215000, China Suzhou Key Laboratory of Microwave Imaging, Processing and Application Technology , Suzhou, Jiangsu 215000, China <i>Interest Field: Sparse signal processing, Sparse Microwave Imaging, Synthetic aperture radar, Three-dimensional SAR imaging, Combination of signal processing and deep learning.</i>
2023.10–	Double Employed Professor University of Chinese Academy of Sciences , Beijing 100190, China
2023.09–	Adjunct Professor

	Qian Xuesen Honors College, Xi'an Jiaotong University , Xi'an, Shaanxi 710049, China
2024.10-	Adjunct Professor Harbin Engineering University , Harbin, Heilongjiang, China
2025.05-	Adjunct Professor Beijing University of Posts and Telecommunications , Beijing, China
2016.12–2020.06	Post-Doctoral Research Fellow George Mason University , Fairfax, VA 22030, USA Advisor: Tian, Zhi, Professor, IEEE Fellow <i>Interest Field: Sparse signal processing, Atomic norm minimization, Combination of signal processing and deep learning.</i>
2015.12–2016.11	Post-Doctoral Research Scientist George Washington University , Washington, DC 20052, USA Advisor: Tian, Zhi, Professor, IEEE Fellow Cheng, Xiuzhen, Professor, IEEE Fellow <i>Interest Field: Sparse signal processing, Atomic norm minimization.</i>

Education

2009.09–2015.07	PH.D./ SIGNAL AND INFORMATION PROCESSING Institute of Electronics, Chinese Academy of Sciences University of Chinese Academy of Sciences Beijing 100190, China Supervisor: Wu, Yirong, Academician of CAS, Professor <i>Interest Field: Sparse microwave imaging, Sparse signal processing, Synthetic aperture radar.</i>
2014.01–2014.04	VISITING STUDENT University of Connecticut , Storrs, CT 06269, USA Supervisor: Zhou, Shengli, Professor, IEEE Fellow.
2004.09–2008.07	B. ENG. INFORMATION ENGINEERING
2003.09–2004.07	SPECIAL CLASS FOR GIFTED YOUNG Xi'an Jiaotong University Xi'an, Shaanxi 710049, China.

Research Projects

2023.12–	Multi-beam Spaceborne High-Resolution Wide-Swath SAR System and Technology , RMB 25,350,000 Grant: <i>National Key Research and Development Program of China</i> , #2023YFB3904900 Principle Investigator.
----------	---

2022.1–	Sparse Signal Processing and Its Applications in Microwave Imaging , RMB 3,000,000 Grant: <i>NSFC Excellent Young Scientists Fund Program (Overseas) Principle Investigator.</i>
2024.7–	Development and Application of Multimodal Remote Sensing Big Data Intelligent Platform based on Ascend Technology , RMB 5,000,000 Grant: <i>jiangsu Province Frontier Technology Research and Development Program Principle Investigator.</i>
2021.1–	Sparse Signal Processing and Deep Learning with Their Applications in Microwave Imaging , RMB 4,000,000 Grant: <i>CAS “One Hundred Talent” Project Principle Investigator.</i>
2021.12–	High Efficiency Sensing System and Technology of Three-dimensional Microwave Imaging , RMB 500,000 Grant: <i>Suzhou S&T Development Project, #ZXL2022381 Principle Investigator.</i>
2021.7–	Structural Signal Adaptive High Efficiency sensing Theory and Its Applications in Microwave Imaging , RMB 1,300,000 Grant: <i>CAS Key Grant Principle Investigator.</i>
2020.1–	Synthetic Aperture Radar Microwave Vision Three-dimensional Imaging Theory and Application Foundations , RMB 20,000,000 Grant: <i>NSFC Major Program, #61991421, 61991420 Co-PI.</i>
2018.8–2018.11	A Gated LFMCW TDMA MIMO SAR based Hidden Chamber Detector , USD \$150,000 Grant: <i>USSOCOM SBIR, #S173-004-0118 Participant.</i>
2015.12–2020.6	Task-Cognizant Sparse Sensing for Inference , USD \$400,000 Grant: <i>National Science Foundation (NSF) Standard Grant, #1527396 Participant.</i>
2010.04–2015.07	Theory, System and Methodology of Sparse Microwave Imaging , RMB 33,000,000 Grant: <i>National Major Fundamental Science Research Project (973 Project), #2010CB731900 Participant.</i>
2012.04–2015.07	Advanced Microwave Sensing and Information Processing , RMB 4,300,000

Grant: *Chinese Academy of Sciences*
Participant.

Honors

- 2022.09 | **Jiangsu Chief Science and Technology Communication Expert** / *Jiangsu Science and Technology Association*
- 2024.11 | **Wiley China Excellent Author Program** / *Wiley*
- 2022.01 | **Excellent Young Scientists Fund Program (Overseas)** / *NSFC*
- 2021.01 | **CAS “One Hundred Talent”** / *Chinese Academy of Sciences*
- 2021.12 | **Suzhou “Gusu Leading Talent”** / *Suzhou City*
- 2022.12 | **Jiangsu “Innovative and Entrepreneurial Talent”** / *Jiangsu Province*
- 2022 | **CAS “Young Cross Teams” Member** / *Chinese Academy of Sciences*

Awards

- 2022.03 | **National Disruptive Technology Innovation Competition** / *Ministry of Science and Technology, China*
Excellence Prize in Final Competition
- 2021.12 | **Winner Prize**
- 2021.12 | **Excellence Prize**
- 2008.04 | **TI DSP Contest** / *Texas Instruments*
Winner Prize
- 2008.02 | **COMAP Mathematical Modeling Contest** / *COMAP*
Meritorious
- 2007.02 | **Honorable Mentioned**
- 2006.09 | **China College Mathematical Modeling Contest** / *CSIAM*
Second Prize

