

REMBERTUS ABRAHAM DUINE - CURRICULUM VITAE

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• contact and personal information

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Born: March 2nd, 1975 in Oud-Alblas, The Netherlands

Nationality: Dutch

Marital Status: Not married, living together with Geertje Speelman and our son Reijn.

Researcher ID: F-3559-2016

• education

October 27, 2003 Ph. D. in theoretical physics (cum laude) at Utrecht University, The Netherlands.

Thesis title: *Atom-Molecule Coherence in Bose Gases*

Promotor: Prof. dr. ir. H.T.C. Stoof

1999 Master's degree in theoretical physics at Utrecht University, The Netherlands.

Thesis title: *Mappings and Simulations of the Repton Model and the Six-vertex Model*

Supervisor: Dr. G.T. Barkema

1994 VWO-diploma, Christelijke Scholengemeenschap “De Lage Waard”, Papendrecht, The Netherlands.

• professional career

08/2019-present Full professor at Utrecht University on the chair “Theory of Nanoscale Systems”.

03/2016-present part-time professor (“deeltijd hoogleraar”) at Eindhoven University of Technology on the chair “Theory for spin-based nanoelectronics”.

- 12/2012-07/2019 “Universitair Hoofddocent” (Dutch equivalent of Associate Prof.) at Utrecht University.
- 3/2008-11/2012 “Universitair Docent” (Dutch equivalent of Assist. Prof.) at Utrecht University.
- 9/2006-2/2008 “Junior Universitair Docent” (Dutch equivalent of Assist. Prof.) at Utrecht University.
- 1/2004-8/2006 Post-doctoral fellow in the condensed-matter theory group of Prof. dr. A.H. MacDonald at The University of Texas at Austin.
- 11/1999-12/2003 Research Assistant (AIO) at the Institute for Theoretical Physics, Utrecht University, The Netherlands.

● research interests

main field: condensed-matter physics, many-body physics.

current interests: spintronics, graphene, topological insulators, cold-atom systems.

other interests: quantum Hall ferromagnets, semi-conductor bilayers, superconductivity

● external funding

- 2022 PhD project in the ENW XL program *Two-dimensional magnon gas in van der Waals magnets* (program leader: Toeno van der Sar, Delft University of Technology).
- 2022 PhD project in the NWO Zwaartekracht proposal *Materials for the Quantum Age* (coordinator: Daniel VanMaekelbergh, Utrecht University).
- 2021 NWO Open Competition Domain Science-KLEIN grant for the project *Black holes on a chip*, with R. Lavrijsen.
- 2019 NWO Innovational Research Incentives Scheme (“VICI”) grant for the proposal *Fluid Spintronics*.
- 2016 ERC Consolidator Grant for the proposal *Spin Transport Beyond Electrons*.
- 2014 Program leader of the FOM program *Magnon Spintronics*; co-applicants: G.E.W. Bauer, B.J. van Wees and T.T.M. Palstra.
- 2014 FOM Projectruimte *SKYRMIONICS - towards skyrmions for nanoelectronics*, with H.J.M. Swagten.
- 2013 Ph. D. project within the NWO Zwaartekracht DITP *Dynamics of topological spin textures in disordered media*, with G. Barkema and V. Vitelli.
- 2010 FOM Projectruimte *Spin drag in Bose gases*, with H. Stoof and P. van der Straten.
- 2009 Project on controlling domain-wall dynamics in the FOM program *Controlling Spin Dynamics in Magnetic Nanostructures* (program leader: Th. Rasing, Nijmegen).
- 2008 ERC Starting Independent Researcher Grant for the proposal *NewSpin: New Frontiers in Spintronics*.

