

refereed
publications:

Leading author in 16 out of the 36 papers (44%), three of which single-author publications (8%).

Published in ApJ, MNRAS, A&A, AN, AJ & CoPhC, with about 1500 citations (ADS) in total; this notably includes an A&A Letter counting 125 citations, a seminal MNRAS paper with 250 cites, as well as an influential ApJ paper with 200 citations.

My *h*-index has gone up by two each year and is currently 23; my *g*-index is 40.

36. “*Finite-time Response of Dynamo Mean-field Effects in Magnetorotational Turbulence*” [Gressel, O.](#), Pessah, M. E. (2022), ApJ 928, 118
35. “*On the combined role of cosmic rays and supernova-driven turbulence for galactic dynamos*” Bendre, A. B., Elstner, D., [Gressel, O.](#) (2021), MNRAS 500, 3527
34. “*Global Hydromagnetic Simulations of Protoplanetary Disks with Stellar Irradiation and Simplified Thermochemistry*” [Gressel, O.](#), Ramsey, J. P., Brinch, C., Nelson, R. P., Turner, N. J., Bruderer, S. (2020), ApJ 896, 126
33. “*Low-mass planet migration in three-dimensional wind-driven inviscid discs: a negative corotation torque*” McNally, C. P., Nelson, R. P., Paardekooper, S.-J., Benítez-Llambay, P., [Gressel, O.](#) (2020), MNRAS 493, 4382
32. “*On the spatial and temporal non-locality of dynamo mean-field effects in supersonic interstellar turbulence*” [Gressel, O.](#), Elstner, D. (2020), MNRAS 494, 1180
31. “*Turbulent transport coefficients in galactic dynamo simulations using singular value decomposition*” Bendre, A. B., Subramanian, K., Elstner, D., [Gressel, O.](#) (2020), MNRAS 491, 3870
30. “*Predicting the Observational Signature of Migrating Neptune-sized Planets in Low-viscosity Disks*” Weber, P., Pérez, S., Benítez-Llambay, P., [Gressel, O.](#), Casassus, S., Krapp, L. (2019), ApJ 884, 178
29. “*Probing the Protosolar Disk Using Dust Filtering at Gaps in the Early Solar System*” Haugbølle, T., Weber, P., Wielandt, D. P., Benítez-Llambay, P., Bizzarro, M., [Gressel, O.](#), Pessah, M. E. (2019), AJ 158, 55
28. “*Streaming Instability for Particle-size Distributions*” Krapp, L., Benítez-Llambay, P., [Gressel, O.](#), Pessah, M. E. (2019), ApJL 878, L30
27. “*Dust Segregation in Hall-dominated Turbulent Protoplanetary Disks*” Krapp, L., [Gressel, O.](#), Benítez-Llambay, P., Downes, T. P., Mohandas, G., Pessah, M. E. (2018), ApJ 865, 105
26. “*Characterizing the Variable Dust Permeability of Planet-induced Gaps*” Weber, P., Benítez-Llambay, P., [Gressel, O.](#), Krapp, L., Pessah, M. E. (2018), ApJ 854, 153
25. “*Low mass planet migration in magnetically torqued dead zones - I. Static migration torque*” McNally, C. P., Nelson, R. P., Paardekooper, S.-J., [Gressel, O.](#), Lyra, W. (2017), MNRAS 472, 1565
24. “*Orbital Evolution of Moons in Weakly Accreting Circumplanetary Disks*” Fujii, Y., Kobayashi, H., Takahashi, S. Z., [Gressel, O.](#) (2017), AJ 153, 194
23. “*Misaligned Disks in the Binary Protostar IRS 43*” Brinch, C., Jørgensen, J. K., Hogerheijde, M. R., Nelson, R. P., [Gressel, O.](#) (2016), ApJ 830, L16
22. “*Linear analysis of the vertical shear instability: outstanding issues and improved solutions*” Umurhan, O. M., Nelson, R. P., [Gressel, O.](#) (2016), A&A 586, A33
21. “*Dynamo saturation in direct simulations of the multi-phase turbulent interstellar medium*” Bendre, A., [Gressel, O.](#), Elstner, D. (2015), AN 336, 991

(continued on next page)

refereed publications: (contd.)