Services

Professional Society Membership and Services

| **Xi'an Jiaotong-Liverpool University**

<p>2022.07–</p> <p>2021.11–</p>	<p><i>External Mentor</i></p> <p><i>Pilotage Mentor</i></p>
<p>2024.01–</p> <p>2016.01–2024.01</p> <p>2010.01–2015.12</p>	<p>IEEE</p> <p><i>Senior Member</i></p> <p><i>Member</i></p> <p><i>Student Member</i></p>
<p>2024.06–</p>	<p>CSIG</p> <p>Microwave Intelligent Imaging Professional Committee</p> <p><i>Committee Member</i></p>
<p>2024.06–</p>	<p>CNC-ISDE</p> <p>Microwave Remote Sensing Professional Committee</p> <p><i>Committee Member</i></p>
<p>2025.05–</p> <p>2024.06–</p>	<p>CIC</p> <p><i>Senior Member</i></p> <p>Space-Air-Ground Integrated Network Communication Professional Committee</p> <p><i>Committee Member</i></p>
<p>2021.04–</p>	<p>CIE</p> <p><i>Member</i></p>
<p>2020.11–</p>	<p>JSAAI</p> <p><i>Member</i></p>

Journal Reviewers

- *Transactions on Pattern Analysis and Machine Intelligence* Journal, SCI.
- *International Journal of Image and Data Fusion* Journal, SCI.
- *CAAI Transactions on Intelligence Technology* Journal, SCI.
- *IEEE Transactions on Antennas and Propagation* Journal, SCI.
- *IEEE Transactions on Image Processing* Journal, SCI.
- *IEEE Transactions on Aerospace and Electronic Systems* Journal, SCI.
- *Journal of Electromagnetic Engineering and Science* Journal, SCI.
- *IEEE Internet of Things Journal* Journal, SCI.
- *Remote Sensing Letters* Journal, SCI.
- *International Journal of Remote Sensing* Journal, SCI.
- *IEEE Transactions on Industrial Informatics* Journal, SCI.
- *IEEE Transactions on Signal Processing* Journal, SCI.

- *IEEE Signal Processing Letters* Journal, SCI.
- *IEEE Open Journal of Signal Processing* Journal, SCI.
- *IEEE Journal of Selected Topics in Signal Processing* Journal, SCI.
- *Signal Processing* Journal, SCI.
- *National Science Open* Journal, SCI.
- *IEEE Transactions on Geoscience and Remote Sensing* Journal, SCI.
- *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* Journal, SCI.
- *IEEE Geoscience and Remote Sensing Letters* Journal, SCI.
- *IEEE Transactions on Industrial Electronics* Journal, SCI.
- *IEEE Sensors Journal* Journal, SCI.
- *IET Radar, Sonar & Navigation* Journal, SCI.
- *IET Electronics Letters* Journal, SCI.
- *IET Signal Processing* Journal, SCI.
- *Remote Sensing* Journal, SCI.
- *Science China Information Science* Journal, SCI.
- *Cogent Engineering* Journal, SCI.
- *Geo-spatial Information Science* Journal, SCI.
- *International Journal of Microwave and Wireless Technologies* Journal, SCI.
- *IEEE Access* Journal, SCI.
- *Tsinghua Science and Technology* Journal, SCI.
- *IEEE Transactions on Circuits and Systems for Video Technology* Journal, SCI.
- *IEEE Wireless Communications Letters* Journal, SCI.
- *Journal of Communications and Networks* Journal, SCI.
- *IEEE Transactions on Computational Imaging* Journal, SCI.
- 雷达学报 Journal, EI.

Vice President of Organizing Committee Member

- The 5th National Radar Earth Observation Symposium, Suzhou, China, May 23-25, 2025.

Organizing Committee Member and Technical Program Chair

- 2022 International Workshop on Microwave Vision and 3D SAR Imaging (MiViSAR 2022), Suzhou, China, Oct 17-19, 2022.

Session Chair

- 2022 IET International Radar Conference, Chongqing, China, Dec 3-5, 2023.
- 2024 PhotonIcs and Electromagnetics Research Symposium (PIERS), Chengdu, China, Apr 21-25, 2024.
- 2024 IEEE International Conference on Signal, Information and Data Processing (IC-SIDP), Zhuhai, China, Nov 22-24, 2024.

TPC Member / Reviewer

2026 | PIERS 2026, ICC 2026.

2025 | MWI 2025, EECSI 2025, iSemantic 2025, ISPA 2025, RAFC 2025.

2024 | PIERS 2024, ICC 2024, CoSeRa 2024, EECSI 2024, Globecom2024, IJEECS 2024, EEET 2024, ICSIDP 2024, AIT 2024.

2023 | EECSI 2023, iSemantic 2023, Globecom 2023, SIRS 2023, IJCDS 2023, IJEECS 2023, IET Radar 2023.

2022 | EEET 2022, EECSI 2022, IJCDS, IJECE 2021-22, FSDM 2022.

2021 | IJEECS 2021, BEEI 2020-21, ICITech 2021, FSDM 2021, TELKOMNIKA 2021.

2020 | CITEI 2020, SIRS 2020, FSDM 2020.

2019 | SIRS 2019, DISP 2019

2018 | CoSeRa 2018, SIRS 2018, EECSI 2018, ICW-TELKOMNIKA 2018, FSDM 2018.

2017 | ICITech 2017, EECSI 2017, SIRS 2017, FSDM 2017.

2016 | CoSeRa 2016.

2015 | CoSeRa 2015, ISSPIT 2015, ICSPDM 2015.

Languages

ENGLISH: Professional (Reside in US for 5 years, CET-6/PETS-5/WSK pass, TOEFL 96)
JAPANESE: Fair

Open Source Projects and Services

2006.04–2015.11	BMY BBS (http://bbs.xjtu.edu.cn/ , http://bmybbs.com/) Host: https://github.com/bmybbs?type=source <i>Technical Leader</i>
2010.06–2019.04	KYXK BBS (http://bbs.ucas.ac.cn/ , http://kyxk.net/) <i>Technical Leader</i>
2018.09–	hCNN (https://github.com/pzhg/hCNN) <i>Principle Developer</i>

Publications (Bold for Corresponding / First Authorship)

