

# Peter Pihlmann Pedersen

*I am a very hard-working and creative problem solver, who relishes a challenge and is always keen to explore new ideas. I'm also an adaptable and motivated team player who enjoys being stretched.*

2 Grimby Place, Oxford, OX2 7LT, UK  
+44 7757 721616  
peter@ppp.one  
www.ppp.one

## Education

2017 – 2021	<b>PhD Sensor Technologies</b> <i>University of Cambridge</i>	
2013 – 2017	<b>MPhys Physics</b> <i>University of Manchester</i>	1:1
	<i>Electives: Maths of Waves &amp; Fields (97%, 1<sup>st</sup> in year), 2<sup>nd</sup> Yr General Paper (83%, 3<sup>rd</sup> in year)</i>	
2015 – 2016	<b>Exchange, Physics</b> Yr 3: received equivalent to a high First Class <i>University of California, Davis</i>	
	<i>Electives: Cosmology (A, graduate level), General Relativity (A)</i>	
2011 – 2013	<b>A Levels</b> <i>The Cherwell School, Oxford</i>	4 A*s

## Positions of Responsibility

2014 – 2016	<b>Student Mentor &amp; Representative</b> mentor for Physics students/exchange students, and a representative at UCAS open days
2014 – 2015	<b>President</b> University of Manchester Astronomy Society

I represented a body of over 300 students, by organising trips, lectures, stargazing and social nights, in addition to establishing the foundations of the society. Under my leadership, we raised over £5000, and were nominated as 'best recreational society' and 'best committee' within the Students' Union.

2014 – 2015	<b>Personal Tutor</b> for A level & GCSE students
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## Computer Skills

Intermediate Knowledge	Linux, batch scripting, L <sup>A</sup> T <sub>E</sub> X, ImageJ, CAD, ZEMAX PHP, SQL, CSS, HTML Premiere Pro, After Effects
Advanced Knowledge	Python, MATLAB, Photoshop, C++, Computer Hardware

## Additional Skills

- **Working proficiency in Spanish**
- **Long distance cycling**
- **Experienced Photographer**  
*hired for events at the Bodleian Library, St Anselm Hall,  
Manchester Business School, the Imperial War Museum  
North. Contracted for Henry's Hotel, Oxford; Sixteen  
restaurant, Witney.*

## Academic Projects/Work Experience

**MPhys Project** Sept 2016 - June 2017  
*University of Manchester, with Sarah Bridle and Bruce Grieves*

- Proposed super-resolution techniques for satellite data (Sentinel-2), used conjointly with Fourier sub-pixel alignment methods.
- Designed various optical designs, through ZEMAX, of a device proposed to detect and remove invasive species of plant to replace the use of herbicides in farming.

**Research Assistant** Sept 2015 - June 2016  
*University of California, Davis, Tyson Cosmology group*

- Testing and modelling LSST CCDs with advanced data processing techniques.
- Became a member of DESC, and attended the DESC LSST collaboration meeting at the University of Oxford.

**Summer Intern** Summer 2015  
*European Southern Observatory, Chile*

- Reduced FITS images and processed over 100 GB of data from POPiPlaN images using a variety of languages.
- Built, from scratch, an online archive of planetary nebulae observed by the VLT based on a PHP and SQL database.

**Summer Intern** Summer 2014  
*BP funded research, Henry Moseley X-ray Imaging Facility*

- Developed methods of image alignment for big datasets of in-situ TEM images.
- Reduced alignment processing time by ~99% as compared with traditional methods using high-throughput computing.

**Volunteering** Sept 2009 – May 2013  
*The Chicken Project - Gcato School, South Africa*

- Charity focused on reducing poverty through education via unique, sustainable and repeatable enterprise.
- Teamwork, with a succession of competition wins including a £3000 prize at Reaching for Gold, Windsor Castle.

## Awards

2015	<b>UCEAP Travel Photo Competition</b>
Apr 2015	<b>Zochonis Travel Award</b>
Feb 2015	<b>RAS Travel Grant</b>
Mar 2014	<b>BP Achievement Scholarship</b>
Sept 2013	<b>Arthur Schuster Entrance Scholarship</b>
2012	<b>Stargazing Oxford Photo Competition</b>
2011	<b>Astrophotographer of the Year (HC)</b>
2010 & 2011	<b>Science Fair Winner</b>

## Referees

Available on request