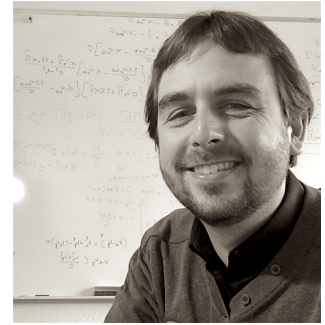


Geoffroy Lesur ([orcid.org/0000-0002-8896-9435](https://orcid.org/0000-0002-8896-9435))

Date of birth: 28-Oct-1981, French

CNRS researcher (CR1), Institut de Planétologie et d'Astrophysique de Grenoble (IPAG)

Web page: <http://ipag.osug.fr/lesurg/>



## Education

- 2004 – 2007 PhD at Laboratoire d'Astrophysique de Grenoble (supervisor: P-Y. Longaretti): *Instabilities and local sources of turbulence in accretion discs*
- 2001 – 2004 Education and master degree in theoretical physics (Ecole Normale Supérieure de Lyon, with honors)

## Current and previous positions

- 2010 – CNRS Research staff (CR1) at Institut de Planétologie et d'Astrophysique de Grenoble (IPAG).
- 2007 – 2010 Postdoctoral fellow - Department of Applied Mathematics and Theoretical Physics - Cambridge (UK) (supervisor: John Papaloizou & Gordon Ogilvie).

## Fellowships & Awards

- 2012 – 2015 Marie Curie reintegration grant PCIG09-GA-2011-294110.
- 2010 Lyman Spitzer fellowship (Princeton, USA). Declined due to a simultaneous offer from CNRS.
- 2007 Daniel Guignier young researcher prize of the French Society for Physics (SFP)
- 2001 – 2006 ENS-Lyon fellowship

## Supervision

- 2014 – 2017 PhD supervisor of William Bethune (IPAG).
- 2012 – 2014 Postdoc co-supervisor of Heloise Meheut (CEA Saclay), hired in 2016 by CNRS (Nice)
- 2011 & 2013 Supervisor of 2 master students (6 months each).
- 2007 – 2010 Day to day supervisor of Hanno Rein (Cambridge), hired in 2013 by CITA (Canada)

## Teaching activities

- 2013 & 2015 Invited lecturer at the 2015 Plasma Astrophysics Winter School of the Ecole de Physique des Houches (Les Houches, France). Topics: accretion disc dynamics. Audience: ~60 people per year.
- 2014 – Numerical fluid dynamics for astrophysical flows (master level). ~10 students per year.

## Institutional responsibilities

- 2016 – Elected member of IPAG laboratory council
- 2013 – 2015 Member of the research commission of Grenoble Observatory.
- 2013 – President of the computing commission of Grenoble Observatory.
- 2011 – Webmaster of IPAG public website.

## Organisation of scientific meetings

- 2017 PI of the Les Houches winter school *From laboratories to astrophysics: the expanding Universe of plasma physics*. International audience (~60 participants, mostly PhD students and postdocs)
- 2016 IPAG workshop *Origin of asymmetries in protoplanetary discs* co-PI with Myriam Benisty (IPAG). National audience (~30 participants)
- 2013 Les Houches school *From black holes to cosmic rays: when plasmas go wild. A tribute to Guy Pelletier* co-Pi with Gilles Henri (IPAG). International audience (~40 participants)
- 2013 – Periodic organisation (every ~ 9 months) of a workshop dedicated to fluid mechanics in Grenoble University. National audience (~ 30 participants at each workshop)

## Commissions of trust

- 2016 External referee and panel member for a lecturer position (ENS Lyon)
- 2015 External referee and panel member for a lecturer position (ENS Paris)
- 2013 – Member of the French national supercomputer panel (GENCI)
- 2014 Referee for J. Minière PhD thesis (Observatoire de Paris, under the supervision of Serge Bouquet and Claire Michaut)
- 2013 External examiner and referee for CJ Donnelly PhD thesis (Cambridge university, under the supervision of Gordon Ogilvie)
- 2013 – 2015 External examiner for 4 PhD thesis: V. Prat (Toulouse, France), N. Cabral (Bern, Switzerland), J. Faure (Paris, France), S. Richard (Marseille, France)
- 2007 – Referee for A&A, ApJ, MNRAS, Phys. of plasmas, Phys. of fluids, J. of fluid mech. (~5 papers per year)

## Major collaborations

- 2013 – *MHD turbulence cascade*, Stanislas Boldyrev, Justin Walker (Madison, USA) 1 refereed joint article, 1 in preparation
- 2012 – *Hall-dominated MRI*, Matthew Kunz (Princeton, USA), 2 refereed joint articles.
- 2011 – *MHD winds and jets*, Jonathan Ferreira (IPAG, Grenoble), 1 refereed joint article, 1 submitted.
- 2007 – *Pm effect and winds*, Sébastien Fromang (CEA Saclay, France), 3 refereed joint articles.