2007 NWO Innovational Research Incentives Scheme (“VIDI”) grant for the proposal *Antiferromagnetic Metal Spintronics*.

• teaching/supervision

Lectures

- Spring 2023 One guest lecture on spintronics in the bachelor course *Quantum Matter*.
- Spring 2023 Co-lecturer for the course *Nanospintronics* at Eindhoven University of Technology.
- Spring 2023 Bachelor course *Classical Field Theory*.
- Spring 2023 Master’s course *Field Theory in Condensed Matter/Quantum Materials* (with Dirk Schuricht and Zeila Zanolli).
- Spring 2022 Co-lecturer for the course *Nanospintronics* at Eindhoven University of Technology.
- Spring 2022 Bachelor course *Classical Field Theory*.
- Spring 2022 Master’s course *Field Theory in Condensed Matter* (with Dirk Schuricht).
- Spring 2021 Co-lecturer for the course *Nanospintronics* at Eindhoven University of Technology.
- Spring 2021 Rector’s League guest lecture at the Christelijk Lyceum Zandvliet in The Hague.
- Spring 2021 Bachelor course *Classical Field Theory*.
- Spring 2021 Master’s course *Field Theory in Condensed Matter* (with Dirk Schuricht).
- Spring 2021 One guest lecture on spintronics in the bachelor course *Moderne Gecondenseerde Materie*.
- Spring 2020 Bachelor course *Classical Field Theory*.
- Spring 2020 Master’s course *Field Theory in Condensed Matter* (with Dirk Schuricht).
- Spring 2020 Co-lecturer of the course *Nanospintronics* at Eindhoven University of Technology.
- Spring 2020 One guest lecture on spintronics in the bachelor course *Moderne Gecondenseerde Materie*.
- Spring 2020 Rector’s League guest lecture at the Camphusianum, Gorinchem.
- Spring 2019 Co-lecturer of the course *Nanospintronics* at Eindhoven University of Technology.
- Spring 2019 Master’s course *Field Theory in Condensed Matter* (with Dirk Schuricht).
- Spring 2019 Bachelor course *Classical Field Theory*.
- Fall 2019 Rector’s League guest lecture at the “Leidsche Rijn College”
- Spring 2019 One guest lecture on spintronics in the bachelor course *Moderne Gecondenseerde Materie*.
- Spring 2018 One guest lecture for the bachelor course *Quantum Matter*.

- Spring 2018 Co-lecturer of the course *Nanospintronics* at Eindhoven University of Technology.
- December 2017 One guest lecture on spintronics in the bachelor course *Moderne Gecondenseerde Materie*.
- Fall 2017 Bachelor course *Advanced Quantum Mechanics*.
- 2017 Third place for the “Lecturer of the year” award from the “Studenten Overleg Natuur- en Sterrenkunde” in category second and third year bachelor courses.
- Spring 2017 Guest lecturer in the course *Nanospintronics* at Eindhoven University of Technology.
- Fall 2016 Student Seminar on quantum computation and information in the Masters Program Theoretical Physics at Utrecht University (with Umut Gursoy).
- Fall 2016 Bachelor course *Advanced Quantum Mechanics*.
- December 2016 One guest lecture on spintronics in the course *Moderne Gecondenseerde Materie*.
- August 2016 *Topics in Statistical Physics, part 2* at the Utrecht Summer School in Theoretical Physics.
- Spring 2016 Bachelor course *Classical Field Theory* (with Dirk Schuricht).
- Spring 2016- Coordinator for the course *Theory for Technology*.
- December 2015 One guest lecture on spintronics in the course *Moderne Gecondenseerde Materie*.
- Fall 2015 Bachelor course *Advanced Quantum Mechanics*.
- Fall 2014 Bachelor course *Advanced Quantum Mechanics*.
- December 2014 One guest lecture on spintronics in the course *Moderne Gecondenseerde Materie*.
- August 2014 *Topics in Statistical Physics, part 2* at the Utrecht Summer School in Theoretical Physics.
- Spring 2014 *Quantum Matter* (with Dirk Schuricht).
- 2014 Received “Lecturer of the year” award from the “Studenten Overleg Natuur- en Sterrenkunde” in category second and third year bachelor courses.
- Fall 2013 Bachelor course *Advanced Quantum Mechanics*.
- August 2013 Second part of the course *Topics in Statistical Physics* at the Utrecht Summer School in Theoretical Physics.
- 2013-2017 Coordinator of the Physics honours programme.
- December 2013 One guest lecture on spintronics in the course *Moderne Gecondenseerde Materie*.
- Fall 2012 Supervised/lectured the Student Seminar *Ultracold Quantum Gases* in the Masters Program Theoretical Physics at Utrecht University.
- Fall 2012 *Statistical Field Theory* in the Masters Program Theoretical Physics at Utrecht University.
- December 2012 One guest lecture on spintronics in the course *Moderne Gecondenseerde Materie*.

