

# Peter Howard Williams

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Date of Birth: 14<sup>th</sup> January 1977  
Nationality: UK  
Family Status: Married, 2 children

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## Employment History

- 2003 - 2005    **Postdoctoral Researcher**, High Energy Physics Group, Department of Physics and Astronomy, University of Oklahoma, USA.  
My research was in the field of particle physics collider phenomenology, specifically concentrating on the physics of the Higgs mechanism. This involved both computational and mathematical analyses of possible search strategies for a new type of matter at the Large Hadron Collider (LHC) experiment, currently under construction near Geneva. I collaborated with theorists and experimentalists, presented my work at international conferences and published results in peer reviewed scientific journals. During the summer of 2004, I was seconded to Brookhaven National Laboratory, New York, to collaborate with some of the top physicists in the world.
- 2000 – 2003:    **Postgraduate Tutor & Masterclass Organiser**, Department of Physics and Astronomy, University of Durham.  
In addition to my Ph.D. research, I taught the third year undergraduate theoretical physics workshop and organised a series of day long particle physics masterclasses for sixth form students from around North-East England.
- Jun – Sep 1999: **CERN Summer Student Programme**, European Laboratory for Particle Physics, Geneva, Switzerland.  
During my MPhys, I was selected to attend this prestigious apprenticeship where I performed a physics analysis for the ALEPH experiment.

## Education

- 2000 – 2003:    **Ph.D.** Institute for Particle Physics Phenomenology, University of Durham,  
Thesis: 'Hadronic Higgs Production with Forward Jets',  
Together with more senior collaborators, I published a series of papers investigating new light Higgs discovery channels at the LHC. This involved writing my own code to simulate both theoretical frameworks and experimental conditions. I completed my thesis well within the funded three academic years.
- 1995 – 2000:    **MPhys**, Mathematical Physics, University of Edinburgh, Class 2(i).  
During my final year I concentrated on physics computer simulation techniques and advanced mathematical topics. My final year project combined these interests.
- 1989 – 1995:    **Secondary School**, Hymers College, Hull.  
A-Level: Maths, Physics, Geography, General Studies, AS-Level Electronics.  
All grade A with distinction in physics special paper.

## IT Skills

- Wrote numerous simulation programs during the course of my work, mainly in fortran90, but also C.
- Some experience of C++ and the attending object oriented approach.
- Wrote UNIX shell and Perl scripts to perform various system administration tasks.
- Experienced user of Mathematica, Maple and specialist physics software.
- Experienced user of RedHat Linux, Sun Solaris and Windows systems.
- Administer my home Linux and Windows network (Fedora Core 4 and XP, respectively).
- Recently attended week long Parallel & Cluster Computing Workshop organised by the US National Computational Science Institute. In preparation for this I taught myself MPI and gave a short talk on the subject.
- Built personal computers from scratch.

## Communication Skills

I have presented my research both to expert, lay and school audiences, including:

- 2005: **National Computational Science Institute**, Parallel & Cluster Computing Workshop, Norman OK, USA.
- 2004: **Phenomenology Symposium 2004**, Madison WI, USA.  
**IPPP Seminar (invited)**, Durham, UK.
- 2003: **Oklahoma HEP Group Seminar (invited)**, Norman OK, USA.  
**38<sup>th</sup> Rencontres de Moriond on QCD & Hadronic Interactions (invited)**, Les Arcs, France.
- 2002: **CTEQ Summer School on QCD Analysis & Phenomenology**, Madison WI, USA.  
**Institute of Physics Conference**, Brighton, UK.
- 2001: **British Universities Summer School in Theoretical Physics**, Manchester, UK.

## Other Information

- Clean driving license.
- Keen hillwalker.
- Whilst in the USA, I took the opportunity to travel, visiting 27 of the 50 states.

## References

Supplied on request