JOURNAL ARTICLES

1. Z. Ma, X. Ye, Z. Zhang*, B. Zhang, and X. Qiu, “PTIR-Net: A Joint Optimization Network of Pulse Transmission and Sparse Reconstruction for Azimuth Multichannel SAR System,” *IEEE Geosci. Remote Sens. Lett.*, vol. 23, pp. 1–5, 2026, doi: [10.1109/LGRS.2025.3645604](https://doi.org/10.1109/LGRS.2025.3645604).
2. Y. Huang, W. Tie*, Z. Zhang, H. Li, and D. Lu, “Hierarchical Framework for Remote Sensing Deep Learning Evaluation on Terminal Devices,” *IEEE J. Sel. Top. Appl. Earth Obs. Remote Sens.*, vol. 18, pp. 28920–28938, 2025, doi: [10.1109/JSTARS.2025.3629641](https://doi.org/10.1109/JSTARS.2025.3629641).
3. Z. Ma, Z. Zhang*, B. Zhang, and X. Qiu, “PUSIF-DUNet: Deep SAR Imaging Network With Joint Optimization on Learnable Probabilistic Undersampling and Unambiguous Reconstruction,” *IEEE J. Sel. Top. Appl. Earth Obs. Remote Sens.*, vol. 18, pp. 28217–28233, 2025, doi: [10.1109/JSTARS.2025.3625733](https://doi.org/10.1109/JSTARS.2025.3625733).
4. 王骜巍, 商明样, and 张柘 *, “一种改进 DBF 方法用于多通道 SAR 非均匀采样重构,” *河南科技大学学报*, vol. 46, no. 3, pp. 1–10, 2025.
5. 海那尔·哈那提, 张柘, 朱利鲁, and 吴一戎 *, “基于区块链的多模态遥感大数据治理方法与系统,” *河南科技大学学报*, vol. 46, no. 2, pp. 1–11, 2025, doi: [10.15926/j.cnki.issn1672-6871.2025.02.001](https://doi.org/10.15926/j.cnki.issn1672-6871.2025.02.001).
6. C. Wang, Q. Yan, X. Qiu, Y. Luo, L. Peng, and Z. Zhang, “A Geometric Semantic Enhanced TomoSAR Reconstruction Algorithm in an Urban Area: Analysis and Application,” *J. Remote Sens.*, vol. 5, Jan. 2025, doi: [10.34133/remotesensing.0583](https://doi.org/10.34133/remotesensing.0583).
7. Z. Jin, Z. Pan, Z. Zhang*, and X. Qiu, “SAAS-Net: Self-Supervised Sparse Synthetic Aperture Radar Imaging Network with Azimuth Ambiguity Suppression,” *Remote Sens.*, vol. 17, no. 6, p. 1069, Mar. 2025, doi: [10.3390/rs17061069](https://doi.org/10.3390/rs17061069).
8. D. Zhao, Z. Zhang*, D. Lu, X. Qiu, W. Li, H. Li, and Y. Wu, “CV-YOLO: A Complex-Valued Convolutional Neural Network for Oriented Ship Detection in Single-Polarization Single-Look Complex SAR Images,” *Remote Sens.*, vol. 17, no. 8, p. 1478, Apr. 2025, doi: [10.3390/rs17081478](https://doi.org/10.3390/rs17081478).
9. S. Song, X. Qiu*, S. Shangguan, Y. Luo, Z. Li, and Z. Zhang, “A polarization-power-maximum-based 3D imaging method for Ku-band UAV-borne fully-polarimetric array InSAR,” *IEEE J. Sel. Top. Appl. Earth Obs. Remote Sens.*, vol. 18, pp. 10320–10336, 2025, doi: [10.1109/JSTARS.2025.3555662](https://doi.org/10.1109/JSTARS.2025.3555662).

10. Z. Wang, Z. Wang, X. Qiu, and Z. Zhang*, “Fine classification of multi-frequency PolSAR images using an adaptive fusion network,” *Remote Sens. Lett.*, vol. 16, no. 5, pp. 461–471, May 2025, doi: 10.1080/2150704X.2025.2470884.
11. Y. Huang, H. Li, D. Lu, Z. Zhang, and W. Tie*, “Intelligence Evaluating Computational Power: A Multi-Factor Method,” *IEEE Access*, vol. 13, pp. 27398–27415, 2025, doi: 10.1109/ACCESS.2025.3538977.
12. D. Wang, D. Lu, J. Zhao, W. Li, H. Li, J. Xu, J. Huang, and Z. Zhang*, “Multiscale Pillars Fusion for 4-D Radar Object Detection With Radar Data Enhancement,” *IEEE Sens. J.*, vol. 25, no. 3, pp. 5102–5115, Feb. 2025, doi: 10.1109/JSEN.2024.3516786.
13. R. Shi, Y. Luo, Z. Zhang, X. Qiu*, and C. Ding, “A Three-Dimensional Imaging Method for Unmanned Aerial Vehicle-Borne SAR Based on Nested Difference Co-Arrays and Azimuth Multi-Snapshots,” *Remote Sens.*, vol. 17, no. 3, p. 516, Feb. 2025, doi: 10.3390/rs17030516.
14. G. Zhou*, Y. Zuo, Z. Zhang, B. Zhang, and Y. Wu, “CR-DEQ-SAR: A Deep Equilibrium Sparse SAR Imaging Method for Compound Regularization,” *IEEE J. Sel. Top. Appl. Earth Obs. Remote Sens.*, vol. 18, pp. 4680–4695, 2025, doi: 10.1109/JSTARS.2025.3533082.
15. M. Shao*, Y. Fan, Y. Zhang, Z. Zhang, J. Zhao, and B. Zhang, “A Novel Gridless Non-Uniform Linear Array Direction of Arrival Estimation Approach Based on the Improved Alternating Descent Conditional Gradient Algorithm for Automotive Radar System,” *Remote Sens.*, vol. 17, no. 2, p. 303, Jan. 2025, doi: 10.3390/RS17020303.
16. P. Jiang, S. Gao, J. Zhao, Z. Zhang*, and B. Zhang, “Gridless DOA Estimation with Extended Array Aperture in Automotive Radar Applications,” *Remote Sens.*, vol. 17, no. 1, p. 33, Dec. 2024, doi: 10.3390/rs17010033.
17. G. Zhou, Z. Zhang*, B. Zhang, and Y. Wu, “An innovative semantically guided SAR imaging and target enhancement method,” *Electron. Lett.*, vol. 60, no. 24, p. e70123, Dec. 2024, doi: 10.1049/ell2.70123.
18. M. Wang, S. Gao, X. Qiu*, and Z. Zhang, “A Novel Phase Error Estimation Method for TomoSAR Imaging Based on Adaptive Momentum Optimizer and Joint Criterion,” *IEEE J. Sel. Top. Appl. Earth Obs. Remote Sens.*, vol. 18, pp. 2042–2051, 2025, doi: 10.1109/JSTARS.2024.3506852.
19. X. Qiu*, Z. Jiao, Z. Zhang, Q. Yan, and C. Ding*, “Advances and prospects in SAR microwave vision three-dimensional imaging,” *Natl. Sci. Open*, vol. 3, no. 5, p. 20240009, Sep. 2024, doi: 10.1360/ns0/20240009.
20. Y. Zhao, D. Xiao, Z. Pan, B. W. K. Ling, Y. Tian, and Z. Zhang*, “Sparse SAR Imaging Based on Non-Local Asymmetric Pixel-Shuffle Blind Spot Network,” *Remote Sens.*, vol. 16, no. 13, p. 2367, Jun. 2024, doi: 10.3390/rs16132367.
21. 仇晓兰, 罗一通, 宋舒洁, 彭凌霄, 程遥, 颜千程, 上官松涛, 焦泽坤, 张柘, 丁赤飚, “微波视觉三维 SAR 实验系统及其全极化数据处理方法,” *雷达学报*, vol. 13, no. 5, pp. 941–954, Sep. 2024, doi: 10.12000/JR24137.
22. S. Gao, M. Wang, Z. Zhang*, B. Zhang, and Y. Wu, “Efficient Gridless DOA Estimation for Nonuniformly Spaced Linear Arrays in Automotive Radar Sensors,” *IEEE Sens. J.*, vol. 24, no. 17, pp. 27737–27749, Sep. 2024, doi: 10.1109/JSEN.2024.342