- August 2012 Second part of the course *Topics in Statistical Physics* at the Utrecht Summer School in Theoretical Physics.
- Spring 2012 Two lectures in the course Field Theory in Condensed Matter 2 in the Masters Program Theoretical Physics at Utrecht University.
- December 2011 One guest lecture on spintronics in the course *Moderne Gecondenseerde Materie*.
- Fall 2011 *Statistical Field Theory* in the Masters Program Theoretical Physics at Utrecht University.
- August 2011 Second part of the course *Topics in Statistical Physics* at the Utrecht Summer School in Theoretical Physics.
- Spring 2011 Four lectures in the course Field Theory in Condensed Matter 2 in the Masters Program Theoretical Physics at Utrecht University.
- December 2010 One guest lecture on spintronics in the course *Moderne Gecondenseerde Materie*.
- August 2010 Second part of the course *Topics in Statistical Physics* at the Utrecht Summer School in Theoretical Physics.
- Fall 2010 *Statistical Field Theory* in the Masters Program Theoretical Physics at Utrecht University.
- August 2010 Senior University Teaching Qualification (SKO).
- Spring 2010 Lecturer of (with Henk Stoof, and Cristiane de Morais Smith) the course *Field Theory in Condensed Matter* in the Masters Program Theoretical Physics at Utrecht University.
- Fall 2009 *Statistical Field Theory* in the Masters Program Theoretical Physics at Utrecht University.
- December 2009 One guest lecture on spintronics in the course *Moderne Gecondenseerde Materie*.
- August 2009 Second part of the course *Topics in Statistical Physics* at the Utrecht Summer School in Theoretical Physics.
- Spring 2009 *Spintronics* in the Masters Program Theoretical Physics at Utrecht University.
- 1-3 April, 2009 Invited lecturer at the DRSTP Postgraduate AIO/OIO School 2009 on Statistical Physics and Theory of Condensed Matter (SPTCM). Lectured the course *Theory of Spin Transfer* (6 lecture hours).
- Fall 2008 Half of the third-year bachelor course *Thermische Fysica 2* (together with G. Barkema).
- August 2008 Second part of the course *Topics in Statistical Physics* at the Utrecht Summer School in Theoretical Physics.
- Spring 2008 Contact person for, and lecturer of (together with Allan MacDonald, Henk Stoof, and Cristiane de Morais Smith), the course *Quantum Fields in Condensed Matter* in the Masters Program Theoretical Physics at Utrecht University.
- Fall 2007 Set up and supervised/lectured the Student Seminar *Ultracold Quantum Gases* in the Masters Program Theoretical Physics at Utrecht University.

- November 2007 Basic University Teaching Qualification (BKO).
- August 2007 Second part of the course *Topics in Statistical Physics* at the Utrecht Summer School in Theoretical Physics.
- Spring 2007 Set up and lectured the course *Spintronics* in the Masters Program Theoretical Physics at Utrecht University.
- Spring 2006 Substitute lecturer *Physics 302 K: General physics* at The University of Texas at Austin (3 lectures).
- Spring 2005 One lecture of the freshman course *Physics For Engineers*, replacing A.H. MacDonald.
- Fall 2004 Substitute lecturer for the graduate course *Solid State Physics* at The University of Texas at Austin (5 lectures).
- 2001/2002 Teaching assistant for the course *Statistical Field Theory* at Utrecht University.
- 1999-2001 Teaching assistant for the course *Quantum Mechanics 2* at Utrecht University.