## Publication record

Bibliometric informations as of January 2016 obtained from ADS are as follows:

Type	# Article	# Total citations	w/o self-citations	H-index
All	42	1071		
All refereed	29	1062	938	18
- as 1st author	12	584	582	11

1. J. Walker, G. Lesur, S. Boldyrev, On the nature of magnetic turbulence in rotating, shearing flows. *MNRAS* **457**, L39–L43 (2016).
2. J. B. Simon, G. Lesur, M. W. Kunz, P. J. Armitage, Magnetically driven accretion in protoplanetary discs. *MNRAS* **454**, 1117–1131 (2015).
3. G. Lesur, P. Hennebelle, S. Fromang, Spiral-driven accretion in protoplanetary discs. I. 2D models. *A&A* **582**, L9 (2015).

4. H. Meheut, S. Fromang, G. Lesur, M. Joos, P.-Y. Longaretti, Angular momentum transport and large eddy simulations in magnetorotational turbulence: the small Pm limit. *A&A* **579**, A117 (2015).
5. A. Riols, F. Rincon, C. Cossu, G. Lesur, G. I. Ogilvie, P.-Y. Longaretti, Dissipative effects on the sustainment of a magnetorotational dynamo in Keplerian shear flow. *A&A* **575**, A14 (2015).
6. G. Lesur, M. W. Kunz, S. Fromang, Thanatology in protoplanetary discs. The combined influence of Ohmic, Hall, and ambipolar diffusion on dead zones. *A&A* **566**, A56 (2014).
7. N. J. Turner, S. Fromang, C. Gammie, H. Klahr, G. Lesur, M. Wardle, X.-N. Bai, Transport and Accretion in Planet-Forming Disks. *Protostars and Planets VI*, 411–432 (2014).
8. A. Riols, F. Rincon, C. Cossu, G. Lesur, P.-Y. Longaretti, G. I. Ogilvie, J. Herault, Global bifurcations to subcritical magnetorotational dynamo action in Keplerian shear flow. *Journal of Fluid Mechanics* **731**, 1–45 (2013).
9. M. W. Kunz, G. Lesur, Magnetic self-organization in Hall-dominated magnetorotational turbulence. *MNRAS* **434**, 2295–2312 (2013).
10. S. Fromang, H. Latter, G. Lesur, G. I. Ogilvie, Local outflows from turbulent accretion disks. *A&A* **552**, A71 (2013).
11. G. Lesur, J. Ferreira, G. I. Ogilvie, The magnetorotational instability as a jet launching mechanism. *A&A* **550**, A61 (2013).
12. A. Lamberts, G. Dubus, G. Lesur, S. Fromang, Impact of orbital motion on the structure and stability of adiabatic shocks in colliding wind binaries. *A&A* **546**, A60 (2012).
13. G. I. Ogilvie, G. Lesur, On the interaction between tides and convection. *MNRAS* **422**, 1975–1987 (2012).
14. J. Herault, F. Rincon, C. Cossu, G. Lesur, G. I. Ogilvie, P.-Y. Longaretti, Periodic magnetorotational dynamo action as a prototype of nonlinear magnetic-field generation in shear flows. **84**, 036321 (2011).
15. G. Lesur, P.-Y. Longaretti, Non-linear energy transfers in accretion discs MRI turbulence. I. Net vertical field case. *A&A* **528**, A17 (2011).
16. S.-J. Paardekooper, G. Lesur, J. C. B. Papaloizou, Vortex Migration in Protoplanetary Disks. *ApJ* **725**, 146–158 (2010).
17. L. Jouve, M. R. E. Proctor, G. Lesur, Buoyancy-induced time delays in Babcock-Leighton flux-transport dynamo models. *A&A* **519**, A68 (2010).
18. E. L. Rempel, G. Lesur, M. R. E. Proctor, Supertransient Magnetohydrodynamic Turbulence in Keplerian Shear Flows. *Physical Review Letters* **105**, 044501 (2010).
19. P.-Y. Longaretti, G. Lesur, MRI-driven turbulent transport: the role of dissipation, channel modes and their parasites. *A&A* **516**, A51 (2010).
20. G. Lesur, G. I. Ogilvie, On the angular momentum transport due to vertical convection in accretion discs. *MNRAS* **404**, L64–L68 (2010).
21. G. Lesur, J. C. B. Papaloizou, The subcritical baroclinic instability in local accretion disc models. *A&A* **513**, A60 (2010).
22. H. Rein, G. Lesur, Z. M. Leinhardt, The validity of the super-particle approximation during planetesimal formation. *A&A* **511**, A69 (2010).
23. G. Lesur, P.-Y. Longaretti, Turbulent resistivity evaluation in magnetorotational instability generated turbulence. *A&A* **504**, 309–320 (2009).
24. G. Lesur, J. C. B. Papaloizou, On the stability of elliptical vortices in accretion discs. *A&A* **498**, 1–12 (2009).
25. G. Lesur, G. I. Ogilvie, Localized magnetorotational instability and its role in the accretion disc dynamo. *MNRAS* **391**, 1437–1450 (2008).
26. G. Lesur, G. I. Ogilvie, On self-sustained dynamo cycles in accretion discs. *A&A* **488**, 451–461 (2008).