23. M. Wang, X. Qiu*, Z. Zhang, and S. Gao, “A domain adaptation framework for cross-modality SAR 3D reconstruction point clouds segmentation utilizing LiDAR data”, Int. J. Appl. Earth Obs. Geoinf., vol. 133, p. 104103, Sep. 2024, doi: 10.1016/j.jag.2024.104103.
24. Y. Wu, R. Song, Z. Zhang*, X. Qiu, and W. Yu, “GSAT-Net: An Azimuth Ambiguity Suppression Network Based on Group Sparsity and Adaptive Threshold for Undersampling SAR Imaging,” IEEE Geosci. Remote Sens. Lett., vol. 21, pp. 1–5, 2024, doi: 10.1109/LGRS.2024.3452796.
25. S. Gao, M. Wang, Z. Zhang*, B. Zhang, and Y. Wu, “Efficient gridless 2D DOA estimation based on generalized matrix-form atomic norm minimization,” Electron. Lett., vol. 60, no. 10, p. e13212, May 2024, doi: 10.1049/ell2.13212..
26. Y. Zhao, C. Ou, H. Tian, B. W.-K. Ling, Y. Tian, and Z. Zhang*, “Sparse SAR Imaging Algorithm in Marine Environments Based on Memory-Augmented Deep Unfolding Network,” Remote Sens., vol. 16, no. 7, p. 1289, Apr. 2024, doi: 10.3390/rs16071289.
27. S. Gao, W. Wang, M. Wang, Z. Zhang*, Z. Yang, X. Qiu, B. Zhang, and Y. Wu, “A Robust Super-resolution Gridless Imaging Framework for UAV-borne SAR Tomography,” IEEE Trans. Geosci. Remote Sens., vol. 62, pp. 1–17, 2024, doi: 10.1109/TGRS.2024.3393972..
28. Z. Wang, Z. Wang, X. Qiu, and Z. Zhang*, “Global Polarimetric Synthetic Aperture Radar Image Segmentation with Data Augmentation and Hybrid Architecture Model,” Remote Sens., vol. 16, no. 2, p. 380, Jan. 2024, doi: 10.3390/rs16020380.
29. Y. Zhao, Q. Liu, H. Tian, B. W.-K. Ling, and Z. Zhang*, “DeepRED Based Sparse SAR Imaging,” Remote Sens., vol. 16, no. 2, p. 212, Jan. 2024, doi: 10.3390/rs16020212.
30. Y. Zhao, Q. Liu, H. Tian, M. Luo, B. W.-K. Ling, and Z. Zhang*, “New convex approaches to general MVDR robust adaptive beamforming problems,” Electron. Lett., vol. 59, no. 18, p. e12957, Sep. 2023, doi: 10.1049/ell2.12957.
31. Y. Bai, J. Kang, X. Ding, A. Zhang, Z. Zhang, and N. Yokoya, “LaMIE: Large-Dimensional Multipass InSAR Phase Estimation for Distributed Scatterers,” IEEE Trans. Geosci. Remote Sens., vol. 61, pp. 1–15, Nov. 2023, doi: 10.1109/TGRS.2023.3330971.
32. D. Zhao, Z. Zhang*, D. Lu, J. Kang, X. Qiu, and Y. Wu, “CVGG-Net: Ship Recognition for SAR Images Based on Complex-Valued Convolutional Neural Network,” IEEE Geosci. Remote Sens. Lett., vol. 20, pp. 1–5, 2023, doi: 10.1109/LGRS.2023.3316133.
33. M. Shao, Z. Zhang*, J. Li, J. Kang, and B. Zhang, “TADCG: A Novel Gridless Tomographic SAR Imaging Approach Based on the Alternate Descent Conditional Gradient Algorithm With Robustness and Efficiency,” IEEE Trans. Geosci. Remote Sens., vol. 62, pp. 1–13, 2024, doi: 10.1109/TGRS.2023.3345454.
34. Y. Wu, Z. Zhang*, X. Qiu, Y. Zhao, and W. Yu, “MF-JMoDL-Net: A Sparse SAR Imaging Network for Undersampling Pattern Design towards Suppressed Azimuth Ambiguity,” IEEE Trans. Geosci. Remote Sens., vol. 62, pp. 1–18, 2024, doi: 10.1109/TGRS.2024.3397826..