(Co-)supervised bachelor thesis of:

1. Steijn Dubbink, *Topological Properties of quasi-1D and 2D WTe₂ from First Principles Simulations*, 2024.
2. Mees van Uden, *Magnonic black-hole horizons using position-dependent magnetic anisotropy*, 2024.
3. Sem Bode, *Predicting Magnetization Dynamics Using Machine Learning*, 2023.
4. Jesper van Soest, *Topological properties and dynamics of magnetic hopfions*, 2022.
5. Roland van der Vegt, *Spherical particle estimation of Laser Induced Demagnetization of Nanoplatelets in a liquid: Proposal for an ultra fast Einstein-de Haas experiment in the nano regime*, 2021. (At Eindhoven University of Technology.)
6. Mithuss Tharmalingam, *Effect of the Geometry of an Yttrium Iron Garnet Film on the Spin-Wave Dispersion Relation*, 2021.
7. Ramon Wakelkamp, *Antiferromagnetic spin waves in a magnetic-field gradient*, 2020.
8. Julius Krebbekx, *Current-Driven Magnetic Instabilities: Towards realizing magnonic black hole analogues*, 2019. (At Eindhoven University of Technology.)
9. Bram Zande, *The shape of a magnonic black hole horizon*, 2019.
10. Koen Wuite, *The effect of spin transfer torques on spin waves*, 2018. (At Eindhoven University of Technology.)
11. Stijn Claerhoudt, *Spin-Cherenkov radiation caused by a magnonic black or white hole*, 2018.
12. Nils Warsen, *Analogue gravity with magnons*, 2018.
13. Amber Heskes, *Manipulation of spin wave propagation in RKKY coupled systems*, 2018. (At Eindhoven University of Technology.)

14. Tjacco Koskamp, *The influence of Dzyaloshinskii-Moriya interaction and spin-orbit torques on the current driven spin-Cherenkov effect*, 2018. (At Eindhoven University of Technology.)
15. Wesley Chu, *Influence of spin currents on ultrafast magnetization dynamics*, 2017. (At Eindhoven University of Technology.)
16. Mathieu de Kruijf, *Spin waves and the spin Cherenkov effect*, 2017. (At Eindhoven University of Technology.)
17. Joren Harms, *Quantum dynamics of skyrmions and vortices in antiferromagnets*, 2017; Joren was awarded the EMMEPH Thesis Prize for this Thesis.
18. Daan Peerlings, *Magnon contribution to unidirectional spin Hall magnetoresistance*, 2017.
19. Thomas Flöss, *Quantum fluctuations and magnon-magnon interactions in antiferromagnets*, 2016.
20. Thijs Kieboom, *Spin transport after ultra-fast demagnetization*, 2016.
21. Ruben Meijs, *The electrically driven magnon Hall effect in YIG/Pt heterostructures*, 2016.
22. Lars de Ruiter, *Magnon kinetics in thin-film magnetic insulators*, 2016.
23. Jan Mulder, *Superconductivity and Spin Superfluidity*, 2016.
24. Hendrik Snijder, *Landau-Lifshitz-Gilbert Theory of Spin Current Transmission Through Ferromagnets*, 2016.
25. Damian van de Heisteeg, *Quantum fluctuations and phase transitions in antiferromagnetic spin configurations*, 2016.
26. Solange Schrijnder van Velzen, *Quantum fluctuations in antiferromagnetic spin configurations*, 2016.
27. Mark Raaijmakers, *Inhomogeneous groundstates in antiferromagnets with Dzyaloshinskii-Moriya interaction*, 2015.
28. Sacha Baerends, *Phase diagram and stability of skyrmion configurations in antiferromagnetic materials lacking inversion symmetry*, 2015.
29. Patrick van Dieten, *Quantum fluctuations and degeneracies of two-dimensional magnetic skyrmions*, 2015.
30. Maarten Beens, *Current-driven skyrmion motion in antiferromagnets*, 2015.
31. Koen Stemerdink, *Thermal spin transport and electron-magnon interactions in easy-plane ferromagnets*, 2015.
32. Kevin Peters, *Magnon-mediated current drag in the semiclassical regime*, 2015.
33. Alex Cleton, *Effects of magnons on spin transport in ferromagnetic metals*, 2015.
34. Victor Dagnelie, *Superfluid and Mott insulating phases of magnons in an easy-plane ferromagnetic insulator*, 2014.
35. Quint-Hein Enneking, *Phase diffusion in a Bose-Einstein condensate of magnons*, 2014.

