

PERSONAL INFORMATION

Dr Apostolos Christou
Research Astronomer
Tel: +44 (0) 2837 442320
Email: apostolos.christou@armagh.ac.uk

RESEARCH STATEMENT

My work focuses on the physical and dynamical evolution of small solar system bodies, their interrelations and effects on planetary atmospheres and surfaces. Recent project topics include: Trojan asteroids of Mars and the Earth, families of giant planet so-called “irregular” satellites, the Main Asteroid Belt, Near-Earth Objects and the meteoroid environment.

I have authored 91 refereed journal publications with a normalised citation count of 434. Of those, nineteen (19) have been published since January 2019 (Source: ADS). Recent highlights: Christou & Georgakarakos, MNRAS, 2021; Christou, Borisov et al, Icarus, 2021; Christou, Dermott & Li, MNRAS, 2022. Christou, Egal & Georgakarakos, MNRAS, 2024

My research has featured in the media. In November 2020, our discovery of a unique, lunar-like composition for a Martian Trojan asteroid featured in *The Guardian* and *The Times* newspapers. Linking the seasonal maximum of Mercury’s exosphere with the meteoroid stream of comet Encke featured in a press conference at the 2015 DPS Meeting. Ongoing work on Mars Trojan asteroids was similarly publicised at the 2013 DPS in Denver, CO and again at the 2017 DPS in Provo, Utah. In 2011, I identified 2010 SO₁₆ as a long-lived Earth horseshoe asteroid with a press release issued by the Royal Astronomical Society.

EVIDENCE OF ESTEEM

Lead author, “Extra-terrestrial Meteors” review chapter in *Meteoroids: Sources of Meteors on Earth and Beyond* (Cambridge Planetary Science Series, published October 2019).

I regularly review UK STFC grant applications and PATT observing time proposals, typically once a year each. In addition, I have reviewed Austrian Science Fund (FWF) & Canadian *Discovery Grant* research proposals, NASA *Outer Planets Research*, *Cassini Data Analysis & Solar System Workings Programme* proposals. I have served as external assessor for RAS Fellowship applications and overseas Professorship nominations.

I regularly review manuscripts submitted to peer-reviewed journals: *Icarus*, *Monthly Notices of the RAS*, *Astronomy & Astrophysics*, *AAS journals* and others at a frequency of 6-8 / year.

Acted as external thesis examiner for 5 PhD vivas, most recently those of Quanzhi Ye (2016, U. Western Ontario, Canada); Agata Rozek (2018, U. Kent, UK); and Petr

Fatka (2020, Charles University, Czech Republic). Also served as internal examiner for several PhD student vivas at AOP.

Other EoE:

- Certificate of Excellence in Reviewing, awarded by Icarus Editorial Board, 2013
- Member of Editorial Advisory Board of Icarus, 2017 – 2019.
- Served as NASA proposal review panelist, 2020.
- Completed term of service within the Vera Rubin Early Career Prize selection committee.
- Organizing Committee Member of IAU Commission F1: Meteors, Meteorites and Interplanetary Dust
- Member of IAU Division A: Fundamental Astronomy and Division F: Planetary Systems and Astrobiology
- full member of the RAS and the AAS, DPS and DDA divisions.
- Minor Planet (9084) Achristou is named after me.

TEACHING RECORD

Undergraduate students: Exercise classes in calculus, differential equations (Queen Mary University of London) and orbital dynamics (Univ. Surrey)

Graduate students: Seminars on Astrodynamics (Univ. Surrey), 3-body problem & co-orbital motion (Univ Surrey, AOP), rigid body dynamics (AOP). Applied probability theory (AOP).

SUPERVISING EXPERIENCE

Acted or acting as principal thesis advisor of 6 PhD students to-date. **Jonathan McAuliffe** (PhD obtained 2006) worked in the European Space Agency Science Operations Department and is currently software project manager for the Global Navigation Satellite System (GNSS) in Munich, Germany. **Toby Hinse** (PhD obtained 2010) is Research Fellow at the Korean Astronomy and Space Science Institute, Daejeon, Republic of Korea. **Daohai Li** (PhD obtained 2017) has been a PDRA at Lund Observatory, Sweden. Currently supervising **Alice Humpage** and **Andrew Marshall-Lee**. Also served as external supervisor for **Tasos Margonis** at TUB Berlin (PhD obtained 2019). Supervised several IAESTE-supported overseas u/g students on summer projects as well as an MSc project.