35. G. Zhou, Z. Xu, Y. Fan, Z. Zhang, X. Qiu, B. Zhang, K. Fu* and Y. Wu, "HPHR-SAR-Net: Hyper-pixel High-resolution SAR Imaging Network Based on Nonlocal Total Variation," *IEEE J. Sel. Top. Appl. Earth Obs. Remote Sens.*, vol. 16, pp. 8595–8608, 2023, doi: 10.1109/JSTARS.2023.3295728.
36. M. Wang, Z. Zhang*, X. Qiu, S. Gao, and Y. Wang, "ATASI-Net: An Efficient Sparse Reconstruction Network for Tomographic SAR Imaging with Adaptive Threshold," *IEEE Trans. Geosci. Remote Sens.*, vol. 61, pp. 1–18, 2023, doi: 10.1109/TGRS.2023.3268132.
37. R. Shi, Z. Zhang*, X. Qiu, and C. Ding, "A Novel Gradient Descent Least-Squares (GDLSS) Algorithm for Efficient Gridless Line Spectrum Estimation With Applications in Tomographic SAR Imaging," *IEEE Trans. Geosci. Remote Sens.*, vol. 61, pp. 1–13, 2023, doi: 10.1109/TGRS.2023.3273568.
38. J. Li, Z. Xu, Z. Li, Z. Zhang*, B. Zhang, and Y. Wu, "An Unsupervised CNN-Based Multichannel Interferometric Phase Denoising Method Applied to To-moSAR Imaging," *IEEE J. Sel. Top. Appl. Earth Obs. Remote Sens.*, vol. 16, pp. 3784–3796, Jul. 2023, doi: 10.1109/JSTARS.2023.3263964.
39. Y. Zhao, Y. Chen, H. Tian, X. Quan, B. W.-K. Ling, and Z. Zhang*, "Wide angle SAR imaging method based on hybrid representation," *Electron. Lett.*, vol. 59, no. 15, p. e12897, Aug. 2023, doi: 10.1049/ell2.12897.
40. P. Jiang, Z. Zhang*, B. Zhang, and Z. Xu, "A novel TomoSAR imaging method with few observations based on nested array," *IET Radar, Sonar Navig.*, vol. 17, no. 6, pp. 925–938, Jun. 2023, doi: 10.1049/rsn2.12388.
41. J. Kang*, T. Ji, Z. Zhang, and R. Fernandez-Beltran, "SAR Time Series Despeckling via Nonlocal Matrix Decomposition in Logarithm Domain," *Signal Processing*, vol. 209, p. 109040, Aug. 2023, doi: 10.1016/j.sigpro.2023.109040.
42. 康健 *, 童风雨, 白雨松, 丁翔, 冀腾宇, and 张柘 *, "基于对数域加性信号分解的时序 SAR 图像相干斑抑制方法," *雷达学报*, vol. 12, no. 5, pp. 1031–1043, Mar. 2023, doi: 10.12000/JR22242.
43. X. Ding, J. Kang*, Z. Zhang, Y. Huang, J. Liu, and N. Yokoya, "Coherence-Guided Complex Convolutional Sparse Coding for Interferometric Phase Restoration," *IEEE Trans. Geosci. Remote Sens.*, vol. 60, pp. 1–14, 2022, doi: 10.1109/TGRS.2022.3228279.
44. Z. Zhu, J. Kang*, T. Ji, Z. Zhang, and R. Fernandez-Beltran, "SAR Time-Series Despeckling via Nonlocal Total Variation Regularized Robust PCA," *IEEE Geosci. Remote Sens. Lett.*, vol. 19, pp. 1–5, 2022, doi: 10.1109/LGRS.2022.3227187.
45. Y. Zhao, W. Huang, X. Quan, W.-K. Ling, and Z. Zhang*, "Data-driven sampling pattern design for sparse spotlight SAR imaging," *Electron. Lett.*, vol. 58, no. 24, pp. 920–923, Nov. 2022, doi: 10.1049/ELL2.12650.
46. Z. Xu, B. Zhang, Z. Zhang*, M. Wang, and Y. Wu, "Nonconvex-Nonlocal Total Variation Regularization Based Joint Feature-Enhanced Sparse SAR Imaging," *IEEE Geosci. Remote Sens. Lett.*, vol. 19, pp. 1–1, 2022, doi: 10.1109/lgrs.2022.3222185.
47. 吕泽鑫, 仇晓兰 *, 张柘, and 丁赤飚, "极化干涉 SAR 面向城区不同处理模式的误差影响分析," *雷达学报*, 2022, doi: 10.12000/JR22059.

48. Z. Xu, G. Zhou, B. Zhang, Z. Zhang* and Y. Wu, "Sparse Regularization Method Combining SVA for Feature Enhancement of SAR Images," *Electronics Letters*, Jun. 2022, doi: 10.1049/ell2.12509.
49. 赵曜, 许俊聰, 全相印, 崔莉, and 张柘 *, “基于稀疏和低秩结构的层析 SAR 成像方法,” *雷达学报*, vol. 11, no. 1, pp. 52–61, 2022.
50. 杜邦, 仇晓兰, 张柘, 雷斌, and 丁赤飚, “基于扰动的结合 Off-grid 目标的层析 SAR 三维成像方法,” *雷达学报*, vol. 11, no. 1, pp. 62–70, 2022.
51. Z. Zhang*, B. Zhang, C. Jiang, X. Liang, L. Chen, W. Hong and Y. Wu, "The First Airborne Experiment of Sparse Microwave Imaging: Prototype System Design and Result Analysis," Available: <http://arxiv.org/abs/2110.10675>.
52. Z. Zhang*, Y. Wang, and Z. Tian, "Efficient Two-Dimensional Line Spectrum Estimation Based on Decoupled Atomic Norm Minimization," *Signal Processing*, Vol. 163, pp. 95–106, 2019.
53. 张柘 *, 张冰尘, 洪文, and 吴一戎, “结合 MD 自聚焦算法与回波模拟算子的快速稀疏微波成像误差补偿算法,” *雷达学报*, vol. 5, no. 1, pp. 25–34, 2016.
54. B. Zhang, Z. Zhang*, C. Jiang, Y. Zhao, W. Hong and Y. Wu, "System Design and First Airborne Experiment of Sparse Microwave Imaging Radar: Initial Results," *Science China Information Sciences (Series F)*, vol. 58, no. 6, 2015.
55. 蒋成龙, 赵曜, 张柘, 张冰尘, and 洪文, “基于相关系数的稀疏微波成像方位向采样优化方法,” *电子与信息学报*, vol. 37, no. 3, 2015.
56. 吴一戎, 洪文, 张冰尘, 蒋成龙, 张柘, and 赵曜,, “稀疏微波成像研究进展 (科普类),” *雷达学报*, vol.3, no. 4, pp. 383–395, 2014.
57. C. Jiang*, B. Zhang, J. Fang, Z. Zhang, W. Hong, Y. Wu and Z. Xu, "An efficient Lq regularization algorithm with range-azimuth decoupled for SAR imaging," *Electronics Letters*, vol. 50, no. 3, pp. 204–205, 2014.
58. Z. Zhang*, B. Zhang, C. Jiang, Y. Xiang, W. Hong, and Y. Wu, "Influence factors of sparse microwave imaging radar system performance: approaches to waveform design and platform motion analysis," *Science China Information Sciences (Series F)*, vol. 55, no. 10, pp. 2301–2317, 2012.
59. C. Jiang*, B. Zhang, Z. Zhang, W. Hong, and Y. Wu, "Experimental results and analysis of sparse microwave imaging from spaceborne radar raw data," *Science China Information Sciences (Series F)*, vol. 55, no. 8, pp. 1801–1815, 2012.
60. 谢敏, 乔瑞萍, 潘志斌, 李东平, 乔阳, and 张柘, “一种改进的绝对误差不等式删除算法在 DM642 上的实现,” *微电子学与计算机*, vol. 27, no. 4, pp. 182–185, 2010.
61. T. Wang*, R. Qiao, Z. Pan, D. Li, Y. Qiao, F. Gao and Z. Zhang, "Research and Application of Vector Quantization Algorithm Based on DM642", in *Proceedings of 2008 TI DSP Contest*, pp. 143–161, Publishing House of Electronics Industry, Beijing, 2008, in Chinese.