20. “*Characterizing the Mean-field Dynamo in Turbulent Accretion Disks*”
Gressel, O., Pessah, M. E. (2015), ApJ 810, 59
19. “*Global Simulations of Protoplanetary Disks With Ohmic Resistivity and Ambipolar Diffusion*” Gressel, O., Turner, N. J., Nelson, R. P., McNally, C. P. (2015), ApJ 801, 84
18. “*Do magnetic fields influence gas rotation in galaxies?*”
Elstner, D., Beck, R., Gressel, O. (2014), A&A 568, A104
17. “*Mean-field and direct numerical simulations of magnetic flux concentrations from vertical field*”
Brandenburg, A., Gressel, O., Jabbari, S., Kleeorin, N., Rogachevskii, I. (2014), A&A 562, A53
16. “*Global Hydromagnetic Simulations of a Planet Embedded in a Dead Zone: Gap Opening, Gas Accretion, and Formation of a Protoplanetary Jet*”
Gressel, O., Nelson, R. P., Turner, N. J., Ziegler, U. (2013), ApJ 779, 59
15. “*Towards a hybrid dynamo model for the Milky Way*”
Gressel, O., Elstner, D., Ziegler, U. (2013), A&A 560, A93
14. “*Linear and non-linear evolution of the vertical shear instability in accretion discs*”
Nelson, R. P., Gressel, O., Umurhan, O. M. (2013), MNRAS 435, 2610
13. “*Dynamo effects in MRI turbulence with finite thermal diffusivity*”
Gressel, O. (2013), ApJ 770, 100
12. “*On the magnetic quenching of mean-field effects in supersonic interstellar turbulence*”
Gressel, O., Bendre, A., Elstner, D. (2013), MNRAS 429, 967
11. “*New Scaling for the Alpha Effect in Slowly Rotating Turbulence*”
Brandenburg, A., Gressel, O., Käpylä, P. J., Kleeorin, N., Mantere, M. J., Rogachevskii, I. (2013), ApJ 762, 127
10. “*Dead zones as safe havens for planetesimals: influence of disc mass and external magnetic field*”
Gressel, O., Nelson, R. P., Turner, N. J. (2012), MNRAS 422, 1140
9. “*On the dynamics of planetesimals embedded in turbulent protoplanetary discs with dead zones*”
Gressel, O., Nelson, R. P., Turner, N. J. (2011), MNRAS 415, 3291
8. “*On the dynamics of planetesimals embedded in turbulent protopl. discs*”
Nelson, R. P., Gressel, O. (2010), MNRAS 409, 639
7. “*MRI channel flows in vertically stratified models of accretion discs*”
Latter, H. N., Fromang, S., Gressel, O. (2010), MNRAS 406, 848
6. “*A mean-field approach to the propagation of field patterns in stratified magnetorotational turbulence*”, Gressel, O. (2010), MNRAS 405, 41
5. “*Multiphase ISM simulations: comparing NIRVANA and ZEUS*”
Piontek, R. A., Gressel, O., Ziegler, U. (2009), A&A 499, 633
4. “*A Field-length based refinement criterion for adaptive mesh simulations of the interstellar medium*”, Gressel, O. (2009), A&A 498, 661
3. “*Direct simulations of a supernova-driven galactic dynamo*”
Gressel, O., Elstner, D., Ziegler, U., Rüdiger, G. (2008), A&A 486, L35
2. “*Dynamo coefficients from local simulations of the turbulent ISM*”
Gressel, O., Ziegler, U., Elstner, D., Rüdiger, G. (2008), AN 329, 619
1. “*Shearingbox-implementation for the central-upwind, constraint-transport MHD-code NIRVANA*”, Gressel, O., Ziegler, U. (2007), CoPhC 176, 652

conference
proceedings:

