

# Centre for the Subatomic Structure of Matter (CSSM)

## School of Chemistry & Physics

### Research Associates in Theoretical Physics

Job Reference Number: 11871, 11116, 13556

We are seeking up to 3 Research Associates in the CSSM. These positions will be of interest to theorists working in subatomic and strong interaction physics. The current activities of the CSSM are primarily focused on nonperturbative QCD and include lattice gauge theory, chiral effective field theory, and nonperturbative methods in quantum field theory. This is complemented by studies of quark models and matter under extremes of density and temperature and phenomenological work using weak and electromagnetic probes to investigate strongly interacting systems.

#### **Position 11871:**

We seek one candidate to join the research efforts of the CSSM Lattice Collaboration. Current research in this area is focused on revealing and understanding the nonperturbative properties of QCD via numerical simulations on a space-time lattice. We have established expertise in a broad range of forefront areas including: lattice action improvement, hadron form factors, quark and gluon propagator structure, baryon resonance phenomenology and exotic hadrons in general. We seek a candidate interested in extending these exciting areas of study. The CSSM has generous access to massively parallel supercomputers to support its research in lattice gauge theory.

#### **Positions 11116, 13556:**

We seek candidates who have demonstrated knowledge and expertise in the following fields: spin and angular momentum decomposition of the nucleon; chiral effective field theory and lattice QCD; quark based description of nuclear structure and dense matter; symmetry tests and physics beyond the Standard Model, including dark matter; hadron phenomenology and spectroscopy.

You should have:

- a PhD or equivalent degree (or thesis submitted) in theoretical physics
- a commitment to research excellence in theoretical physics, particularly in the area of hadronic and nuclear structure
- demonstrated publication track record in leading scientific journals and conferences
- advanced analytical and computational skills

Salary: (Level A) \$62,014 - \$66,567 per annum.

Plus an employer superannuation contribution of 17% may apply.

These fixed-term positions are available from 1 September 2009 for a period of two years (an earlier start date may be possible).

Please refer to the selection criteria or alternatively contact Professor Tony Williams, Director, CSSM, email: [anthony.williams@adelaide.edu.au](mailto:anthony.williams@adelaide.edu.au) or Professor Derek Leinweber Head, School of Chemistry & Physics, email: [derek.leinweber@adelaide.edu.au](mailto:derek.leinweber@adelaide.edu.au).

Further information on the CSSM is available at:

<http://www.physics.adelaide.edu.au/cssm/>.

CSSM researchers have access to the extensive supercomputer facilities managed by eResearch SA (<http://www.eresearchsa.edu.au/>) and also at the Australian National Facility (<http://nf.apac.edu.au/>)

**Deadline: *ongoing until filled***

Your application must:

- include your résumé/Curriculum Vitae (including a list of publications, and a statement of research interests)
- address the selection criteria
- quote the relevant reference number
- include residency status
- include the names, addresses and/or email details of three referees

Email applications to [cssm@adelaide.edu.au](mailto:cssm@adelaide.edu.au) or forward in duplicate to:

Director  
Centre for the Subatomic Structure of Matter (CSSM)  
School of Chemistry & Physics  
The University of Adelaide  
South Australia 5005

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HR WEB PAGE: <http://www.adelaide.edu.au/jobs/>

SEEK: <http://www.seek.com.au/>

Ad composed: 21/01/09