36. Dion Hartmann, *Domain-Wall Motion in Materials with Perpendicular Magnetic Anisotropy*, 2014; Dion also won the Utrecht-Eindhoven Science and Technology Award in 2013.
37. Sjoerd Jan Venema, *Magnetic phase diagrams of spin systems with inversion asymmetry*, 2014.
38. Laurens Stronks, *Transverse spin injection: from scattering theory to skyrmions*, 2014.
39. Maxime Jonker, *Density of States of quasi-equilibrium Bose-Einstein condensed magnons in YIG*, 2014.
40. Serop Lazarian, *Skyrmion Dynamics in Thin Films with Perpendicular Magnetic Anisotropy*, 2014.
41. Marianne Knoester, *Skyrmions driven by the spin Hall effect*, 2013.
42. Han van den Berg, *Influence of the Dzyaloshinskii-Moriya interaction on the properties of domain walls in magnetic nanowires*, 2013.
43. Peter Kristel, *Domain-wall motion in layered materials*, 2013.
44. Peer Fisser, *Pseudo-spin transport in cold-atom systems*, 2013.
45. Stefan Korenberg, *Light-Induced Magnetic Fields for Neutral Atoms*, 2013.
46. Rob van den Berg, *Motion of a ferromagnetic domain wall under influence of an electromagnetic field*, 2012.
47. N.H. Reinerink, *Domain walls and spin-orbit coupling*, 2010.

(Co-)supervised master thesis of:

1. Cas Korporaal, *Spin-wave cloaking*, 2023.
2. Mithuss Tharmalingam, *Phonon-induced spin inertia in ferromagnets*, 2023.
3. Teun Kluck, *Effects of spin inertia on ground-state energies: the spin-instanton*, 2023.
4. Mario Gaspar Quarenta, *Bath-Induced Spin Inertia*, 2022.
5. Mexx Regout, *Spontaneous magnon emission in the bosonic Klein paradox*, 2022.
6. Daan van Seters, *Dissipative Antiferromagnetic Dynamics*, 2022.
7. Maurice Dijsselbloem, *Can a machine discover the Landau-Lifshitz equation?*, 2021.
8. Steven Schoenmaker, *The interlayer Dzyaloshinskii-Moriya interaction*, 2021. (At Eindhoven University of Technology).
9. Paul mulholland, *Optimising for the Delayed Onset of Trapped-Electron Modes in Stellarator Geometry*, 2021.
10. Tjacco Koskamp, *Viscous electron systems with coupling to the spin degree of freedom*, 2020. (At Eindhoven University of Technology).
11. Miguel Lammers, *Statistical Physics Models for Economic Systems*, 2020.
12. Christian Nesenberend, *Computational Information Density and Entropy of the Bitcoin blockchain*, 2020.
13. Jan Mulder, *Statistical-physics models for fluctuations and emergent inequality in economic systems*, 2019.

