

Student Admissions

Smart Sensor Fusion for Autonomous Systems
Shanghai Jiao Tong University, Shanghai, China

Contact: fusion@sjtu.edu.cn
University Page and Lab Page

Job Category

Undergraduate/Gruduate/Ph.D. Students	unlimited/4/4 candidates
Institution	Shanghai Jiao Tong University (SJTU)
School	Electronic Information and Electrical Engineering (SEIEE)
Department	Automation
Location	Minhang Campus, Shanghai, China
Application Deadline	Available Until Positions Filled

Job Announcement

The newly-established Smart Sensor Fusion for Autonomous Systems (SSF) research laboratory at the SEIEE of SJTU invites applications for student researching positions to study with. Successful candidates will carry out research topics/projects focusing on **Cognitive Signal Processing, Sensor Fusion, Object Tracking, Localization/Mapping, Deep/Reinforcement Learning** for various autonomous systems (such as Truck, Mining Truck, and Mobile EV Charger).

The students will have great opportunites for deep research experience, international study opportunities/recommendations, and internship within companies in fields of autonomous systems.

Applicants should submit a curriculum vitae and a brief research summary, and arrange three reference letters (optional but preferred) to be directly sent to: **fusion@sjtu.edu.cn**. Applications will be considered until the position is filled.

Apply to Job

Attention: **fusion@sjtu.edu.cn** with position code in title

- **Position Code: ST_FUS** candidate is expected to have interests and knowledge on Kalman filter (KF), unscented Kalman filter (UKF), particle filter (PF), interacting multiple model (IMM), extended object tracking, homogeneous/heterogeneous track/data fusion (T2TF), track/data association.
- **Position Code: PD_LOC** candidate is expected to have interests and knowledge on the simultaneous localization and mapping (SLAM) problems and familiar with g2o, ORB SLAM, occupancy grid map, and statistical properties of different sensor systems (mainly IMU, Radar, Camera and Lidar systems).
- **Position Code: ST_PLN** candidate is expected to have interests and knowledge on convex optimization, expectation-maximization (EM), pattern search, observability/estimability analysis, PIC, MPC, PLC and CAN, familiar with pathfinding algorithms, such as Dijkstra's algorithm, A-star search, and Swarm search.
- **Position Code: ST_DRL** candidate is expected to have interests and knowledge on deep learning and/or reinforcement learning for autonomous driving applications, familiar with object detector, such as Yolo and PifPaf, and with know-how on building a sensor fusion data platform and labeling toolbox.
- **Position Code: ST_OPS** candidate is expected to have interests and knowledge on fleet management and group rormation, flocking, remote control and operation optimization in hybrid systems. Knowledge in industrial internet of things (IIoT) is a plus.