

Curriculum Vitae

Name: Darren Martin O'Brien

Place and date of birth: Galway, Republic of Ireland; 20-11-1978

Nationality: Irish

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Education:

- Inscribed as a PhD student at the University of Porto, March 2002 to present. Currently based at the University of Athens.
- Diploma in Astronomy; University of Porto: February 2001; Final mark 78%.
- Bachelor degree in Experimental Physics; National University of Ireland Galway: June 1999; Final mark 68.4%.

Referee:

- **Dr. João José Lima**, Centro de Astrofísica da Universidade do Porto, Rua das Estrelas, 4150-762 Porto, Portugal. **e-mail:** jlima@astro.up.pt
- **Dr. Cathal Flynn**, School of Physics, Dublin Institute of Technology, Kevin Street, Dublin 8, Ireland. **e-mail:** cathal.flynn@dit.ie
- **Prof. Iwan Williams**, Queen Mary University of London, London E1 4NS, United Kingdom. **e-mail:** I.P.Williams@qmul.ac.uk

Area of Expertise: Astrophysics of young stars - micro-jets

Other areas: Astronomy, Physics, Mathematics

Grants Awarded:

- European Research and Training Network Grant, University of Athens - November 2003 to July 2004.
- Research Scholarship from the Center for Astrophysics of the University of Porto - Pluri-annual Program - April to October 2003.
- Research Scholarship from the Center for Astrophysics of the University of Porto - Pluri-annual Program - March 2002 to March 2003.
- National University of Ireland Galway Teaching Fellowship: October 2000 to January 2002.
- ERASMUS mobility grant: October 2000 to February 2001.

Refereed Publications

- Pesenti N., Dougados C., Cabrit S., O'Brien D., Garcia P. & Ferreira J., 2003, **Near-IR [Fe II] emission diagnostics applied to cold disk winds in young stars**; *Astronomy & Astrophysics*, 410, 155
- O'Brien D., Garcia P., Ferreira J., Cabrit S. & Binette L., **Mechanical heating in disk-driven winds - Thermal structure and observational predictions**; *Astrophysics & Space Science*, 287, 1
- O'Brien D., Garcia P., Ferreira J., Cabrit S. & Binette L., 2003, **The temperature and ionization of T-Tauri microjets**; *Astrophysics & Space Science*; in press
- Dougados C., Cabrit S., Lopez-Martin L., Garcia P., O'Brien D., 2003, **The RW Aur microjet: testing MHD disk wind models**; *Astrophysics & Space Science*; in press

Scientific Communications

- “Heating Functions for Disk-Driven Winds” ; Poster in the conference *Magnetic Fields and Star Formation*, Madrid, Spain, 24th of April 2003.
- “Mechanical Heating in Disk-Driven Winds” ; Poster in the conference *JENAM 2002: The Unsolved Universe: Challenges for the Future: Workshop JETS*, Porto, Portugal, 2nd of September 2002.
- “Mechanical Heating in Disk Winds - Thermal Structure” ; Oral communication in the summer school *Accretion Discs, Jets and High Energy Astrophysics*, Les Houches, France, 7th of August 2002.
- “Mechanical Heating in Disk Winds” ; Poster in the the summer school *Accretion Discs, Jets and High Energy Astrophysics*, Les Houches, France, 29th of July 2002.

Seminars:

- “Models and Observational Predictions of Collimated Mass-loss” ; Department of Applied Mathematics of the University of Porto, 28th of May, 2003.
- “High-Energy Processes in Young Stellar Objects” ; Center for Astrophysics of the University of Porto, 16th of October 2002.
- “Disk Accretion and Mass Loss from Young Stars” ; Center for Astrophysics of the University of Porto, 10th of July 2002.
- “Heating and Ionization of X -winds” ; Center for Astrophysics of the University of Porto, 22nd of May 2002.
- “Acceleration Mechanisms for Cool Star Winds” ; Center for Astrophysics of the University of Porto, 30th of January 2001.
- “Electron Behaviour in Doped Semiconductor Crystals” ; National University of Ireland Galway, 25th of March 1999.

Participation in conferences:

- *Accretion Discs, Jets and High Energy Astrophysics*, Les Houches, France, 29th of July - 23rd of August 2002 ; Summer school with lecture series' by Vasily Beskin, Omer Blaes, Nuria Calvet, Max Camenzind, Annalisa Celotti, Bozena Czerny, Lee Hartmann, Jean Heyvaerts, Thierry Montmerle, Guy Pelletier, Ralph Pudritz, Rashid Sunyaev and others.
- *JENAM 2002: The Unsolved Universe: Challenges for the Future: Workshop JETS*, Porto, Portugal, 2nd - 7th of September 2002.
- *Magnetic Fields and Star Formation*, Madrid, Spain, 21st - 25th of April 2003.
- *Atacama Large Millimetric - Array Science & Operations*, Porto, Portugal, 16th of June 2003.

Languages: English: Mother tongue. Portuguese: Very Good. Irish: Good. French: Rudimentary.

Computer skills: Programming languages: C, YORICK, LaTeX, GreG, BASIC, MATLAB

Other activities

- Physics laboratory teacher (second year of the bachelor degree), National University of Ireland Galway, from September 2001 to January 2002.
- Physics laboratory teacher (first year of the bachelor degree), National University of Ireland Galway, from September 1997 to May 1998, September 1998 to May 1999 and May to June 2001.
- University award (National University of Ireland Galway): Highest grade in the third year (1997/1998) - Experimental Physics.