KEYNOTES / INVITED TALKS

1. 张柘 *, “无网格稀疏信号处理及其在微波成像中的应用”, in *当稀疏信号处理技术遇见雷达研讨会*, Nanjing, 2021, *invited*.

2. 张柘 *, “基于深度神经网络隐式约束的 SAR 微波视觉三维成像方法”, in 第四届雷达未来大会雷达与微波视觉分论坛暨第四期雷达学报大讲堂, Xi'an, 2024, *invited*.
3. 张柘 *, “基于微波视觉与多径利用的低空 SAR 城市三位建筑布局重构研究”, in 第二届雷达与信号处理技术及应用大会, Nanjing, 2024, *invited*.
4. Z. Zhang*, “SAR Imaging Methods based on Microwave Vision”, in 2024 IEEE International Conference on Signal, Information and Data Processing (IC-SIDP), Zhuhai, 2024, *invited*.
5. 张柘 *, “基于微波视觉的微波智能三维成像理论与方法”, in 第一届微波成像技术学术会议, Sanya, 2025, *invited*.
6. 张柘 *, “星载合成孔径雷达智能成像新体制: 认知成像与智能感知一体化”, in CCF 普适计算专委会“泛在中国行”系列活动——苏州独墅湖数据智能论坛与战略研讨, Suzhou, 2025, *invited*.
7. 张柘 *, “穿越空间的微波之眼”, in “科学与中国——千名院士·千场科普”格致论道, Changsha, 2025, *invited*.
8. Z. Zhang*, “New Era of Microwave Imaging: SAR Cognitive Imaging and Intelligent Perception Integration”, in 2025 IET International Radar Conference (IRC), Jiaxing, 2025, *invited*.

INVITED PEER-REVIEWED CONFERENCE PAPERS

1. Z. Zhang*, M. Jian, Z. Lu, H. Chen, S. James, C. Wang. and R. Gentile, “Embedded Micro Radar for Pedestrian Detection in Clutter”, in IEEE International Radar Conference (RADAR 2020), 2020, *invited*.
2. Z. Zhang*, B. Zhang, W. Hong, H. Bi and Y. Wu, “SAR Imaging of Moving Target in a Sparse Scene Based on Sparse Constraints: Preliminary Experiment Results,” in 2015 IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2015), *invited*.
3. W. Hong, B. Zhang, Z. Zhang*, C. Jiang, Y. Zhao and Y. Wu, “Radar Imaging with Sparse Constraint: Principle and Initial Experiment,” in 10th European Conference on Synthetic Aperture Radar (EuSAR 2014), *invited*.

PEER-REVIEWED CONFERENCE PAPERS

1. Y. Zhao, W. Yang, K. Han, W. K. Ling, Z. Pan, and Z. Zhang, “Sparse and Low-rank Decomposition of Hankel Matrix for SAR Imaging,” 2024 4th Int. Conf. Commun. Technol. Inf. Technol. ICCTIT 2024, pp. 730–733, 2024, doi: 10.1109/ICCTIT64404.2024.10928650.
2. H. Huang, W. Li, H. Li, Y. Zhu, D. Lu, and Z. Zhang, “SARRSD: large-scale microwave radar remote sensing mapping-type and recognition-type object detection dataset,” in Second Conference of Young Scientists of the Chinese Society of Optical Engineering, L. Cao, Q. Zhang, P. Hu, and L. Liu, Eds., SPIE, Sep. 2025, p. 105. doi: 10.1117/12.3073531.