27. S. Fromang, J. Papaloizou, G. Lesur, T. Heinemann, MHD simulations of the magnetorotational instability in a shearing box with zero net flux. II. The effect of transport coefficients. *A&A* **476**, 1123–1132 (2007).
28. G. Lesur, P.-Y. Longaretti, Impact of dimensionless numbers on the efficiency of magnetorotational instability induced turbulent transport. *MNRAS* **378**, 1471–1480 (2007).
29. G. Lesur, P.-Y. Longaretti, On the relevance of subcritical hydrodynamic turbulence to accretion disk transport. *A&A* **444**, 25–44 (2005).

## ■ Oral presentations (since 2010)

March 2016	Edinburgh (UK) <i>Protoplanetary discussions</i> . Invited review talk.
October 2015	ESTEC (Nodwijk, NL) <i>Accretion/Outflow in Young stellar objects</i> . Invited review talk.
July 2015	Larnaka (Cyprus) <i>Disc dynamics and planet formation</i> . Invited review talk.
April 2015	Les Houches (FR) <i>Turbulence, magnetic fields and self-organization in laboratory and astrophysical plasmas</i> . Invited lecture.
January 2015	ISTERRE Grenoble (FR). Laboratory seminar.
November 2014	Cambridge(UK) <i>John Papaloizou retirement event</i> . Invited talk.
August 2014	Copenhagen (DK) <i>Non-ideal MHD, Stability and dissipation in Protoplanetary discs</i> . Invited talk.
July 2014	Chamonix (FR) <i>From the MRI to the sun</i> . Invited talk.
October 2013	Madison (USA). Physics department colloquium.
October 2013	Les Houches (FR) <i>From black holes to cosmic rays</i> . Contributed talk.
July 2013	Biarritz (FR) <i>Astronum 2013</i> . Invited talk.
July 2013	Heidelberg (DE) <i>Protostars and Planets VI</i> . Keynote.
May 2013	Boulder (USA) <i>GTP workshop on LES of MHD turbulence</i> Invited talk.
April 2013	Princeton (USA) <i>Stability, Energetics and Turbulent Transport in Astrophysical Fusion and Solar Plasmas</i> . Invited talk.
February 2013	Les Houches (FR) <i>The Future of plasma astrophysics</i> . Invited lecture.
September 2012	Marseille (FR) <i>Instabilities and structures in protoplanetary discs</i> . Invited review.
August 2012	Stockholm (SW) <i>Astrophysics code comparison Workshop</i> . Invited talk.
May 2012	Princeton (USA). Laboratory seminar.
February 2012	Ringberg (DE) <i>Transport Processes and Accretion in YSOs</i> . Invited review.
January 2011	LAB Bordeaux (FR). Laboratory seminar.
November 2011	Queen Mary University of London (UK). Laboratory seminar.
October 2010	Lyon (FR) <i>Frontiers in Computational astrophysics</i> . Contributed talk.
October 2010	Arles (FR) <i>Colloque PCMI 2010</i> . Contributed talk.
June 2010	Ishigaki (JP) <i>Evolving theory for planet formation</i> Invited review talk.
May 2010	KIAA, Beijing (CN) <i>Dynamics of Astrophysical Disks</i> . Invited talk.
March 2010	Nice observatory (FR). Laboratory seminar.
March 2010	ENS-LRA Paris (FR). Laboratory seminar.
March 2010	CEA Scalay (FR). Laboratory seminar.
February 2010	Newcastle (UK). Laboratory seminar.
February 2010	LERMA Paris (FR). Laboratory seminar.