The Department of Applied Mathematics and Statistics (AMS) at UC Santa Cruz is inviting applications for an interdisciplinary postdoctoral position in the fields of Astrophysical Fluid Dynamics, and Stellar and Planetary Astrophysics, to be held jointly with the department of Astronomy and Astrophysics (A&A). The position will also be affiliated with the Theoretical Astrophysics at Santa Cruz (TASC) Institute.

The successful candidate will be joining the research groups of Dr. Pascale Garaud (AMS) and Dr. Jonathan Fortney, (A&A) and is expected to conduct research in collaboration with both PIs. Garaud's group is specialized in modeling hydrodynamical and magnetohydrodynamical processes in stellar/planetary interiors. Fortney's group is specialized in modeling the structure interiors and atmospheres of solar system planets and exoplanets using state-of-the-art microphysics. Both are engaged in improving current stellar and planetary evolution models, to include the contribution of magnetic fields and inhomogeneous composition respectively. The new multidisciplinary postdoctoral position is expected to catalyze collaborations between the two groups. As such, the appointee is expected to conduct research both in astrophysical fluid dynamics and in stellar and planetary astrophysics. Experience in all these areas is highly desirable, although expertise in one area and interest in the other is also acceptable. The successful candidate is expected to participate in the development of two codes for planetary evolution, and for 2D stellar evolution with magnetic fields respectively. The candidate will be expected to devote a significant fraction of their time to work with Garaud and Fortney on magnetized stars projects and on planetary evolution projects. They will also be encouraged to interact with other TASC faculty and their own research groups, see http://www.tasc.ucsc.edu/ for detail.

RANK: Postdoctoral Scholar - Employee

SALARY: from $45,000 annually, commensurate with qualification and experience.

MINIMUM QUALIFICATIONS: PhD or equivalent in Astrophysics, Planetary Science or related fields. A strong interest in interdisciplinary work at the nexus of Applied Mathematics and Stellar/Planetary Astrophysics is a must. Experience in using a 1D stellar evolution code is required. Good communication, mathematical and computational skill are expected.

PREFERRED QUALIFICATIONS: Basic experience in fluid dynamics and magnetohydrodynamics is recommended, as well as basic understanding of the microphysics (convective/radiative heat transport, equation of state, nuclear reaction networks, etc..) of planetary/stellar evolution. Experience with MESA is preferred over other stellar evolution codes.

TERM OF APPOINTMENT: This position is full time. Initial appointment is for one year. Should the hiring unit propose reappointment, a review to assess performance will be conducted. In addition, reappointment is contingent upon availability of funding. For appointments within the University of California, the total duration of an individual’s postdoctoral service may not exceed five years, including postdoctoral service at other institutions.

START DATE: As soon as possible after closing

TO APPLY: Applicants should submit a letter of application, the names of 2 referees, a curriculum vitae and 2-page past and future research statement directly to: pgaraud@cse.ucsc.edu. To ensure full consideration, applications must be received by January 6th 2013.

*All letters of recommendation will be treated as confidential documents; please direct your references to UCSC's confidentiality statement at http://ahr.ucsc.edu/academic_policies_and_procedures/cappm/confstm.htm

CLOSING DATE: Position is open until filled.

The University of California, Santa Cruz is an Affirmative Action/Equal Employment Opportunity Employer, committed to excellence through diversity. We strive to establish a climate that welcomes, celebrates, and promotes respect for the contributions of all students and employees. Under Federal law, the University of California may employ only individuals who are legally able to work in the United States as established by providing documents as specified in the Immigration Reform and Control Act of 1986.