

# David Jon Gooding MSc BSc

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I am an Optical System Engineer with 5 years of experience in the space industry including optical payload design for earth observation, management of R&D projects, mission concept studies and CMOS sensor characterisation. I am looking for a new challenging role to build on this experience and make a valuable contribution to important science with your organisation. Referees are available upon request.

## Relevant Skills

**Development of optical systems:** Full lifecycle involvement and responsibility of space borne optical instrumentation with reflective and refractive components; concept to in-orbit operation

**Performance assessment of optical systems:** MTF characterisation of EarthCARE's TIR instrument, MTF and SNR testing of commercial high-resolution imagers, and characterisation of astronomical MCT infrared detectors at ESA

**Technical coordination and leadership:** Product owner of a commercial imager and technical lead of R&D project to develop a deployable space telescope; leading multi-disciplinary teams, and providing customer training

## Employment History

### Surrey Satellite Technology Ltd., Guildford, Surrey, UK (September 2016 – Current)

Optical Payload Systems Engineer



- Current Payload Chain Subsystem Lead for 100kg EO satellite for institutional customer
- Design, build and test of 1m GSD cameras for Earth Observation missions (Zemax, SolidWorks etc.)
- Data analysis for characterisation of MSI/TIR instrument of ESA's EarthCARE mission
- Development of Python code to commission EO satellite imagery
- Leading several internal R&D projects to further SSTL's optical performance capabilities
- Lead bids and proposals for R&D funding from government for novel instrumentation
- Supporting future mission concept studies and providing technical support to bids and business development
- Internal secondments to Mission Concepts team and EO Business Line team
- Leading member of the outreach team, communicating STEM subjects and space to the community

### European Space Agency, ESTEC, Noordwijk, The Netherlands (Oct 2015 – September

2016)



Young Graduate Trainee

- Payload technology validation activities on infrared detectors for future astronomy missions
- Characterised MCT IR detectors
- Presented a paper at the SPIE Astronomical Telescopes & Instrumentation conference 2016

### Hawk-Eye Innovations Ltd., Sony, UK (Sept 2014 – June 2015)

Part-time Goal Line Technology (GLT) Systems Operator



- Setup, testing and operation of GLT system for Premier League football matches
- Liaising with match officials and broadcast directors
- Operation of complex software packages to ensure data quality and reliability

### Rutherford Appleton Laboratory (RAL), Oxford, UK (July – Dec 2011)

Research Assistant, Millimetre-wave Technology Group, RAL Space



- Professional placement as part of undergraduate degree at Cardiff University
- Specification testing and design of Atacama Large Millimeter Array (ALMA) components
- Represented the European Southern Observatory (ESO) at the Innovation Convention 2011, Brussels
- Contributed to a RAL presentation during an annual ALMA board conference I attended in Santiago, Chile

# Education

**University College London, London, UK (2014 to 2015)**  
MSc Space Science & Engineering - Distinction



**Cardiff University, UK (2009 to 2013)**  
BSc Physics with Astronomy (with Prof Place) (Hons) - 2:1



**Universidad de Cantabria, Santander, Spain (Jan to July 2012)**  
Diploma in Experimental Physics (Erasmus programme) - Distinction



**Farnborough Sixth Form College, UK (2006 to 2008)**  
A-Levels: Physics - B, Mathematics - B, Chemistry - D and General Studies - C



**Lord Wandsworth College, UK (2000 to 2006)**  
GCSEs: 6 As, 4 Bs.

## Other Employment

- Universidad Internacional Menéndez Pelayo (UIMP), Madrid, Spain  
*Teaching Assistant (Summer of 2013 & 2014)*
- SkiBound, TUI, Tignes, France  
*Ski Rep (Nov 2013 - Feb 2014)*

## Hobbies and Interests

### Sport

- Regular football player; captained and coached department football team at university
- Played university level hockey for 2 years
- Ran the Amsterdam Marathon 2015
- Avid skier and snowboarder

## Qualifications and Awards

- Licentiateship City and Guilds Institute (LCGI) awarded during my placement at RAL
- Qualified Salomon Ski Technician

## Skills and Experience

### Leadership

- Leading a team of 8 engineers in a £250k UK Space Agency funded project
- Organised and ran educational activities for 200+ Spanish students

### AIV

- Preparation, alignment, bonding and testing of refractive and reflective optical systems for space

### Languages

- Native English speaker, intermediate Spanish and basic French

## Volunteering

- Instituto de Educacion Tecnologica y Cientifica (IETC), Naco, Honduras  
*English and Maths Teacher (April - May 2014)*
- LOCOG, London 2012 Olympics, London, U  
*Venue Entry Team Member (July 2012)*
- Hands On Disaster Response  
*Fundraiser (2010-2014)*

### Travel

- Worked and/or studied in Austria, Spain, France, Honduras and the Netherlands
- Backpacked around China, Europe and Central America
- Full clean drivers licence

- Duke of Edinburgh Bronze and Silver
- BTEC First Diploma in Public Services
- RYA Keelboat Level 2
- First Aid Trained

### Problem Solving

- Lab experience at SSTL, RAL and ESA involving a wide range of problem solving on a day to day basis both individually and as a team

### IT

- Very IT literate; able to use all common software
- Data analysis and test automation with Python
- Regular user of SolidWorks and Zemax
- Experience with Autodesk Inventor (FEM), Fusion 360, ESATAN-TMS, STK, LaTeX, DOORS and Microsoft Project, MatLab, VBA