

Curriculum Vitae

Szabolcs Mészáros

Born: Kiskunfélegyháza, Hungary, March 12, 1981

Citizenship: Hungarian (EU)

Current Position:

- 2010–2013: SLOAN Postdoctoral Fellow, Instituto de Astrofísica de Canarias, Canary Islands, Spain

PhD:

- 2010: PhD thesis: *Mass Loss from Red Giant Stars in Globular Clusters* (Thesis Advisor: Dr. Andrea K. Dupree, Harvard-Smithsonian Center for Astrophysics)

Education and Fellowships:

- 2009–2010: Research Fellow, Department of Optics and Quantum Electronics, University of Szeged, Hungary
- 2008–2009: PhD student at the Department of Optics and Quantum Electronics, University of Szeged, Hungary (supervisor: Dr. József Vinkó)
- 2005–2008: Predoctoral Fellowship at the Harvard-Smithsonian Center for Astrophysics, Cambridge, USA (supervisor: Dr. Andrea K. Dupree)
- 2004–2005: PhD student at the Department of Optics and Quantum Electronics, University of Szeged, Hungary (supervisor: Dr. József Vinkó)
- 2004: MSc in astronomy (Thesis: *Evolutionary Models of Contact Binary Stars*, supervisor: Dr. József Vinkó)
- 2003: summer student at the Space Telescope Science Institute, Baltimore, USA (supervisors: Dr. Letizia Stanghellini and Dr. Eva Villaver)

- 2003: Pro Renovanda Cultura Hungariae foundation “Students for the Science” fellow
- 1999–2004: student of astronomy, University of Szeged, Hungary

Awards:

- 2003. April 16. XXVI. Hungarian Nationwide Scientific Student Conference, Physics, Geography and Mathematics section, Astronomy II (Astrophysics) subsection, *Evolutionary Models of Contact Binary Stars*, placed first

Grants (as participant):

- 2009–2012: „Late stages of stellar evolution”, Hungarian OTKA K76816
- 2004–2007: „Lasers in optics, spectroscopy and material science”, Hungarian OTKA Grant TS049872
- 2003–2006: „Variable stars in the instability strip and the giant branch”, Hungarian OTKA Grant T042509

Observations and Short Visits (as visiting astronomer):

- 2010-2011: Observatorio del Teide, Tenerife, Spain (multiple times)
- 2005–2008: MMT Observatory, Arizona, USA (multiple times)
- 2006: Las Campanas Observatory, Chile
- 2004: University of Sydney and Mount Stromlo and Siding Spring Observatory, Australia
- 2002: Asiago Observatory, Italy
- 2000–2005: Konkoly Observatory, Hungary (multiple times)

Research Fields:

- theory of stellar atmospheres and spectra, abundance analysis
- analysis of high resolution spectroscopic survey data (SDSS-3, APOGEE)

- high resolution spectroscopy of stars in globular and open clusters, multi-object spectroscopy
- spectroscopy and photometry of contact binary stars, supernovae, pulsating stars, star clusters
- crowded field photometry, and digital image processing

Skills:

- stellar atmosphere modelling, spectral synthesis, abundance analysis:
 - ATLAS, SYNTHE, PANDORA, TLUSTY, SYNSPEC, WIDTH
- data reduction and processing:
 - advanced knowledge of IRAF, and digital image processing
 - basic knowledge of IDL
- computers:
 - Linux, Windows and Solaris system administration
 - Advanced programming in C, C#
 - Basic programming in C++, TCL/TK, Python, IDL
 - Advanced script programming in LINUX and UNIX (bash, awk, C shell)

Teaching Activities at University of Szeged:

- Life in the Universe (2010) (open course for all undergraduate students)
- Astrophysics 2 (2009) (for students of astronomy)
- Astronomical Observations (2005) (for students of astronomy)
- Introduction to Astronomy I. and II. (2004-2005) (for students of astronomy)
- Physics Laboratory (2001-2004) (for students of pharmacy)

Publications:

- 17 refereed publications (3 submitted as of November 2012), 44 independent citations