Kostas Moraitis

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Short biographical note

Kostas Moraitis was born in Athens, Greece in 1977. He studied in the Physics Department of the University of Athens and graduated with a B.Sc. in Physics in 2000 after writing a diploma thesis entitled “Accretion disks” under the supervision of A. Mastichiadis, Associate Professor (at the time). In 2004 he obtained his M.Sc. in Physics from the Physics Department of the University of Athens with the thesis “Acceleration and emission of charged particles in supernovae shock waves” supervised by A. Mastichiadis.

In 2012 he successfully defended his doctoral thesis “X- and γ-ray flares from the acceleration and emission of charged particles in AGN jets” that was supervised by A. Mastichiadis. This way he obtained a Ph.D. in (High-energy) Astrophysics from the Physics Department of the University of Athens. During his doctorate studies he earned a three-year post-graduate scholarship from the Greek State Scholarships Foundation, he worked as a post-graduate research fellow in the Research Program “Plasma Outflows in Astrophysical Accretion Discs” (with Professor K. Tsinganos of the University of Athens as Principal Investigator), he published three refereed papers (see List of Publications), and additionally, he served a one-year military service, he got married and became the father of three kids.

After obtaining his Ph.D., K. Moraitis changed his career path and started working in Solar Physics. Initially the years 2013 – 2016, he worked with M. Georgoulis, Senior Researcher at the Academy of Athens, as a post-doctoral research fellow in the Research Program “Hellenic National Space Weather Research Network” (with Professor L. Vlahos of the University of Thessaloniki as Principal Investigator). During this time he published four refereed papers, and was a member of the international ISSI team led by G. Valori (MSSL - UK) and E. Pariat (LESIA - FR) on “Magnetic Helicity Estimations in Models and Observations of the Solar Magnetic Field”, which has (so far) published a large review-paper on magnetic helicity.

As of September 2016, K. Moraitis is a post-doctoral research fellow in the Research Program “Magnetic Helicity Measurements in the Solar Atmosphere – HELISOL”, working with E. Pariat at the Observatory of Paris in Meudon.

List of (refereed) Publications

1. *A two-zone model for the emission from RX J1713.7-3946*,
   K. Moraitis & A. Mastichiadis 2007, A&A, 462, 173
2. *On the rapid TeV flaring activity of Mrk 501*,
   A. Mastichiadis & K. Moraitis 2008, A&A, 491, L37
3. *X-ray variability patterns in blazars*,
   K. Moraitis & A. Mastichiadis 2011, A&A, 525, A40
4. *Validation and Benchmarking of a Practical Free Magnetic Energy and Relative Magnetic Helicity Budget Calculation in Solar Magnetic Structures*,
   K. Moraitis, K. Tziotziou, M.K. Georgoulis, V. Archontis 2014, SoPh, 289, 4453
5. *Validation of the magnetic energy vs. helicity scaling in solar magnetic structures*,
   K. Tziotziou, K. Moraitis, M.K. Georgoulis, V. Archontis 2014, A&A, 570, L1
6. *The major geoeffective solar eruptions of 7 March 2012: comprehensive Sun-to-Earth analysis*,
   S. Patsourakos, M.K. Georgoulis, A. Vourlidas, A. Nindos, T. Sarris, G. Anagnostopoulos, A. Anastasiadis, G. Chintzoglou, I.A. Daglis, C. Gontikakis, N. Hatzigeorgiou, A.C. Iliopoulos, C. Katsavrias, A. Kouloumvakos, K. Moraitis, T. Nieves-Chinchilla, G. Pavlos, D. Sarafopoulos, P. Syntelis, C. Tsironis, K. Tziotziou, I.I. Voyatzis, G. Balasis, M. Georgiou, L.P. Karakatsanis, O.E. Malandraki, C. Papadimitriou, D. Odstrčil, E.G. Pavlos, O. Podlachikova, I. Sandberg, D.L. Turner, M.N. Xenakis, E. Sarris, K. Tsinganos, L. Vlahos 2016, ApJ, 817, 14
7. *An observationally-driven kinetic approach to coronal heating*,
   K. Moraitis, A. Toutountzi, H. Isliker, M.K. Georgoulis, L. Vlahos, G. Hintzoglou 2016, A&A, in press
8. *Magnetic helicity estimations in models and observations of the solar magnetic field. Part I: Finite volume methods*,
   G. Valori, E. Pariat, S. Anfinogentov, F. Chen, M.K. Georgoulis, Y. Guo, Y. Liu , K. Moraitis, J.K. Thalmann, S. Yang 2016, Space Science Reviews, in press