Post-doctoral position

Provably safe design of cyber-physical transportation systems

MIT, MechE
Del Vecchio’s Group

Del Vecchio’s group seeks a highly skilled and motivated postdoctoral scholar to work on a challenging project which focuses on the provably correct design of driver-assist systems to improve the current safety level of transportation networks. The project emphasizes partially autonomous systems and systems architecture with human-in the loop, cooperation and/or communication among vehicles and with the infrastructure at traffic intersections. Despite the presence of human operators, safety guarantees (probabilistic) need to be provided; hence new techniques for the design of supervisors under safety specifications for stochastic systems with hidden players need to be developed. The project is in collaboration with human factor researchers at UMTRI and with the Toyota Technical Center (TTC), and hence it is expected that the researcher would also spend some time at TTC guiding the implementation and experimental validation of the algorithms on full scale vehicles.

The successful candidate will have a Ph.D. (or will graduate with one soon) in controls and dynamical systems or closely related areas. The position is initially for one year and it can be renewed for up to a total of three years. The position can start any time but preferably not later than July 1st 2014.

Interested individuals can send a resume and the names of three potential letter writers to ddv@mit.edu.