



## PERSON SPECIFICATION

This is a specification of the qualifications, experience, skills, knowledge and abilities that are required to effectively carry out the responsibilities of the post (as outlined in the job description) and forms the basis for selecting a candidate

**Job Title: Postdoctoral Research Assistant –  
Condensed Matter Theory**

**Department: Physics**

	Essential	Desirable	Tested by
<p><b>Knowledge, Education, Qualifications and Training</b></p> <p>PhD or equivalent in a related field of study</p> <p>Knowledge of quantum condensed matter theory</p> <p>Knowledge of both current theories and experiments in at least one of the following systems: helium superfluid/solid, trapped ultracold atoms, strongly correlated electronic systems such as cuprates, iron-based superconductors</p> <p>Supervisory or management training</p>	<p>X</p> <p>X</p> <p>X</p>	<p>X</p>	<p>Application form</p> <p>Application form, interview</p> <p>Application form, interview, presentation</p> <p>Application form</p>
<p><b>Skills and Abilities</b></p> <p>Essential: computational and/or analytical methods in quantum condensed matter theory, at least one of A) or B):</p> <p>A) Computational skill: advanced computational methods for quantum condensed matter such as quantum Monte Carlo and dynamical mean-field theory.</p> <p>B) Advanced analytical methods, for example, quantum field theories, microscopic theories of strongly correlated quantum systems, group theory, renormalisation group theory.</p> <p>Excellent oral and written communication skills</p> <p>Ability to analyse, specify and communicate administrative requirements</p> <p>The ability to relate to students and staff at all levels in a professional and confident manner</p> <p>Use of webpage software to create engaging copy and images</p>	<p>X</p> <p>X</p> <p>X</p> <p>X</p>	<p>X</p> <p>X</p>	<p>Application form, interview</p> <p>Application form, interview</p> <p>Application form, interview</p> <p>Application form, interview</p> <p>Interview</p> <p>Application form, interview</p>
<p><b>Experience</b></p> <p>Work experience in the theory of strongly correlated quantum many-body physics.</p> <p>Work experience in applying theory to model and to analyse experiments in quantum condensed matter systems, for example, helium superfluid/solid, trapped ultracold atoms, strongly correlated electronic systems such as cuprates, iron-based superconductors</p>	<p>X</p>	<p>X</p>	<p>Application form, interview, publications, presentation</p> <p>Application form, interview, publications, presentation</p>

Experience of organising research, managing and motivating research team		X	Application form, interview
Experience of writing papers for publication		X	Application form, interview
Demonstrate independence, critical thinking and creativity in research		X	Application form, interview
Experience working with research students		X	Application form, interview
<b>Other requirements</b>			
Remain calm and effective under pressure	X		Interview
Prepared to work additional hours as required		X	Interview