

Two Post-Doctoral Researcher Positions in Concrete Pavement Design and Pavement Management System at University of California, Davis

August 2024

Job Description

The University of California Pavement Research Center (UCPRC) at UC Davis is seeking two post-doctoral researchers to lead research in concrete pavement design and pavement management systems (PMS), with some focus on asphalt pavement design. The research areas of interest include:

1. Mechanistic-empirical design of concrete pavements and support for mechanistic design of asphalt pavements software (CalME).
2. Pavement management systems.

Appointment length: 24 months, 100 % time (renewable depending on funding availability and performance)

Salary: Between \$77,000 and \$87,000, commensurate with experience.

Job Location: Davis, California

Anticipated start date: Immediately (applications reviewed and candidates interviewed every 2 weeks until positions are filled)

Responsibilities

The successful candidates will:

- Review field data from various databases and perform data analysis.
- Modify and develop mechanistic pavement models, focusing on CRCP models (e.g., punchout, crack width) for California conditions.
- Develop asphalt performance, and mechanistic models
- Assist in developing data-cleaning methods for the database.
- Work on traffic models and lane-based traffic assignments.
- Utilize PMS data in projects, such as JPCP long life.
- Apply deep learning approaches to performance models.
- Oversee and conduct comprehensive data analysis, including qualitative and quantitative data.
- Communicate findings in reports and meetings with the UCPRC team, Caltrans, industry, and other stakeholders.
- Write articles for refereed academic journals, technical reports, and conference papers.
- Supervise, train, and mentor graduate students and other team members.

Qualifications (at the time of application)

Required:

- Ph.D. or equivalent International Degree in Civil Engineering or a related field.
- Expertise in pavement mechanistic modeling.

- Research experience in data analysis techniques and PMS.
- Demonstrated ability to work effectively as part of a diverse team.
- Strong English communication skills (oral and written).

Preferred:

- Additional academic, industry training, or professional experience in pavements or closely related fields beyond Ph.D. studies.
- Record of high-quality publications in academic journals and other venues.
- Demonstrated strong writing skills in English.
- Proven ability to lead a team of graduate and undergraduate students.

Application Procedure

Please submit a letter of application explaining your interest in the position and your goals, along with your CV and two published papers as examples, in a single PDF file to ucprc.concrete@gmail.com. Include contact information for two references in your letter. Specify which area of interest (pavement design or PMS) you are applying for in the letter.