

## **POSITION ANNOUNCEMENT**

### **Postdoctoral Scholar**

**Salary Range: \$3,844 - \$5,729 per month**

THE INSTITUTE OF TRANSPORTATION STUDIES, UNIVERSITY OF CALIFORNIA, IRVINE invites applications for a post-doctoral position in INTELLIGENT TRANSPORTATION SYSTEMS (ITS). The appointment is to be within the Postdoctoral Scholar series; salary will be determined based on capabilities and experience. The anticipated starting date of the position is 12 Sep 2009; the appointment will be for twelve months, with the possibility of renewal pending the availability of funding for the position.

The Postdoctoral Scholar will lead a team of graduate student researchers, holding primary responsibility for online corridor field implementation and testing of the Real-Time Performance Measurement System (RTPMS), and REID and vehicle classification systems, developed previously at UCI. This will entail making all detection stations in the I-405 freeway corridor operational (replacing those that are defective, upgrading detector cards as needed, managing wireless communications performance), and modifying the RTPMS for corridor operation (including web-site and data-base modifications). In addition, the Postdoctoral Scholar will be required to perform in depth analyses of wireless magnetometer signatures, performing evaluations and developing heterogeneous vehicle re-identification algorithms between magnetometers and inductive loop sensors. A significant operational phase for data collection, ground-truthing, algorithm development, and evaluation of the RTPMS and other algorithms is also required.

Additionally, the Postdoctoral Scholar will investigate other novel traffic detector technologies such as the Blade inductive loop system. This consists of coordinating with public agencies to deploy the technologies in the field, designing and implementing field data collection, managing the operations of the sensor equipment and developing advanced traffic surveillance algorithms and applications based on these technologies.

Lastly, the Postdoctoral Scholar will co-lead a team responsible for designing a data repository system to meet the needs of freight system modeling. This will entail designing a GIS-based database architecture, web user interface, and data mining of the consolidated data for gaps.

Candidates for the position should have demonstrated capabilities in the following areas: advanced loop detector technologies, wireless magnetometer technologies, GIS and database management, applied mathematics and advanced computation techniques focusing on transportation systems. The candidate should possess excellent written, communication and interpersonal skills, proven ability to work collaboratively with research sponsors and teams of researchers involving faculty, students and other Postdoctoral Scholars. Strong interest in the application of advanced computing and numerical techniques toward real-world problem solving, and in the scholarly publication of research results, is required. A Ph.D. in one of the following fields is required: Transportation Engineering, Electrical Engineering, Computer Engineering/Science, or Civil Engineering.

The position may be filled as early as September 13, 2009: evaluation of candidates will begin immediately. Please submit a complete resume with at least three references by **12 September 2009** to Professor Stephen Ritchie, Director, Institute of Transportation Studies, University of California, Irvine, CA 92697-3600.

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