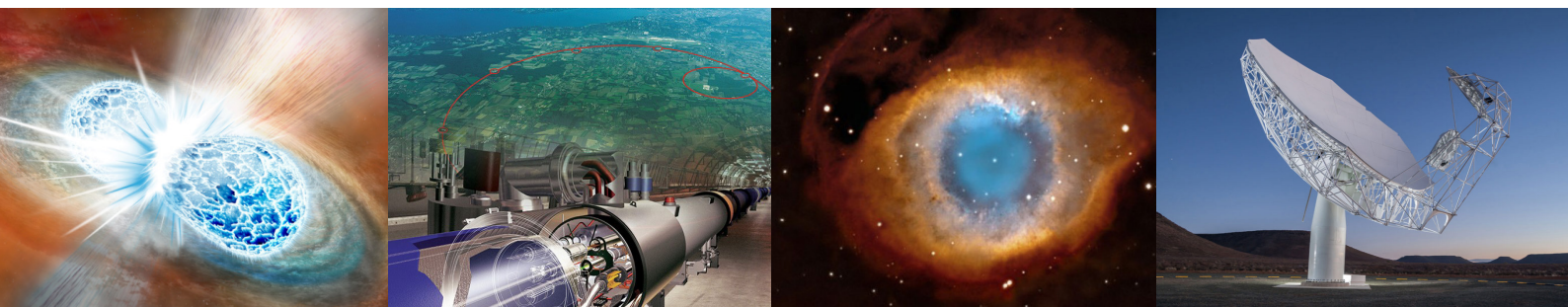


Faculty of Science

Nelson Mandela University invites applications for two postdoctoral positions

Postdoctoral positions in Theoretical High Energy Nuclear-Particle Physics and Theoretical Astrophysics-Cosmology, Port Elizabeth, South Africa

- in Relativistic Heavy Ion Collisions and
- in Relativistic Astrophysics



We are seeking talented and motivated scientists for two postdoctoral positions at Nelson Mandela University, to work in the fields of theoretical high energy nuclear-particle physics and theoretical astrophysics. The positions include participation to the SA-CERN/Theory, SA-JINR/Theory, and the National Institute of Theoretical Physics (NITheP) as well as participation to the theoretical SKA science projects.

The main focus of research will be on the theoretical study of matter under extreme conditions in Heavy-Ion Collisions and Astrophysics: the equation of state and QCD phase transition, transport properties in hot and dense QCD matter, hadronization and freeze-out in heavy ion collisions, astrophysics of compact stars and their mergers, simulations of hot and dense QCD, heavy ion collisions and compact stars, hot and dense matter in strong electromagnetic fields. The research will be performed in collaboration with Prof Azwinndini Muronga in a dynamic, team-oriented and collaborative environment.

Main responsibilities with the postdoctoral positions include:

- theoretical description of heavy ion collisions and astrophysical processes
- collaboration with the team at SA-CERN/Theory, SKA/Theory, and SA-JINR/Theory
- supervision of postgraduate and undergraduate students involved in the project

Requirements and qualifications expected from the candidates:

- PhD in relevant theoretical physics and astrophysics, (high energy particle physics, high energy nuclear physics)
- experience in the field of theoretical heavy-ion physics and/or astrophysics
- advanced experience in object oriented programming in the ROOT environment, in computational science and data science
- availability for regular travel within SA/Africa and abroad
- available to teach undergraduate students and to give topical courses to postgraduate students and interns

- excellent English oral and written communication skills.
- strong team player with mathematical, scientific computing, and analytical skills and interested to work in a highly interdisciplinary team
- research experience with simulations in numerical relativity, relativistic hydrodynamics and MHD, relativistic transport/microscopic theory is favourably evaluated
- candidates with knowledge and experience in modelling core-collapse supernovae, neutron star mergers/collisions or heavy ion collisions will be particularly favoured.

Our offer:

- research work in a multi-disciplinary team of experts embedded in the international CERN and SKA theory communities
- an international environment, in which you can develop your talent and realize ideas and innovations within a competent team of experts
- income according to the postdoc pay scale
- possibility to join teaching activities of Nelson Mandela University

The successful applicants will be part of a vibrant environment at the Nelson Mandela University, Port Elizabeth, South Africa. Port Elizabeth is a lively and friendly city in South Africa.

The positions are available starting on January 1, 2020, for an initial duration of two years.

Nelson Mandela University wishes to reflect the diversity of society and welcomes applications from all qualified candidate regardless of personal background.

The application should comprise a CV, a publication list, a brief research summary and proposal. Applicants should also arrange for three letters of reference to be sent to the address below. Applications will have to be sent by October 31, 2019 for full consideration, but the search will remain open till the optimal candidates are found.

Please send your application to:

Mrs Tessa Penrith: Tessa.Penrith@mandela.ac.za