3. Y. Zhao, K. Liu, D. Lu, and Z. Zhang, “A multimodal remote sensing image fusion method for object detection based on tensor decomposition,” in Second Conference of Young Scientists of the Chinese Society of Optical Engineering, L. Cao, Q. Zhang, P. Hu, and L. Liu, Eds., SPIE, Sep. 2025, p. 100. doi: 10.1117/12.3073498.
4. F. Gong, C. Wang, D. Lu, H. Li, and Z. Zhang*, “Research on precise positioning method of low-altitude targets based on DOA estimation,” in Second Conference of Young Scientists of the Chinese Society of Optical Engineering, L. Cao, Q. Zhang, P. Hu, and L. Liu, Eds., SPIE, Sep. 2025, p. 211. doi: 10.1117/12.3075320.
5. Y. Wu, Z. Zhang*, R. Song, X. Qiu, and W. Yu, “Azimuth Ambiguity Suppression for Sparse SAR Imaging Based on Unfolded Deep Network,” Proc. Eur. Conf. Synth. Aperture Radar, EUSAR, pp. 526–530, 2024.
6. A. Wang, M. Shang, X. Qiu, and Z. Zhang*, “L2 Regularized Reconstruction Matched Filter for Azimuth Multichannel SAR ,” in IGARSS 2024 - 2024 IEEE International Geoscience and Remote Sensing Symposium, IEEE, Jul. 2024, pp. 1173–11176. doi: 10.1109/igarss53475.2024.10641476.
7. M. Wang, X. Qiu, S. Gao, and Z. Zhang, “LiDAR-to-SAR Point Cloud Segmentation via Unsupervised Domain Adaptation Network,” in IGARSS 2024 - 2024 IEEE International Geoscience and Remote Sensing Symposium, IEEE, Jul. 2025, pp. 10808–10812. doi: 10.1109/igarss53475.2024.10641953.
8. H. Yang, Z. Huang, and Z. Zhang, “Interpretable Attributed Scattering Center Extracted via Deep Unfolding,” in IGARSS 2024 - 2024 IEEE International Geoscience and Remote Sensing Symposium, IEEE, Jul. 2024, pp. 2004–2008. doi: 10.1109/igarss53475.2024.10641709.
9. Y. Wu, Z. Zhang*, X. Qiu, Y. Zhao, W. Yu, and R. Song, “An efficient azimuth sampling design network for sparse SAR imaging,” in IET International Radar Conference (IRC 2023), Institution of Engineering and Technology, 2023, pp. 2994–2998. doi: 10.1049/icp.2024.1570.
10. G. Zhou, Z. Xu, Y. Fan, Z. Zhang, B. Zhang*, and Y. Wu, “Deep unfolding network for sparse SAR imaging based on compound regularization,” in IET International Radar Conference (IRC 2023), Institution of Engineering and Technology, 2023, pp. 3536–3540. doi: 10.1049/icp.2024.1673.
11. Z. Wang, Z. Wang, X. Qiu, and Z. Zhang*, “End-to-end global segmentation of PolSAR images with data augmentation,” in IET International Radar Conference (IRC 2023), Institution of Engineering and Technology, 2023, pp. 1816–1820. doi: 10.1049/icp.2024.1359.
12. M. Wang, S. Gao, Z. Zhang*, and X. Qiu, “An autofocus network for multi-channel phase errors with application to tomoSAR imaging,” in IET International Radar Conference (IRC 2023), Institution of Engineering and Technology, 2023, pp. 3045–3050. doi: 10.1049/icp.2024.1580.
13. S. Gao, M. Wang, Z. Zhang*, B. Zhang, and Y. Wu, “Gridless DOA estimation for automotive radars with various array geometries: the non-Vandermonde atomic soft thresholding approach,” in IET International Radar Conference (IRC 2023), Institution of Engineering and Technology, 2023, pp. 2068–2073. doi: 10.1049/icp.2024.1406.

14. M. Shao, C. Su, Z. Zhang*, and B. Zhang, “The application of the alternate descent conditional gradient method in tomographic SAR off-grid imaging,” in IET International Radar Conference (IRC 2023), Institution of Engineering and Technology, 2023, pp. 3259–3264. doi: 10.1049/icp.2024.1622.
15. M. Wang, S. Gao, Z. Zhang*, and X. Qiu, “A Novel Multi-Channel Phase Error Estimation Method Based On Stochastic Optimization For Tomographic SAR Autofocusing,” in IGARSS 2023 - 2023 IEEE International Geoscience and Remote Sensing Symposium, Jul. 2023, pp. 7953–7956. doi: 10.1109/IGARSS52108.2023.102829
16. T. Chen, Y. Meng, G. Zhou, Z. Zhang, B. Zhang, and Y. Wu, “An Improved Imaging Method for Highly-Squinted SAR Based on Hyper-Optimized ADMM,” in IGARSS 2023 - 2023 IEEE International Geoscience and Remote Sensing Symposium, Jul. 2023, pp. 4548–4551. doi: 10.1109/IGARSS52108.2023.10281842.
17. P. Jiang, Z. Zhang*, and B. Zhang, “Efficient Sparse MIMO SAR Imaging with Fast Iterative Method Based on Back Projection and Approximated Observation,” in 2022 5th International Conference on Electronics and Electrical Engineering Technology (EEET), Dec. 2022, pp. 34–40. doi: 10.1109/EEET58130.2022.00014.
18. S. Gao, Z. Zhang*, B. Zhang, and Y. Wu, “Gridless tomographic SAR imaging based on accelerated atomic norm minimization with efficiency,” in International Conference on Radar Systems (RADAR 2022), 2022, pp. 48–53. doi: 10.1049/icp.2022.2290.
19. M. Wang, Z. Zhang*, Y. Wang, S. Gao, and X. Qiu, “TomoSAR-ALISTA: Efficient TomoSAR imaging via deep unfolded network,” in International Conference on Radar Systems (RADAR 2022), 2022, pp. 528–533. doi: 10.1049/icp.2023.1289.
20. Z. Xu, G. Zhou, B. Zhang, Z. Zhang, and Y. Wu, “An Accurate Sparse SAR Imaging Method for Joint Feature Enhancement Based on Nonconvex-Nonlocal Total Variation Regularization,” in 14th European Conference on Synthetic Aperture Radar (EUSAR 2022), 2022, pp. 576–581. [Online]. Available: <https://ieeexplore.ieee.org/document/9944320>.
21. M. Liu, J. Li, Z. Zhang, B. Zhang, and Y. Wu, “Azimuth Ambiguities Suppression for Multichannel SAR Imaging Based on L_{2,q} Regularization: Initial Results of Non-sparse Scenario,” in International Geoscience and Remote Sensing Symposium (IGARSS) 2021, 2021, pp. 3153–3156.
22. B. Du, Z. Zhang, X. Qiu, B. Lei, and C. Ding, “Multi-aspect Tomographic SAR Imaging Approach via Distributed Compressed Sensing and Joint Sparsity,” in CIE Radar Conference 2021, 2021, pp. 2–5.
23. Z. Wang, X. Lin, X. Xiang, Z. Zhang, Z. Tian, K. Pham, E. Blasch and G. Chen, “A hidden chamber detector based on a MIMO SAR”, in Proc. SPIE 11017, Sensors and Systems for Space Applications XII, 1101706, 2019.
24. P. Xu, Z. Tian, Z. Zhang and Y. Wang, “COKE: Communication-Censored Kernel Learning via random features”, in the 2019 IEEE Data Science Workshop (DSW 2019), 2019.
25. Z. Zhang, X. Chen and Z. Tian*, “A Hybrid Neural Network Framework and Application to Radar Automatic Target Recognition”, in the 6th IEEE Global Conference on Signal and Information Processing (GlobalSIP 2018), 2018.
26. Z. Zhang and Z. Tian*, “ANM-PhaseLift: Structured Line Spectrum Estimation from Quadratic Measurements”, in 7th IEEE International Workshop

on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP 2017), 2017.

