



**Dr. Tom Dietel, Dr. Andrew Hamilton, Dr W.A. Horowitz,
 Prof. Dr. Andre Peshier, Prof. Dr. Heribert Weigert**

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Fellowships for PhD studies in Physics at the University of Cape Town

The High energy physics group at the UCT Physics Department is pleased to announce the availability of at least two fellowships (stipend plus running costs) for students wishing to undertake a PhD in Physics at the University of Cape Town. The fellowships are for 3 years and are available to local or international students.

The High energy physics group at the UCT Physics Department undertakes research within the following areas:

- › High energy theory, with a focus on quantum chromodynamics (QCD), Color Glass Condensate theory and applications (CGC), finite temperature and non-equilibrium phenomena in field theory and initial conditions of heavy ion collisions, and AdS/CFT.

To identify a specific thesis topic suited to your background and interests, please contact one of us directly:

- Dr. W. A. Horowitz (QCD, AdS/CFT, heavy ion collision phenomenology, electron ion collision phenomenology)
 Sample topic options: “pQCD Energy Loss in QGP at NLO”; “Improved Strongly-Coupled Light and Heavy Flavor Suppression at RHIC and LHC”; “Running Coupling Exclusive Vector Meson Production at an EIC”
<http://www.phy.uct.ac.za/people/horowitz>
- Prof. Dr. Andre Peshier (QCD in finite temperature and out of equilibrium)
 Sample topic option: “Strongly interacting quark-gluon plasma far from equilibrium.”
<http://www.phy.uct.ac.za/peshier/>
- Prof Dr. Heribert Weigert (QCD at high energies, Field theories out of equilibrium, initial states of heavy ion collisions, nonlinear jet evolution equations)
 Sample topic options: “JIMWLK evolution at NLO: Theory and implementation.”, “Nonlinear jet evolution equations vs Monte Carlo generators, a comparison.”
<http://www.phy.uct.ac.za/weigert/>

email contacts: wa.horowitz@uct.ac.za, andre.peshier@uct.ac.za, heribert.weigert@uct.ac.za

- › Experimental high-energy physics at CERN within the ATLAS and ALICE collaborations. Particle physics: search for the Higgs boson (ATLAS); heavy-ion physics: photon production, statistical model (ALICE); related topics in high-performance computing Please contact us directly to tailor a topic to your skills and interests.

- Dr. Andrew Hamilton, ATLAS (Higgs analyses)
<http://www.phy.uct.ac.za/people/hamilton/workpage/Home.html>
- Dr. Tom Dietel, ALICE (photon analyses, computing R&D)
<http://www.phy.uct.ac.za/people/dietel/UCT/Projects.html>

email contacts: thomas.dietel@uct.ac.za, andrew.hamilton@uct.ac.za

Please note that any topic listed are mainly illustrative and do not constitute an exhaustive list, direct communication with a prospective academic supervisor is recommended to finalize a specific topical choice. The supervisor may also assist you in completing the application form.

Further information is available from our departmental website (www.phy.uct.ac.za) or from Mrs Margie Maich (margaret.maich@uct.ac.za) to whom applications must be submitted.

Closing date for applications: **31 January 2014**

Applications are competitive and will be considered in February 2014. Preference will be given to students who demonstrate potential to complete their PhD within 3 years. Successful applicants may start their studies any time during 2014. Funding is for three years.

