University of Birmingham

Dr Andrea Miglio PhD

Lecturer in Astrophysics

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About

Dr. Miglio is Lecturer in Astrophysics. He has published over 100 papers in scientific journals in the field of stellar physics and stellar variability. He is actively involved in the activities and planning of several working groups within the space missions CoRoT, Kepler and the ESA planet-finding candidate mission PLATO.

Qualifications

- PhD in Astrophysics, Université de Liège, 2007
- DEA en Sciences, Université de Liège, 2005
- Laurea in Fisica, Univesità degli Studi di Milano, 2002

Biography

Andrea Miglio qualified with a Laurea in Fisica from the Università degli Studi di Milano, Italy 2002. He went on to study for a PhD in astrophysics at the Institut d'Astrophysique, Université de Liège, Belgium. After 3 years as a FNRS postdoctoral fellow in Liège, in early 2011 he joined the School of Physics and Astronomy as a Lecturer.

The common thread of his activities is the development and application of asteroseismic techniques which aim at inferring the internal structure of stars, and at determining their global parameters for studies of stellar populations in the Milky Way.

Teaching

- Y1 C++/MATLAB Computing Labs
- Y3 Group Studies
- Y4 Project Supervision
- MPAGS module on Stars

Postgraduate supervision

- Supervision of research PhDs in asteroseismology

Research

RESEARCH THEMES

- Asteroseismology
- Stellar Structure and Evolution,
- Stellar Population synthesis

Other activities

Member of the:

- CoRoT Seismology Working Group (2007 –)
- Kepler Asteroseismic Science Consortium (2009 –)
- ESA Plato Mission Consortium (2010 –)
- Gaia Research for European Astronomy Training (GREAT) (2008 –)
- CoRoT Co-Investigator (2012 –)

Publications

Huber, D., Carter, J. A., Barbieri, M., *Miglio, A.* et al (2013), Stellar Spin-Orbit Misalignment in a Multiplanet System, Science, 342, 331

Maxted, P. F. L., Serenelli, A. M., *Miglio, A.*, Marsh, T. R., et al. (2013), Multi-periodic pulsations of a stripped red-giant star in an eclipsing binary system, Nature, 498, 463

Miglio, A., Chiappini, C., Morel, T., Barbieri, M. et al. (2013), Galactic archaeology: mapping and dating stellar populations with asteroseismology of red-giant stars, Monthly Notices of the Royal Astronomical Society, 429, 423

Miglio, A., Brogaard, K., Stello, D. et al. (2012), Asteroseismology of old open clusters with Kepler: direct estimate of the integrated red giant branch mass-loss in NGC 6791 and 6819, Monthly Notices of the Royal Astronomical Society, Volume 419, pp. 2077-2088

Miglio, A., Montalbán, J., Carrier, F., De Ridder, J., et al. (2010), Evidence for a sharp structure variation inside a red giant star, Astronomy and Astrophysics, Volume 520, L6

Degroote, P., Aerts, C., Baglin, A., *Miglio, A.* et al. (2010), Deviations from a uniform period spacing of gravity modes in a massive star, Nature, Volume 464, Issue 7286, pp. 259-261

Miglio, A. et al. (2009), Probing populations of red giants in the galactic disk with CoRoT, Astronomy and Astrophysics Letters, 503, L21-L24

Miglio, A., Montalbán, J., Noels, A., Eggenberger, P. (2008) Probing the properties of convective cores through g modes: high-order g modes in SPB and γ Doradus stars, Monthly Notices of the Royal Astronomical Society, Volume 386, pp. 1487-1502

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