16. “*Global Non-ideal MHD Simulations of Protoplanetary Disks with Irradiation, Thermochemistry, and Synthetic Observations*”
Ramsey, J., Gressel, O., Brinch, C., Nelson, R., Turner, N., Bruderer, S. (2021), AAS 53, 229.03
15. “*Gas flow into the vicinity of gas giants and formation of circumplanetary disks*” Fujii, Y., Gressel, O., Tomida, K., Ziegler, U. (2019), EPSC 2019, EPSC-DPS2019-1408
14. “*Early-phase simulations of circumplanetary disk formation*”
Fujii, Y. I., Gressel, O., Tomida, K., Ziegler, U. (2019), ESS 51, 320.02
13. “*Low mass planet migration in Hall-affected disks*”
McNally, C. P., Nelson, R. P., Paardekooper, S.-J., Gressel, O., Lyra, W. (2018), JPhCS 1031, 012007
12. “*Disk Evolution and the Fate of Water*”. Hartmann, L., Ciesla, F., Gressel, O., Alexander, R. (2017), SSRv 212, 813
11. “*Weakly Accreting CPDs and Satellites in Resonant Orbits*”. Fujii, Y. I., Kobayashi, H., Takahashi, S. Z., Gressel, O. (2017), DPS 49, 508.08
10. “*Toward realistic simulations of magneto-thermal winds from weakly-ionized protoplanetary disks*”. Gressel, O. (2017), JPhCS 837, 012008
9. “*Adaptive-mesh MHD simulations of a jet emerging from a circumplanetary disc embedded in a protosolar nebula*”
Gressel, O., Nelson, R. P., Turner, N. J., Ziegler, U. (2013), EPSC 8, 144
8. “*Breathing Life Into Dead-Zones*”
Umurhan, O. M., Nelson, R. P., Gressel, O. (2013), EPJWC 46, 3003
7. “*The role of star formation for the galactic dynamo*”
Elstner, D., Gressel, O. (2012), arXiv:1206.5097
6. “*Planetesimal dynamics in hydromagnetic turbulence*”
Gressel, O., Nelson, R. P., Turner, N. J. (2011), IAUS 276, 424
5. “*Quantifying the evolution of planetesimals embedded in magnetized protoplanetary discs with dead zones*”
Gressel, O., Nelson, R. P., Turner, N. J. (2011), EPSC conf. proc. 1280
4. “*Supernova-driven interstellar turbulence and the galactic dynamo*”
Gressel, O., Elstner, D., Rüdiger, G. (2011), IAUS 274, 348
3. “*Magnetic field amplification by SN-driven interstellar turbulence*”
Gressel, O., Ziegler, U., Elstner, D. (2011), EAS 44, 73
2. “*Galactic dynamo simulations*”
Elstner, D., Gressel, O., Rüdiger, G. (2009), IAUS 259, 467
1. “*A galaxy dynamo by Supernova-driven interstellar turbulence*”
Gressel, O., Ziegler, U., Elstner, D., Rüdiger, G. (2009), IAUS 259, 81

**invited talks/
lectures (12):**

- 06/06/2022 **PIPA 2022 workshop**
“Partially Ionised Plasmas in Astrophysics”,
Hotel Benczúr, Budapest, Hungary
- 17/07/2018 **TIARA summer school**
“Origins of the Solar System”,
ASIAA, Taipei, Taiwan
- 26/03/2018 **Nagoya University workshop**
“Circumplanetary disks and satellite formation”,
Nagoya Castle, Japan
- 23/05/2017 **Nordita program**
“Phase Transitions in Astrophysics, from ISM to Planets”,
Nordita Stockholm, Sweden
- 01/09/2016 **PIPA 2016 workshop**
“Partially Ionised Plasmas in Astrophysics”,
San Cristóbal de La Laguna, Tenerife, Spain
- 07/12/2015 **PCTS workshop**
“The Dynamo Effect in Astrophysical and Laboratory Plasmas”,
Princeton, USA
- 30/09/2015 **JAMSTEC and Nagoya University workshop**
“PPD Dynamics and Planet Formation”,
Yokohama, Japan
- 07/09/2012 **XXXII. Dynamics Days Europe**
Minisymposium “Turbulence and Planet Formation”,
Gothenburg, Sweden
- 06/09/2010 **IAU Symposium 274 on**
“Advances in Plasma Astrophysics”,
Giardini-Naxos, Italy
- 07/06/2010 **ATNF conference on**
“Cosmic Magnetism: stellar to intergalactic scales”,
Kiama, Australia
- 21/01/2010 **Winter school on dynamos**
NORDITA, Stockholm, Sweden
- 22/01/2009 **Constellation school**
University of Cardiff, UK

