Dr Robin Cole

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Nationality: British

Summary - PhD Physicist who has become a python developer with a focus on data and analytics applications

PROFESSIONAL SOFTWARE DEVELOPMENT

- Maintainer of mission critical software tool for processing and performing analytics on satellite imagery
- Developed python library for modelling satellite optical systems, used to guide decision making in bids
- Developed automation and visualisation tools to significantly expedite Monte Carlo modelling of radiation transport
- Using C# developed .exe to mine a proprietary medical database that was previously manually crawled
- Undertook significant research study using R & python statistics packages to compare radiation algorithms, providing advice on adoption of new algorithms to clinical team
- Automated laboratory measurement systems to enable remote control and collection of large volumes of high resolution data

OPEN SOURCE AND COMMUNITY WORK

- https://github.com/robmarkcole
- Significant contributor to smart home python platform Home Assistant www.home-assistant.io
- Winner of 'Best innovator' award (and £3k) in the 2017 Design Spark LeakKiller Challenge https://www.rs-online.com/designspark/the-smart-home-approach-to-leak-detection
- 3x presentations at PyData London events
- Developer evangelist for Clarifai AI
- Contributed to Pandas documentation at hackathon

TECHNOLOGIES

- Python: scientific stack
- Databases: SQL, PostgreSQL
- Docker
- Linux: Ubuntu
- MATLAB & R

SIGNIFICANT PUBLICATIONS

- Phys. Rev. Lett. 97, 137401: 82 citations, breakthrough in understanding of light propagation in periodic metallic structures
- Nano Lett. 7(7) 2094–2100: 188 citations, finite element modelling of light in confined metal structures
- Phys. Rev. A. 3 (2), 024004: 30 citations, measurement of graphene opto-mechanical structures

WORK EXPERIENCE

July 2017 - present	Optical systems engineer, Surrey Satellite Technology Ltd
September 2014 – July 2017	Medical physics, Royal Surrey County Hospital
August 2011 – August 2014	Postdoctoral RA, University of Queensland, Australia
May 2010 – July 2011	Research scientist, Sharp Laboratories, Oxford

EDUCATION

2006 – 2010	PhD in Physics, University of Cambridge
2014 – 2017	MSc in Medical Physics, Kings College London, pass with distinction
2004 – 2005	MSc in Optics and Photonics, Imperial College London, pass
2001 – 2004	BSc in Physics, University of Southampton, 1st class

INTERESTS

- Advanced salsa dancer: former member of performance teams and have competed in both team and solo categories.
- Music: grade 8 violin and grade 7 piano. Have been a member of many orchestras and performed both in UK and overseas.
- Rock climbing: mostly indoor climbing in UK, but have done deep water soloing and lead climbing in Thailand.