

Henrik Nils Latter

Research Associate

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Date of birth: 16 August 1977

Nationality: Australian

EDUCATION

Doctorate in Theoretical Astrophysics (Oct 2003 - Dec 2006)

AFD group, DAMTP, University of Cambridge
Supervisor: Gordon Ogilvie
Thesis title: *Instabilities in Planetary Rings*

Master of Science (Mar 2003 - Oct 2003)

Department of Mathematics, University of Sydney
Supervisor: David Ivers
Thesis title: *Topics in Kinematic Dynamo Theory*

Bachelor of Arts (Honours) (Aug 2001 – Jun 2002)

Department of Mathematics, University of Sydney
Applied Mathematics – First Class

Bachelor of Arts and Bachelor of Science (Mar 1996 – Dec 2000)

University of Sydney
Majors: Mathematics, English Literature, History

EMPLOYMENT

Research associate (Sep 2010 - present)

AFD group, DAMTP, University of Cambridge
under John Papaloizou and Gordon Ogilvie

Undergraduate supervisor (Sep 2010 - present)

Clare College, University of Cambridge

Postdoctoral researcher (Oct 2007 - Aug 2010)

Laboratoire de Radioastronomie (LERMA), Ecole Normale Supérieure, Paris
under Steve Balbus

Research assistant (Apr 2007 – Sep 2007)

AFD group, DAMTP, University of Cambridge
under Gordon Ogilvie

Casual tutor (Mar 2003 – Jun 2003)

Department of Mathematics, University of Sydney

Part-time sales assistant and delivery driver (1998-2003)

Universal Fashion Uniforms, Sydney

AWARDS

- **2006** Mini Rouse-Ball Fellowship, Trinity College, Cambridge
- **2005** Smith Prize, Class 2, DAMTP, Cambridge
- **2003-2006** Australian Alumni Scholarship, Cambridge Commonwealth Trust
- **2003-2006** Overseas Research Studentship, Universities UK
- **2003** University of Sydney Postgraduate Award
- **2003** Bullen Prize for Applied Maths, University of Sydney
- **2002** University Medal, Applied Maths, University of Sydney

SELECTED SEMINARS

- Seminar 07.2011. 'The ballistic transport instability revisited', At the Cornell Rings 2011 workshop, Cornell Uni., USA.
- Invited seminar 02.2011. 'Fine-scale structure formation in Saturn's rings', at Queen Mary, University of London, UK.
- Invited seminar 11.2010. 'Fine-scale structure formation in Saturn's rings', at the University of Exeter, UK.
- Invited seminar 11.2010. 'Fine-scale structure formation in Saturn's rings', at the University of Newcastle, UK.
- Seminar 08.2010. 'Fine-scale structure formation in Saturn's rings', at the Harvard-Smithsonian CFA, Cambridge, USA.
- Seminar 07.2010. 'Planet formation and MHD turbulence in circumstellar disks', at the ISIMA, University of Santa Cruz, Santa Cruz, USA.
- Seminar 07.2010. 'Planet formation and MHD turbulence in circumstellar disks', at NASA JPL, Pasadena, USA.
- Seminar 06.2010. 'The magnetorotational instability and the structure of protoplanetary disks', at the Oxford Plasma Theory Group, Oxford.
- Invited seminar 02.2010. 'Coherent structures in turbulent accretion disks', ENS MHD seminar series, ENS, Paris.
- Seminar 09.2009. 'Double-diffusive instability in the dead-zones of protoplanetary disks', at the Isaac Newton Institute, Cambridge, UK.
- Seminar 04.2009. 'The dynamics of MRI channel flows', at *The Astrophysics of the Magnetorotational Instability and Related Processes* conference, Ringberg, Germany.
- Invited seminar 02.2009. 'MRI channel flows in accretion disks', AFD seminar series, DAMTP, Cambridge, UK.
- Seminar 09.2007. 'Nonlinear waves and the viscous overstability in dense planetary rings', at the 2007 Europlanets Conference, Potsdam, Germany.