**seminar
talks (21):**

- 18/10/2022 † Virtual-Nordic-Dynamo-Seminar, Stockholm, Sweden
- 11/09/2021 † American Museum for Natural History, New York, USA
- 29/07/2021 † Joint MPIA Group seminar, Heidelberg, Germany
- 05/10/2020 † TAP Colloquium, U of Arizona, Tucson, AZ, USA
- 16/06/2020 † Virtual-Nordic-Dynamo-Seminar, Stockholm, Sweden
- 14/03/2018 Group Seminar, University of Kiel, Germany
- 06/03/2017 DAMTP, University of Cambridge, UK
- 02/02/2017 KITP Seminar, Santa Barbara, California, USA
- 28/09/2015 Ta Colloquium, Nagoya University, Japan
- 16/09/2015 Observatoire de la Côte d'Azur, Nice, France
- 25/04/2013 Lund Observatory, Lund, Sweden
- 15/11/2012 Niels Bohr Institute, Copenhagen, Denmark
- 03/02/2012 Astronomy seminar, Stockholm University, Sweden
- 11/08/2011 NASA JPL, Caltech, Pasadena, California, USA
- 09/08/2011 KIPAC, Stanford University, California, USA
- 19/01/2011 University of Hertfordshire, Hatfield, UK
- 19/05/2010 LRA, École Normale Supérieure, Paris, France
- 08/02/2010 DAMTP, University of Cambridge, UK
- 20/03/2009 Newcastle University, UK
- 24/11/2008 IAAT, Universität Tübingen, Germany
- 18/11/2008 Astronom. Inst., Ruhr Universität Bochum, Germany

†) virtual talk

contributed
talks (28):

- 25/04/2022 **Leibniz MMS Days 2022, Potsdam**
Potsdam Institute for Climate Impact Research, Germany
- 13/06/2017 **MIAPP Program on PPDs and Planet Formation**
Munich Institute for Astro- and Particle Physics, Germany
- 05/05/2017 **1st West-Baltic Meeting on Th.& Comp. Astroph.**
Sandbjerg Gods, Denmark
- 08/06/2016 **Eleventh Astronom, Monterey, CA**
Monterey, CA
- 09/03/2016 **Protoplanetary Discussions, Edinburgh, UK**
Edinburgh, UK
- 30/06/2015 **Disc dynamics & planet formation**
UCLAN, Larnaka, Cyprus
- 06/05/2015 **Exoplanets in Lund meeting**
Lund Observatory, Sweden
- 16/04/2015 **The MRI Confronts the Observations**
Tagungsstätte Schloss Ringberg, Germany
- 03/12/2014 **German MHD Days 2014**
Leibniz Institute for Astrophysics, Potsdam, Germany
- 20/10/2014 **Cosmic magnetic fields meeting**
Jagiellonian University, Kraków, Poland
- 02/10/2014 **Accretion and Outflows throughout the scales**
Ecole normale supérieure de Lyon, France
- 04/08/2014 **Non-ideal MHD, Stability, and Dissipation in PPDs**
NBIA, Copenhagen, Denmark
- 17/06/2014 **Annual Danish Astronomy Meeting**
Radisson Blue HCA Hotel, Odense, Denmark
- 10/02/2014 **Star and Planet formation for all**
Lund Observatory, Lund, Sweden
- 01/11/2013 **Max-Planck/Princeton Center for Plasma Physics**
Princeton University, Princeton, NJ
- 23/09/2013 **Galactic Magnetism in the Era of LOFAR & SKA**
Nordita, Stockholm, Sweden
- 12/09/2013 **European Planetary Science Congress 2013**
University College London, London, UK
- 13/06/2013 **Nordic Physics Days**
Lund University, Lund, Sweden
- 14/05/2013 **LOFAR Magnetism KSP meeting**
Sant'Antioco, Sardinia, Italy
- 18/03/2013 **Cosmic magnetic fields**
Newcastle University, Newcastle upon Tyne, UK
- 11/10/2012 **The low-metallicity ISM**
University of Göttingen, Germany
- 31/05/2012 **LOFAR Key Science Project on Magnetism**
Chalmers, Gothenburg, Sweden
- 06/10/2011 **EPSC-DPS Joint Meeting 2011**
La Cité, Nantes, France

(continued on next page)

**contributed
talks (contd.):**

- 09/12/2009 **12th MHD Days 2009**
Leibniz Institut für Astrophysik, Potsdam, Germany
- 11/03/2008 **IAU Symposium 259**
Puerto Santiago, Tenerife, Spain
- 10/09/2008 **JENAM 2008**
University of Vienna, Austria
- 26/11/2007 **10th MHD Days 2007**
MPI für Plasmaphysik, Garching, Germany
- 27/09/2007 **AG Annual Meeting**
Universität Würzburg, Germany