

Post-doctoral Researcher/Research Scientist

University of California, Davis, California, USA

Research Position in Micro/Nano Electro-Mechanical Systems (MEMS/NEMS)

The ECE Department at UC Davis is accepting applications for the position of a Research Scientist or Postdoctoral Research Fellow specializing in design, modeling, micro/nano fabrication and characterization of semiconductor/ceramic based MEMS/NEMS devices and systems for bio-medical applications.

This position requires the ability to work well in a multidisciplinary team. The candidate will be involved in developing, characterizing, and stabilizing MEMS fabrication processes and must be able to exercise judgment on selections of work details and adaptations of technical alternatives and approaches. The candidate will have a fair amount of independence in establishing his or her research work, with the expectation that aligns with our strategic direction of MEMS/NEMS device development. He or she will have considerable opportunity in determining technical objectives of assignments, and is expected to be a technical resource and mentor to other research group members.

Our core research program is based on materials growth/synthesis, processing, patterning, fabrication, transfer printing, electrical/optical/mechanical characterization and system demonstration. Current areas of active research interests include precision fabrication and assembly of micro/nano-structures in several material systems (Si, Ge, GaAs, GaN, InP, ceramics, oxides etc.), and applications of 1D/2D structures for photonic, electronic and mechanical devices. We use physical and chemical vapor deposition (CVD, PVD), RIE/DRIE, wet chemical etching, passivation coating and bond technologies as well as less common micromachining methods on combining the “*bottom-up*” techniques with the “*top-down*” approaches of device fabrication and system integration. The above efforts will closely link with the research activities of our collaborators at University of California Berkeley, several industries and national labs including Army Research Labs.

A Ph.D. in Physical Sciences or Engineering (Mechanical, Electrical or Chemical Engineering, Physics or Material Science) with an emphasis in micro/nano fabrication of materials and devices, completed within the last three years or soon to be completed, is required. The candidate must possess material/device micro/nanofabrication, surface coating/passivation and characterization skills (e.g. microscopy, mechanical testing, SEM imaging, etc.) and subsequent data interpretation and reduction. The candidate is expected to closely interact with multiple research groups, prepare scientific reports/papers, attend grant agency meetings and conferences, communicate well in English and be comfortable with leadership responsibilities. Initial appointment is for 1 year and could be extended to 2 to 3 years depending on the performance and available funding. Salary is negotiable, commensurate with qualifications and experience, and the position carries benefits.

Interested candidates should email curriculum vitae, a list of publications, a brief statement of research interests and the names of three professional scientists who are familiar with the applicant's work and who could provide recommendation letters. Applications will be reviewed as received and the position kept open until filled.

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