

LIST OF PUBLICATIONS

F. Rincon

◆ Review papers (peer-reviewed)

1. M. Rieutord and **F. Rincon**. The Sun's supergranulation. 82 pages, published in *Living Rev. Solar Phys.* **7**, 2 (2010).

◆ Articles in peer-reviewed journals

28. **F. Rincon**, T. Roudier, A. A. Schekochihin and M. Rieutord. Supergranulation and multiscale flows in the solar photosphere: Global observations vs. a theory of anisotropic turbulent convection. submitted to *A&A* (2016).
27. A. Riols, **F. Rincon**, C. Cossu, G. Lesur, G. I. Ogilvie and P.-Y. Longaretti. Magnetorotational dynamo chimeras. The missing link to turbulent accretion disk dynamo models ?. *A&A* in press (2016).
26. S. S. Cerri, F. Califano, F. Jenko, D. Told and **F. Rincon**. Subproton-scale cascades in solar wind turbulence: driven hybrid-kinetic simulations. *ApJ Lett.* **822**, L12 (2016).
25. **F. Rincon**, F. Califano, A. A. Schekochihin and F. Valentini. Turbulent dynamo in a collisionless plasma. *PNAS* **113**, 3950 (2016).
24. S. Rawat, C. Cossu and **F. Rincon**. Travelling-wave solutions bifurcating from relative periodic orbits in plane Poiseuille flow. *Comptes Rendus Mécanique* **344**, 448 (2016).
23. S. Rawat, C. Cossu, Y. Hwang and **F. Rincon**. On the self-sustained nature of large-scale motions in turbulent Couette flow. *J. Fluid. Mech* **782**, 515 (2015).
22. **F. Rincon**, A. A. Schekochihin and S. C. Cowley. Nonlinear mirror instability. *MNRAS* **447**, L45 (2015).
21. A. Riols, **F. Rincon**, C. Cossu, G. Lesur, G. I. Ogilvie and P.-Y. Longaretti. Dissipative effects on the sustainment of a magnetorotational dynamo in Keplerian shear flow. *Astron. Astrophys.* **575**, A14 (2015).
20. S. Rawat, C. Cossu and **F. Rincon**. Relative periodic orbits in plane Poiseuille flow. *Comptes Rendus Mécanique* **342**, 485 (2014).
19. A. Riols, **F. Rincon**, C. Cossu, G. Lesur, P.-Y. Longaretti, G. I. Ogilvie and J. Herault. Global bifurcations to subcritical magnetorotational dynamo action in Keplerian shear flow. 45 pages, *J. Fluid Mech.* **431**, 1 (2013).
18. J. Herault, **F. Rincon**, C. Cossu, G. Lesur, G. I. Ogilvie and P.-Y. Longaretti. Periodic magnetorotational dynamo action as a prototype of nonlinear magnetic field generation in shear flows. *Phys. Rev. E* **84**, 036321 (2011).
17. M. S. Rosin, A. A. Schekochihin, **F. Rincon** and S. C. Cowley. A nonlinear theory of the parallel firehose and gyrothermal instabilities in a weakly collisional plasma. *MNRAS* **413**, 7 (2011).

16. A. A. Schekochihin, S. C. Cowley, **F. Rincon** and M. S. Rosin. Magnetofluid dynamics of magnetized cosmic plasma: firehose and gyrothermal instabilities. *MNRAS* **405**, 291 (2010).
15. M. Rieutord, T. Roudier, **F. Rincon**, J. M. Malherbe, N. Meunier, T. Berger, and Z. Frank. On the power spectrum of solar surface flows. *Astron. & Astrophys.* **512(A4)**, 11 (2009).
14. T. Roudier, M. Rieutord, D. Brito, **F. Rincon**, J. M. Malherbe, N. Meunier, T. Berger, and Z. Frank. Mesoscale dynamics on the Sun's surface from HINODE observations. *Astron. & Astrophys.* **495**, 945 (2009).
13. T. A. Yousef, T. Heinemann, **F. Rincon**, A. A. Schekochihin, N. Kleeorin, I. Rogachevskii, S. C. Cowley and J. C. Mc Williams. Numerical experiments on dynamo action in sheared and rotating turbulence. *Astron. Nach.* **329(7)**, 737 (2008).
12. **F. Rincon**, G. I. Ogilvie, M. R. E. Proctor and C. Cossu. Subcritical dynamos in shear flows. *Astron. Nach.* **329(7)**, 750 (2008).
11. U. Ehrenstein, M. Nagata and **F. Rincon**. Two-dimensional nonlinear plane Poiseuille-Couette flow homotopy revisited. *Phys. Fluids* **20**, 064103 (2008).
10. M. Aurière et al. Weak magnetic fields in Ap/Bp stars: Evidence for a dipole field lower limit and a tentative interpretation of the magnetic dichotomy. *Astron. & Astrophys.* **475**, 1053 (2007).
9. **F. Rincon**. On the existence of two-dimensional nonlinear steady states in plane Couette flow. *Phys. Fluids* **19(7)**, 074105 (2007).
8. **F. Rincon**, G. I. Ogilvie and M. R. E. Proctor. A self-sustaining nonlinear dynamo process in Keplerian shear flows. *Phys. Rev. Lett.* **98**, 254502 (2007).
7. **F. Rincon**, G. I. Ogilvie and C. Cossu. On self-sustaining processes in Rayleigh-stable rotating plane Couette flows and subcritical transition to turbulence in accretion disks. *Astron. & Astrophys.* **463**, 817-832 (2007).
6. T. A. Yousef, **F. Rincon** and A. A. Schekochihin. Exact scaling laws and the local structure of isotropic magnetohydrodynamic turbulence. *J. Fluid Mech.* **575**, 111-120 (2006).
5. **F. Rincon**. Anisotropy, inhomogeneity and inertial-range scalings in turbulent convection. *J. Fluid Mech.* **563**, 43-69 (2006).
4. **F. Rincon**, F. Lignières and M. Rieutord. Mesoscale flows in large aspect ratio simulations of turbulent compressible convection. *Astron. & Astrophys. Lett.* **430**, L57-L60 (2005).
3. D. Reese, **F. Rincon** and M. Rieutord. Oscillations of magnetic stars: II. Axisymmetric toroidal and non-axisymmetric shear Alfvén modes in a spherical shell. *Astron. & Astrophys.* **427**, 279-292 (2004).
2. **F. Rincon** and M. Rieutord. Oscillations of magnetic stars: I. Axisymmetric shear Alfvén modes of a spherical shell in a dipolar magnetic field. *Astron. & Astrophys.* **398**, 663-675 (2003).

