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# Jason B. Greenwood *BA, Ph.D, CPhys*

## **Position**

Senior Lecturer  
Centre for Plasma Physics  
School of Mathematics and Physics  
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## **Personal Information**

Born 2 June 1970, Belfast, United Kingdom, UK citizen, 2 children

## **Education and Employment**

<b>BA Degree:</b> 1988-91	<b>Physics, Keble College, Oxford University</b> 1 <sup>st</sup> Class
<b>Ph.D. Degree:</b> 1991-95	<b>Atomic and Molecular Physics, Queen's University Belfast</b> <i>Elastic and inelastic scattering of electrons from ions</i> , Supervisor Ian Williams
<b>Research Fellow:</b> 1995-97	<b>Atomic and Molecular Physics, Queen's University Belfast</b> <i>State-Selective Electron Capture by State Prepared Ions</i> , R.W. McCullough
<b>Research Associate:</b> 1997-99	<b>Jet Propulsion Laboratory, California Institute of Technology</b> <i>Multiply Charged Ion Collisions of Astrophysical Interest</i> , Dr. Ara Chutjian
<b>Lecturer:</b> 1999-2006	<b>School of Maths and Physics, Queen's University Belfast</b>
<b>Senior Lecturer:</b> 2006-present	<b>School of Maths and Physics, Queen's University Belfast</b>

## **Awards**

1991-94 Postgraduate Distinction Award: Department of Education for Northern Ireland  
1997-99 National Research Associateship: National Research Council, National Academy of Sciences, USA

## **Teaching**

Electricity and Magnetism – Year 1 Undergraduate (7 years)  
Nuclear Physics – Year 2 UG (5 years)  
Atomic and Molecular Physics – Year 4 UG (4 years)  
Physics in Medicine – Year 3 UG (7 years)  
Quantum Mechanics – Year 2 UG (2 years)  
Statistical Mechanics – Year 2 UG (1 year)  
Intense Lasers in Atomic Physics – Quantum , Atomic and Molecular Physics Summer School UK (2 years)

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## **Research Interests**

Femtosecond laser technology  
Ionization and dissociation of atoms and molecules in intense laser fields  
Electrostatic ion trap design and operation  
High resolution mass spectrometry  
Ion-atom/molecule, electron-ion collisions

## **Technical Expertise**

Ultrahigh vacuum technology  
C programming  
Labview virtual instrumentation programming  
SIMION charge particle optics software design  
Femtosecond laser technology

## **Research Record**

7 talks at major international conferences  
46 papers in refereed international journals  
4 papers in Physical Review Letters  
435 citations  
260 non-self citations  
11 h index (Hirsch number)

## **Successful Research Proposals**

2000-03 *Low Energy Ion Beam Facilities*  
€40k EU 5th Framework, Co-operation Network (Co-I)

2000-02 *Production and Excitation of Negative Ions for Studies of Collective Effects in Atomic Systems*  
£60k EPSRC (PI)

2000-01 *Low Energy Ion Beams*  
£10k Royal Society (PI)

2001-02 *Measurement of Charge Exchange Cross Sections Relevant to Cometary X-ray Emission*  
£4k PPARC (PI)

2003-04 *Using Heidelberg Femtosecond Laser Facility to Study Collective Effects in Negative Ion*  
£12k EPSRC (PI)

2003-06 *North-South Programme for Collaborative Research*  
£100k Higher Education Authority, Rep. of Ireland (Co-I)

2006-11 Beamtime on Astra/Artemis laser at STFC Central Laser Facility (PI) – 16 weeks total

2006-10 *Ion Technology and Spectroscopy at Low Energy Ion Beam Facilities*  
£300k EU 6<sup>th</sup> Framework, Integrated Infrastructure Initiative (Co-I)

2008-11 *Femtosecond Lasers in Mass Spectrometry*  
£177k Leverhulme Trust (PI)

## **Other Interests**

Rowing Coaching, Cycling, Running