Jamie Parkinson

I am a 4th year Theoretical Physics student at UCL, hoping to continue studying and researching physics at a higher level. I am interested in quantum information theory and quantum thermodynamics, and particularly in the overlaps between these two very related fields. I'd like to pursue a PhD around these topics.

Education

University College London (UCL) - *Theoretical Physics MSci* *[2012 -]*

- 1st year average mark - 86.6%
- 2nd year average mark - 87.8%
- 3rd year average mark - 81.0%
- Awarded the Oliver Lodge Prize for best performance in first year physics.
- Studies have been as mathematically focused as available options have allowed.
- My recently completed MSci research with Dan Browne looked at trying to incorporate some theory of thermodynamics into Rob Spekkens' toy theory of epistemic states, and tried to use this to give some insight into the role that thermodynamics plays in quantum settings.

Bilborough College, Nottingham - *A-Levels* *[2010 - 2012]*

- Maths, Further Maths, Physics - A*
- AS Levels: History and Extended Project - A

The Nottingham Bluecoat School - *GCSEs* *[2005-2010]*

- 9 A*s, 4 As

Employment

UCL Physics Department: *Project Student* *[June 2015 - September 2015]*

- Work during the summer with Prof. Ian Ford funded by the EPSRC Vacation Bursary.
- A paper from this, of which I am first author, is to appear in *Molecular Simulation* - it has been accepted for publication. It is available at *arXiv:1603.05848*.
- Implemented a new technique (developed by Ford and H. Y. Tang) for the determination of cluster free energies of formation by Molecular Dynamics simulations. This involved both computational and theoretical (statistical thermodynamics) work.
- Presented preliminary results to Prof. Hanna Vehkamäki's group at the University of Helsinki, and discussed the possible comparisons between our technique and existing results.

UCL Physics Department: *Project Student* *[June 2014 - March 2015]*

- Work during the summer with Dr. Stephen Hogan funded by the EPSRC Vacation Bursary.
- Developed C++ software from scratch to simulate the acceleration of antihydrogen in an inhomogeneous electric field, under conditions relevant to the AEgIS experiment at CERN.

- Determined optimal field configurations for this acceleration, to be used in the AEgIS experiment.

Salutaris Medical Devices, Ltd.: *Associate* *[Jan 2013 - Jan 2015]*

- The company is developing a radiotherapy procedure for treating Wet AMD.
- Responsibilities including office-keeping, liaising with staff both in the company and at Imperial College London, quality control and health and safety.

University of Leicester Physics Department: *Work Experience* *[March 2009]*

- Completed an undergraduate research project - the results were used as model data in the following year. Involved lab work and IDL programming.

British Home Stores: *Sales Associate* *[May 2012 - September 2012]*

- Worked with customers and on tills, which required efficiency and teamwork.

Interests

- Music: Grade 8+ proficiency on double bass and piano. I play as principal and co-principal bass in several orchestras, and am on the committee the UCL Chamber Music Club. I have also worked as a rehearsal pianist for theatre productions.

References

Dr. Dan E. Browne

Relationship: MSci project supervisor

Email: d.browne@ucl.ac.uk

Tel: +44 20 7679 3602

Address: Department of Physics and Astronomy
UCL, Gower Street, London WC1E 6BT, U.K.

Prof. Ian J. Ford

Relationship: Summer project supervisor

Email: i.ford@ucl.ac.uk

Tel: +44 20 7679 7136

Address: As above