



Ji Yuanfa

Research Interests:
satellite navigation

School: The National Astronomical
Observatories of the Chinese Academy
of Sciences

Political appearance: CPC member

Education: Doctor

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Education

1994.9-1998.7

Guilin University of Electronic Technology / Mechanical and Electrical Engineering

Machinery Manufacturing Technology, Motor drive and control, factory power supply, single-chip microcomputer principle, machine tool numerical control technology, mechanical and electrical equipment failure analysis and maintenance, etc.

2001.9-2004.7

Guilin University of Electronic Technology / Signal and information processing

Matrix theory, random process, signal detection and estimation, modern signal processing, digital signal processing, digital image processing, information theory, pattern recognition, time-frequency analysis, etc.

2005.9-2008.4

The National Astronomical Observatories of the Chinese Academy of Sciences / satellite navigation

GPS signal and its navigation message, theoretical calculation and analysis of GPS satellite orbits, GPS measurement and its error, GPS Positioning Principle and Accuracy Analysis, Kalman filter and its application, etc.

2008.9-2010.8

Yunnan Observatories, Chinese Academy of Sciences / Celestial navigation

Principles of astronomical navigation, Spacecraft Guidance, Navigation and Control, etc.

Experience

2011.12-nowpresent

Guilin University of Electronic Technology / Professor

work description:

1. Research in the frontier fields of satellite navigation signal simulators and high-precision receivers.
2. Teaching graduate courses: GNSS Receiver Technology and Application, GPS System and Its Application, Satellite Navigation.

2008.12-2011.12

Guilin University of Electronic Technology / Associate Professor

work description:

1. Research in the frontier fields of satellite navigation signal simulators and high-precision receivers.
2. Teaching graduate courses: GNSS Receiver Technology and Application, GPS System and Its Application, Satellite Navigation.

2004.7-2005.9

Guilin University of Electronic Technology / Lecturer

1998.7-2001.9

Guilin University of Electronic Technology / Assistant Engineer

Profession

1. Academic research, scientific and technological innovation have yielded fruitful results. More than 100 papers published and 23 patents granted;
2. Discipline construction and scientific research platform support contribute prominently;
3. Achieving transformation of scientific and technological achievements and serving society;
4. Actively Promote Beidou Internationalization;

Papers

1. Fu W , Luo X , **Ji Y*** , et al.. Node-Subset Scheduling with a Subset-Reset Mechanism for the Decoding Algorithm of Nonbinary LDPC Codes[J]. Mobile Information Systems, 2021, 2021(1):1-16.
2. Sun, X., Zhang, K., **Ji, Y***. et al. Correlation filter tracking algorithm based on multiple features and average peak correlation energy. Multimed Tools Appl 79, 14671–14688 (2020).
3. Wu J , **Ji Y*** , Sun X , et al. Guidance Optimization of Travelers' Travel Mode Choice Based on Fuel Tax Rate and Bus Departure Quantity in Two-Mode Transportation System[J]. Journal of Advanced Transportation, 2020, 2020(10):1-10.
4. Sun X , Xu L , **Y Ji***, et al. An Extremum Approximation ARAIM Algorithm Based On GPS And BDS[J]. IEEE Access, 2020, PP(99):1-1.
5. S. Zhao, K. Sun, **Y. Ji***, N. Guo and X. Jia, "Correlation Filter-based Object Tracking Algorithms," 2020 IEEE 3rd International Conference on Information Communication and Signal Processing (ICICSP), 2020, pp. 57-62.
6. Li Y , Gao J , **Ji Y*** , et al. Research on Near-far Effect and anti-impact noise interference pseudo-code sequence blind estimation algorithm in Pseudo Satellite System[C]// 2020 IEEE 3rd International Conference on Information Communication and Signal Processing (ICICSP). IEEE, 2020.
7. **Yuan Fa J I** , Chen X , Qiang F U , et al. Reconstruction of sub cross-correlation cancellation technique for unambiguous acquisition of BOC(kn,n)signals[J]. Journal of Systems Engineering and Electronics, 2019(5).
8. Sun X , Zhou Q , **Ji Y*** , et al. An Unambiguous Acquisition Algorithm for BOC (n, n) Signal Based on Sub-correlation Combination[J]. Wireless Personal Communications: An International Journal, 2019.
9. Sun X , Jiang Y , **Ji Y*** , et al. Distance Measurement System Based on Binocular Stereo Vision[J]. IOP Conference Series Earth and Environmental Science, 2019, 252(5):052051.
10. X Sun, Liu D , **Ji Y*** , et al. A New Image Block Encryption Method Based on Chaotic Map and DNA Encoding[C]// 2018 7th International Conference on Digital Home (ICDH). 2018.

Projects

1. Platform design development and industrial application demonstration of automotive smart seats. Guangxi Innovation-driven Development Special.
2. Develop automotive smart seat safety alarm system and automotive smart seat mobile APP.
Guangxi Innovation-Driven Development Special Subtopic.
3. Speech Recognition+Mobile APP Architecture for Automotive Seat Intelligent Control Terminal and Speech Recognition System.
Guangxi Innovation-Driven Development Special Subtopic
4. Multi-source information fusion detection, automatic analysis, comprehensive processing and alarm technology.
Guangxi Innovation-Driven Development Special Subtopic
5. Driving Monitoring Technology Based on Mobile Device Software Development and Embedded Platform.
Guangxi Innovation-Driven Development Special Subtopic
6. Research and Development of Multi-band Signal Analog Transmitting System.
7. Development of Remote UAV Reverse System.
8. Development of Beidou GNSS Navigation Signal Test System.

Awards

1. Science and Technology Progress The first prize --- Key Technology and Application of High Precision Beidou Space Time Service Network.
2. Science and Technology Award The first prize --- Beidou/GNSS high precision landslide monitoring and prewarning system.
3. China Patent Award Excellence Award --- A GPS and GLONASS dual system integrated simulator and its method.
4. Guangxi Invention Achievement Award Gold Award --- Realization method and system of Beidou seamless high precision time service.
5. Guangxi Invention Achievement Award Silver Award --- A GPS deceptive jamming method and system.
6. Lao Nanta Science and Technology Progress Award The first prize --- Beidou/GNSS High Precision Landslide Monitoring and Warning System.
7. Guangxi Technological Invention Award The first prize --- Underwater carrier positioning system of Beidou self-sinking float.
8. Satellite Navigation Positioning Science and Technology Progress Award the second prize --- Key Technology and Application of Multimode Satellite Navigation Test.