27. Z. Tian, Z. Zhang* and Y. Wang, “Low-complexity optimization for Two-Dimensional Direction-of-arrival Estimation via Decoupled Atomic Norm Minimization”, in 42th International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2017), 2017.
28. Z. Zhang*, Z. Tian, B. Zhang, W. Hong, W. Hong and L. Li, “Multi-channel SAR Covariance Matrix Estimation Based on Compressive Covariance Sensing”, in 4th International Workshop on Compressive Sensng Theory and its Applications to Radar, Sonar and Remote Sensing (CoSeRa 2016), 2016.
29. C. Jiang*, Y. Lin, Z. Zhang, B. Zhang and W. Hong, “WASAR Imaging based on message passing with structured sparse constraint: approach and experiment”, in 3th International Workshop on Compressive Sensng Theory and its Applications to Radar, Sonar and Remote Sensing (CoSeRa 2015), 2015.
30. X. Quan*, C. Jiang, Z. Zhang, B. Zhang and Y. Wu, “A Study of BP-CAMP Algorithm for SAR Imaging,” in 2015 IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2015), 2015.
31. X. Quan*, Z. Zhang, C. Jiang, B. Zhang and Y. Wu, “Comparison of Several Sparse Reconstruction Algorithms in SAR Imaging,”, in IET International Radar Conference 2015, 2015.
32. W. Wang*, B. Zhang, W. Hong, Z. Zhang, Y. Zhao, C. Jiang and H. Bi, “ Polarimetric SAR Tomography of Forested Areas Based on Compressive MUSIC,” in 2014 IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2014), 2014.
33. Z. Zhang*, Y. Zhao, C. Jiang, B. Zhang, W. Hong and Y. Wu, “Initial Analysis of SNR / Sampling Rate Constraints in Compressive Sensing based Imaging Radar,” in 2nd Workshop on Compressive Sensng Applied to Radar (CoSeRa 2013), 2013.
34. B. Zhang, C. Jiang*, Z. Zhang, J. Fang, Y. Zhao, W. Hong, Y. Wu and Z. Xu, “Azimuth Ambiguity Suppression for SAR Imaging based on Group Sparse Reconstruction”, in Workshop on Compressive Sensng Applied to Radar (CoSeRa 2013), 2013.
35. Z. Zhang*, Y. Zhao, C. Jiang, B. Zhang, W. Hong and Y. Wu, “Autofocus of Sparse Microwave Imaging Radar Based on Phase Recovery,” in 2nd IEEE International Conference on Signal Processing, Communications and Computing (ICSPCC 2013), 2013.
36. Z. Zhang*, B. Zhang, W. Hong, and Y. Wu, “Waveform Design for Lq Regularization Based Radar Imaging and An Approach to Radar Imaging with Non-moving Platform,” in 9th European Conference on Synthetic Aperture Radar (EuSAR 2012), 2012.
37. B. Zhang, Z. Zhang*, W. Hong, and Y. Wu, “Applications of Distributed Compressive Sensing in Multi-channel Synthetic Aperture Radar,” in 1st Workshop on Compressive Sensng Applied to Radar (CoSeRa 2012), 2012.

1. 上官松涛, 张柘, and 仇晓兰, “一种基于城区广泛强散射点参考的 SAR 辐射交叉定标方法,” CN202511185894.0.
2. 周欣, 邢朕诏, 张柘, 薦蓓, 彭凌霄, and 金燕, “一种利用时间序列光学和 SAR 数据的冰川表面积雪识别方法”, CN202511027857.7.
3. 商明样, 王骜巍, 张柘, 王纯一, and 吕旖旎, “一种基于 L2 正则的方向多通道 SAR 非均匀采样重构方法及系统,” CN202510493241.2.
4. 张柘, 余佳童, 马梓瑞, 傅世平, 陈宇凡, 王纯一, and 吕旖旎, “一种基于深度展开网络的 SAR 稀疏成像方法与系统,” CN202510486386.X.
5. 张柘, 吴雨微, 王纯一, 商明样, and 傅世平, “一种基于深度学习的 SAR 方位向欠采样成像方法与系统,” CN202510471949.8.
6. 商明样, 顾杨钧, and 张柘, “一种面向超高分辨率星载 SAR 图像的自适应量化方法及系统,” CN202510115690.3.
7. 马梓瑞, 张冰尘, 吕旖旎, and 张柘, ”稀疏合成孔径雷达成像方法、装置、设备、介质及产品,” CN202510516768.2.
8. 铁雯婕, 卢东东, 李杭, 张柘, and 李~~方~~, “一种面向运动模糊和雾霾影响的光学图像质量盲评价方法及系统,” CN202411939598.0.
9. 仇晓兰, 王沐涵, 高四琳, 罗一通, 张柘, and 焦泽坤, “一种基于微波视觉的阵列干涉 SAR 误差估计方法与装置,” ZL202411777220.5.
10. 施睿哲, 罗一通, 张柘, and 仇晓兰, “基于嵌套的三维 SAR 天线阵列设计方法与应用,” CN202411175663.7.
11. 徐仲秋, 张冰尘, 蒋鹏宇, 张柘, and 吴一戎, “基于非凸-非局部全变差正则化的稀疏 SAR 成像方法及系统,” ZL202111402837.5.
12. 张柘, 赵曜, 张冰尘, 洪文, and 吴一戎, “一种基于相位恢复的机载稀疏微波成像自聚焦方法,” ZL201310737404.4.
13. 张柘, 张冰尘, 洪文, 吴一戎, and 全相印, “一种基于 PhaseLift 的稀疏微波成像自聚焦方法,” ZL201510227896.1.
14. 张冰尘, 洪文, 吴一戎, and 张柘, “装载于慢速平台上的成像雷达的稀疏微波成像方法及装置,” ZL201510227896.1.
15. 全相印, 张冰尘, 蒋成龙, 赵曜, 张柘, and 吴一戎, “一种基于稀疏度估计的分维度阈值迭代稀疏微波成像方法,” ZL201410497525.0.
16. 吴一戎, 全相印, 张冰尘, and 张柘, “基于正则化的偏置相位中心天线成像方法,” ZL201610202747.4.