Name:Xin PEI

Professional:

Senior Engineer

Master Supervisor

Chief of digital Lab, Xinjiang Astronomical Observatory, CAS

Education:

2019-2022, University of Chinese Academy of Sciences, Ph.D.

2008-2011, University of Chinese Academy of Sciences, M.S.

2006-2008, Xinjiang Normal University, B.S.

Contact:

E-mail: peixin@xao.ac.cn

Postal Address: 150 Science 1-Street, Urumqi, Xinjiang 830011, China

Research Interests:

- ✓ Astronomical signal processing techniques and methods
- ✓ Digital backends
- ✓ Heterogeneous high performance computing
- ✓ Digital beamforming
- ✓ Artificial intelligence signal recognition algorithm

Selected Publications:

[1] Pei X, Li J, Wang N, et al. Design of a Multi-function High-speed Digital Baseband Data Acquisition System[J]. Research in Astronomy and Astrophysics, 2021, 21(10): 248-260. DOI: 10.1088/1674-14527/21/10/248.

[2] Pei X, Wang N, Werthimer D, et al. Design of RFSoC-based Digital Phased Array Feed (PAF) and Hybrid Architecture Beamforming System[J]. Research in Astronomy and Astrophysics, 2022, 22: 045016. DOI: 10.1088/1674-4527/ac56cb.

[3] Pei X, Li J, Duan X F, et al. QTT Ultra-wideband Signal Acquisition and Baseband Data Recording System Design Based on the RFSoC Platform[J]. Publications of the Astronomical Society of the Pacific, 2023, 135: 075003. DOI: 10.1088/1538-3873/ace12d.

[4] Pei X, Li J, Duan X F. Multi-Function Digital Signal Processing System for a 110-meter Radio Telescope, URSI GASS 2023, Sapporo, Japan, 19-26 August

2023[C]. IEEE. DOI: 0.23919/URSIGASS57860.2023.10265668.

[5] Pei X, Li J, Li S Y, et al. Design of FRB real-time search backend for multi-beam receiver(in Chinese). Sci Sin-Phys Mech Astron, 2019, 49: 099508,doi:10.1360/SSPMA2018-00418.

[6] Xin Pei, Jian Li, et al. Design of a Microwave Holography Correlator Based on the ROACH Board. Astronomical Research & Technology – Publications of National Astronomical Observatories of China. 2015, 12(1): 54-62.

[7] Xin Pei, Maozheng Chen, et al. VLBI Time-frequency Signal Transmission Test over Optical Fiber Based on the Method of Correlator Delay Measurement. Astronomical Research & Technology – Publications of National Astronomical Observatories of China. 2015, 12(3): 270-276.

[8] Xin Pei, Jun Nie, et al. Realization of Dual-channel Real-time Correlator Based on Heterogeneous Architecture. Computer Engineering. 2016, 42(5): 42-46.