MISCELLANEOUS

- Reviewer for *MNRAS*, *Astronomical Journal*, *Icarus*, NASA PGG
- Group seminar organiser for the LRA, ENS, 2008-2010 and AFD group, DAMTP, Cambridge, 2010-present
- Representative for all LERMA (Laboratoire d'Etude du Rayonnement et de la Matière en Astrophysique) postdocs (2009)
- Co-supervisor of Julius Bonart (2009) and Marie Chupeau (2011) for their ENS MSc research projects
- Contributor to *Plus* internet magazine (a popular mathematics website)

Henrik Latter: Peer-reviewed articles

1. H. N. Latter, M. Kunz, 2012. 'The HBI in a quasi-global model of the intracluster medium'. Submitted, *MNRAS*.
2. H. N. Latter, S. A. Balbus, 2012. 'The dynamics of inner dead-zone boundaries in protoplanetary disks'. Submitted, *MNRAS*.
3. H. N. Latter, H. Rein, G. I. Ogilvie, 2012. 'The gravitational instability of a stream of co-orbital particles'. Accepted, *MNRAS*.
4. S. A. Balbus, H. Latter, N Weiss, 2012. 'Global model of differential rotation in the Sun'. *MNRAS*, 420, 2457
5. E. Jacquet, S. A. Balbus, H. Latter, 2011. 'On linear dust-gas streaming instabilities in protoplanetary discs'. *MNRAS*, 415, 3591.
6. H. N. Latter & G. I. Ogilvie, 2010. 'Hydrodynamical simulations of viscous overstability in Saturn's rings'. *Icarus*, 210, 318.
7. S. A. Balbus & H. N. Latter, 2010. 'The tachocline and differential rotation in the Sun'. *MNRAS*, 407, 2565.
8. H. N. Latter & D. Ivers, 2010. 'Spherical single-roll dynamos at large magnetic Reynolds numbers'. *Physics of Fluids*, 22, 066601.
9. H. N. Latter, S. Fromang, O. Gressel, 2010. 'MRI channel flows in vertically-stratified models of accretion disks'. *MNRAS*, 406, 848.
10. H. N. Latter, J. Bonart, S. A. Balbus, 2010. 'Resistive double-diffusive instability in the dead-zones of protostellar disks'. *MNRAS*, 405, 1831.
11. S. A. Balbus, J. Bonart, H. Latter, N. Weiss, 2009. 'On differential rotation and convection in the Sun'. *MNRAS*, 400, 176.
12. H. N. Latter & S. A. Balbus, 2009. 'Inertial waves near corotation in 3D hydrodynamical disks'. *MNRAS*, 399, 1058.
13. H. N. Latter & G. I. Ogilvie, 2009. 'The viscous overstability, nonlinear wavetrains, and fine-scale structure in dense planetary rings'. *Icarus*, 202, 565.
14. P. Lesaffre, S. A. Balbus, H. N. Latter, 2009. 'A comparison of local simulations and reduced models of MRI-induced turbulence'. *MNRAS*, 396, 779.
15. H. N. Latter, P. Lesaffre & S. A. Balbus, 2009. 'MRI channel flows and their parasites'. *MNRAS*, 394, 715.
16. H. N. Latter & G. I. Ogilvie, 2008. 'Dense planetary rings and the viscous overstability'. *Icarus*, 195, 725.
17. H. N. Latter & G. I. Ogilvie, 2006. 'Viscous overstability and eccentricity evolution in three-dimensional gaseous disks'. *MNRAS*, 372, 1829.
18. H. N. Latter & G. I. Ogilvie, 2006. 'The linear stability of dilute particulate rings'. *Icarus*, 184, 498.
19. H. Latter & D. Ivers, 2004. 'Kinematic roll dynamo computations at large magnetic Reynolds numbers'. *ANZIAM J.*, 45(E), C905.

In preparation:

1. H. N. Latter, J. C. B. Papaloizou, 2012. 'Thermal instability and limit cycles in numerical MRI simulations of dwarf novae and low mass X-ray binaries'. For *MNRAS*.
2. H. N. Latter, M. Chuepeau, G. I. Ogilvie, 2012. 'The ballistic transport instability and axisymmetric structure in Saturn's B and C rings'. For *Icarus*.
3. Z. Leinhardt, G. Ogilvie, H. Latter, E. Kokubo, 2012. 'The tidal disruption of satellites and formation of narrow rings'. For *Icarus*.