

Dr Mario M. Bisi, MPhys (Hons) (WALES), Ph.D. (WALES), FRAS, MInstP



Dr Bisi's main research interests concern the origin and development of the large-scale structure of the solar wind and solar-wind transients (Heliophysics) and their influence on the inner planets. A particular focus is on the space weather they can create at Earth and their impact. He is experienced in working with both ground-based radio observations and various forms of spacecraft data (remote sensing and *in situ*) as well as in three-dimensional tomographic reconstruction of the inner heliosphere.

Dr Bisi has authored/co-authored over 80 publications/reports (over 65 of which are refereed) and well over 275 conference presentations (including over 40 invited talks where around 20 were as first author). He has acted as a scientific reviewer of proposals (and sat on several international proposal panels, *e.g.* NASA), for international scientific journals including (among others) *Advances in Geosciences* (the original AOGS journal series), *The Astrophysical Journal*, *Journal of Geophysical Research*, *Solar Physics*, and *Radio Science*. He has organised various workshops and sessions at multiple national and international conferences (eight workshops and around 25 sessions at AOGS, AGU, NAM, *etc.*).

Dr Bisi has also been a Guest Editor for four Topical Issues of *Solar Physics* and one Special Issue of the *Space Weather* journal, a NASA Living With a Star (LWS) TR&T Steering Committee Liaison (2013-2015), as well as holding multiple other community positions. Examples include a ST Secretary positions since 2011 (having been re-elected each time), the new Vice Chair of the ESWW Programme Committee, a COSPAR I-SWAT Moderator (2017-present), a member of the UN COPUOS SWx Expert Group (2014-present), the heliospheric coordinator for the Murchison Widefield Array (MWA) Solar Heliosphere Ionosphere (SHI) scientific community (2012-2017; member since 2006), and he is also an active core member of the Low Frequency ARray (LOFAR) Solar physics and Space Weather Key Science Project (SSW-KSP) (2012-present; member in 2011). In addition, he was the LOFAR-UK Management Committee Representative for Aberystwyth University (2012-2013) and is currently one of the leads for the Worldwide IPS Stations (WIPSS) Network (which already includes multiple institutions from across the AOGS region and will be expanding across this region in 2019-2020).

Education:

July 2006 – Ph.D. (Solar/Heliospheric Physics) – University of Wales, Aberystwyth (UK)

July 2002 – MPhys (Hons) (Physics with Astronomy) – University of Wales, Cardiff (UK)

Research Experience:

August 2013-Present Space Weather Scientist, RAL Space, UKRI STFC RAL, UK

January 2010-July 2013 Post-Doctoral Research Associate (and Senior Lecturer cover for research and research administration), IMAPS, Aberystwyth University, UK

June-August 2011 Visiting Postdoctoral Scholar (Secondment), CASS, UCSD, USA

August 2006-December 2009 International Postdoctoral Scholar, CASS, UCSD, USA

September 2002-July 2006 Post-Graduate Student Researcher, IMAPS, UWA, UK

Selected Publications:

Bisi, M.M., et al. (83 co-authors), “The First Coronal Mass Ejection Observed with the Low Frequency ARray (LOFAR)”, submitted to *Ap. J. Supp.*

Fallows, R.A., **M.M. Bisi, et al.**, “Separating Nightside Interplanetary and Ionospheric Scintillation with LOFAR”, *Ap. J. Lett.*, 828:L7 (6pp), 2016.

Jackson, B.V., P.P. Hick, A. Buffington, H.-S. Yu, **M.M. Bisi, et al.**, “A Determination of the North-South Heliospheric Magnetic Field Component from Inner Corona Closed-Loop Propagation”, *Ap. J. Lett.*, 803:L1 (5pp), 2015.

Howard, T.A., **M.M. Bisi et al.** (18 additional co-authors), “The Solar Mass Ejection Imager and the Heliospheric Imaging Legacy”, *Space Sci. Rev.*, 180 (1-4), pp.1-38, 2013.

Bisi, M.M., et al. (27 co-authors), “From the Sun to the Earth: The 13 May 2005 Coronal Mass Ejection”, *Sol. Phys.*, 265 (1-2), pp.49-127, 2010.

Bisi, M.M., et al., “3D Reconstructions of the Early-November 2004 CDAW Geomagnetic Storms: Analyses of STELab IPS speed and SMEI density data”, (CDAW) *J. Geophys. Res. – Space Physics Special Edition - Geomagnetic Storms of Solar Cycle 23*, 113, A00A11, pp.1-10, 2008 (*AGU Space Weather Editor's Choice*).