1. M. Rieutord, T. Roudier, J.-M. Malherbe et **F. Rincon**. On mesogranulation, network formation and supergranulation. *Astron. & Astrophys.* **357**, 1063-1072 (2000).

◆ Proceedings papers

12. **F. Rincon**, A. Riols, C. Cossu, G. Lesur, G. I. Ogilvie and P.-Y. Longaretti. Subcritical magnetorotational dynamo action in Keplerian shear flow. Euromech Colloquium EC565 on subcritical transition to turbulence, Cargèse, May 2014 (2014).
11. **F. Rincon**. Instabilités et turbulence dans les disques d'accrétion astrophysiques. Proceedings du congrès de la division plasma de la Société Française de Physique, Toulouse, Mar. 2014 (2014).
10. S. Rawat, C. Cossu and **F. Rincon**. Relative periodic edge orbits in plane channel flow. Proceedings of the 14th European Turbulence Conference, Lyon (2013).
9. **F. Rincon**, A. Riols, C. Cossu, G. Lesur, G. I. Ogilvie and P.-Y. Longaretti. Global bifurcations to subcritical magnetorotational dynamo action in Keplerian shear flow. Proceedings of the 14th European Turbulence Conference, Lyon (2013).
8. **F. Rincon**. Scale-by-scale energy budgets in turbulent convection. Small Scale Turbulence and Related Gradient Statistics, D. Tordella and K. R. Sreenivasan Eds., Proc. EUROMECH Colloquium 512, Turin, Italy (2009).
7. Th. Roudier et al.. Supergranulation, network formation and TFGs evolution from Hinode observations. Second HINODE science Meeting "Beyond discovery – towards understanding", M. Cheung, B. Lites, T. Magara, J. Mariska, and K. Reeves Eds., Boulder, USA, 29 Sep.-3 Oct. 2008. Astronomical Society of the Pacific, 2009, p. 83. (2009).
6. M. Aurière et al.. Why are some A stars magnetic while some others are not ?. Solar Polarization 5: In Honor of Jan Stenflo ASP Conference Series, Vol. 405, proceedings of the conference held 17-21 September, 2007 at Centro Stefano Franscini–Monte Verit, Ascona, Switzerland. Edited by Svetlana V. Berdyugina, K. N. Nagendra, and Renzo Ramelli. San Francisco: Astronomical Society of the Pacific, 2009., p.499. (2009).
5. T. A. Yousef, **F. Rincon** and A. A. Schekochihin. Exact scaling laws, nonlocality and structure in isotropic MHD turbulence. Advances in Turbulence XI, J. M. L. Palma and A. Silva Lopes, Eds., Proc. 11th EUROMECH European Turbulence Conf., Porto, Portugal, 25-28 June 2007. Springer **76** (2007).
4. **F. Rincon**. Theories of convection and the spectrum of turbulence in the solar photosphere. Convection in astrophysics, F. Kupka, I. W. Roxburgh and K. L. Chan, Eds., Proc. IAU Symposium 239, Prague, Czech Republic, 21-25 August. Cambridge University Press (2006).
3. D. Reese, **F. Rincon** and M. Rieutord. Shear Alfvén modes in magnetized spherical shells. Proc. SF2A-2004: Semaine de l'Astrophysique Française (2004).

2. **F. Rincon** and M. Rieutord. Stability of a compressible fluid layer in a magnetic field: a simple model for supergranulation. Proc. SF2A-2003: Semaine de l'Astrophysique Francaise, p.103-107 (2003).
1. **F. Rincon** and M. Rieutord. A Study of Shear Alfvén Waves in Magnetic Stars: the spherical shell model. Asteroseismology Across the HR Diagram, M. J. Thompson, M. S. Cunha and M. J. P. F. G. Monteiro, Eds. Proc. of the Asteroseismology Workshop, Porto, Portugal, 1-5 July, 2002, p. 561-564. Kluwer Academic Publishers (2003).

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