Xu Yang

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EDUCATION

Beihang University	Master	Instrumentation Engineering	Sep.2015-Mar.2018
Beihang University	Bachelor	Detection, Guidance and Control	Sep.2011-Jun.2015

WORK EXPERIENCE

JD Logistics, UAV Department | Algorithm Engineer Mar.2018-Apr.2019

- Develop and optimize the integrated navigation system
- Research the autonomous vision-based localization and navigation

Beijing Aibee Technology Co., Ltd, Robot Department | Algorithm Engineer May.2019-Current

- Optimize the localization system of 3D scanning robot
- Develop and optimize the indoor positioning system of VR navigation

PROJECT EXPERIENCE

MEMS Integrated Navigation System of UAV Mar.2018-Dec.2018

- Calibration and compensation of airborne sensor errors (Gyroscope, Accelerometer, Magnetic, Barometer, GPS, RTK, etc.)
- Develop and optimize the performance of MEMS INS in the communication exception of RTK and the situation of high maneuver flight

Vision-based Localization System of UAV Jun.2018-Apr.2019

- Build SLAM development platform, and research and test the performance and robustness of orb-slam2, okvis, vins-fusion
- Build hardware platform, and develop and test the vision-based autonomous landing navigation system

Indoor 3D Scanning Robot May.2019-Aug.2019

- Auto-calibration of Internal and external parameters of robot sensors (lidar, camera, imu)
- Optimize the Multi-sensor fusion localization based on lidar-imu SLAM

Indoor VR Positioning and Navigation System Jul.2019-Mar.2020

- Develop indoor positioning subsystems, including PDR positioning, iBeacon positioning, WIFI positioning, compass, semantic map, etc.
- Achieve the indoor multi-sensor fusion positioning system based on particle filter and extended Kalman filter

PERSONAL SKILLS

Programming: C/C++, Python, MATLAB/Simulink, and familiar with Embedded system and ROS
Professional: Sensor error analysis and calibration, 6-DOF motion estimation, Multi-sensor fusion, SLAM/VIO, Computer vision
Language: English, CET-6

PAPER/PATENTS

Paper:

[1] Yanshun Zhang, **Xu Yang**, et al. The Standing Calibration Method of MEMS Gyro Bias for Autonomous Pedestrian Navigation System[J]. Journal of Navigation, 2017, 70(3): 607-617. (**SCI**, Q1, The first student author)

[2] **Xu Yang**, Zhanqing Wang, et al. Dynamic leveling method under independent work mode for airborne remote sensing stabilized platform[C]. Chinese Control Conference, 2017: 5020-5024.

[3] **Xu Yang**, Jin Huang, et al. The Instantaneous Linear Motion Information Measurement Method Based on Inertial Sensors for Ships[C]. American Institute of Physics Conference Series. 2018, 1967(3).

[4] **Xu Yang**, Zhanqing Wang, et al. A Rapid Alignment Method under Large Azimuth Misalignment Angle for Strap-down Gyrocompass [J]. Ship Engineering, 2018(05):83-87.

[5] Baichao Ding, Wei Quan, **Xu Yang**. The Intelligent Segmentation Fusion Method of Inertial/ Geomagnetic Integrated Navigation [J]. Journal of Navigation and Positioning. 2017(04): 1-5.

Patent:

[1] Yanshun Zhang, **Xu Yang**, et al. Method and Device for Measuring Horizontal Tilt Angle of Multifunctional Debugging Platform in Complicated Environment [P], CN107063181B. (**Authorized**, The first student author)

[2] Yanshun Zhang, **Xu Yang**, et al. A Synthetic Measurement Method of Pedestrian Step Length Based on Height and Motion Characteristics [P], CN106767807A. (Accepted, The first student author)

[3] **Xu Yang**, Yuanqing Lin. A Loop Detection Method and Device for SLAM System [P], CN110514199A. (Accepted)

[4] **Xu Yang**, Jiabin Guo, et al. A Positioning Method, Device and System [P], 202010080648.X (Accepted)

HORNOR/AWARDS

Outstanding Graduates of Beijing, Outstanding Cadres of The Communist Youth League of Beijing.

Kwang-Hua Scholarship, First-Class Scholarship of Beihang University, First-Class Scholarship for Social Work of Beihang University, Excellent Master of Beihang University, Triple-A Student of Beihang University, etc.