14. Sacha Baerends, *Phenomenological theory of spin hydrodynamic generation*, 2019.
15. Maarten Beens, *Microscopic theory for ultrafast magnetization dynamics*, 2017.
16. Quint-Hein Enneking, *The magnon-drag Peltier effect*, 2017.
17. Wiet van Lanschot, *Influence of Dzyaloshinskii-Moriya Interaction on Spin Waves and Magnon Spin Transport*, 2017.
18. Maxim Faber, *Vortices in p-wave superconductors*, 2017.
19. Ilias Samathrakakis, *Thermal Magnon Hall Effect in FM/AFM Skyrmionic Structures*, 2016
20. Sjaak van Diepen, *Stability of a magnon Bose-Einstein condensate*, 2016.
21. Bram van Dijk, *Skyrmions and the Dzyaloshinskii-Moriya Interaction*, 2014.
22. Erik van der Wurff, *Number Fluctuations and Phase Diffusion in a Bose-Einstein Condensate of Light*.
23. Oliver Hijano Cubelos, *Current induced torques and transport in Rashba ferromagnets*, 2012.
24. V.P.J. Jacobs, *Kubo Formalism for Spin Drag in an Atomic Fermi Gas*, 2011 (with Henk Stoof).
25. R. Kittinaradorn, *Critical Spin transport in Bose Gases*, 2011.
26. H.J.R. van Tuyll, *Spin transfer in helical magnets*, 2009.
27. H.J. van Driel, *Models for Current-Driven Domain Wall Motion*, 2008.
28. M.P. Mink, *Pinning of Vortex Lattices in Single and Multicomponent Bose-Einstein Condensates by an Optical Potential*.
29. M.E. Lucassen, *Rigid Domain-Wall Motion*.
30. A. Swaving, *Magnetization Relaxation in Disordered Ferromagnets*, 2008.
31. B. Zoetekouw, *Damping of collective modes in Bose-Einstein condensates*, 2002.
32. B.W.A. Leurs, *Dissipative Dynamics of a Vortex in a Bose-Einstein Condensate*, 2002.
33. F. van Belle, *Theories of Feshbach Resonances in Atomic Bose-Einstein Condensates*, 2003.
34. N. de Keijzer, *Atom-molecule Coherence near a Feshbach resonance*, 2003.
35. B.H.M. Vlaar, *Coherent Atom-molecule Oscillations*, 2003.

(Co-)supervised Ph. D. thesis of:

1. Joren Harms, *Current-driven instabilities and non-linearities in magnetic systems*, 10 November 2023.
2. Pieter Gunnink, *Non-equilibrium topology in magnonic systems*, 13 September 2023.
3. Tom Lichtenberg, *Moving Spins: Novel methods and materials for femtomagnetism*, (21 December 2022, at Eindhoven University of Technology, funded by FOM Projectruimte on THz magnonics).

4. Peter Sterk, Magnonic spin transport in magnetic insulators, (31 October 2022, funded by ERC CoG).
5. Maarten Beens, *Theoretical methods for femtomagnetism and ultrafast spintronics*, (25 October 2022, at Eindhoven University of Technology, funded by FOM Projectruimte on THz magnonics).
6. Casper Schippers, *Alternating moments: or towards applications using antiferromagnetic spintronics*, (27 September 2022, at Eindhoven University of Technology, funded by FOM Projectruimte on Antiferromagnetic Spintronics).
7. Jurriaan Wouter, *Exotic phases in strongly correlated parafermion chains*, 12 January 2022.
8. Etienne van Walsem, *Chiral Phenomena in Magnetic Multilayers*, (29 March 2021, funded by the FOM projectruimte on skyrmionics).
9. Camilo Ulloa, *Spin Conversion at Interfaces*, (17 June, 2020, funded by the FOM program on Magnon Spintronics).
10. Juriaan Lucassen, *Exploring chiral magnetism with spin waves and domain walls*, (20 May, 2020, at Eindhoven University of Technology, funded by the FOM projectruimte on skyrmionics).
11. Jiansen Zheng, *Spin and Heat Transport Beyond Electrons: Ferromagnetic Insulators and Antiferromagnetic Metals*, (March 20, 2019, funded by a CSC Scholarship and the ERC Consolidator Grant).
12. R. Keesman, *Topological Phases and Phase Transitions in Magnets and Ice*, Leiden University, (June 7, 2017, funded by D-ITP).
13. B. Flebus, *Collective spin and heat transport through magnetic systems*, Utrecht University (April 10, 2017, co-funded by NWO VIDI).
14. A.-W. de Leeuw, *Many-body phenomena in a Bose-Einstein condensate of light*, Utrecht University (June 22, 2016, co-funded by ERC Starting Grant).
15. J. Armaitis, *Hydrodynamics of Bose gases with internal degrees of freedom*, Utrecht University (June 3, 2015, funded by FOM project).
16. E. van der Bijl, *Spin currents and magnetization dynamics in multilayer systems*, Utrecht University (January 28, 2014, funded by FOM program).
17. H.J. van Driel, *Spin transport in Bose gases*, Utrecht University (December 12, 2012, funded by ERC Starting Grant).
18. M.P. Mink, *Pseudospin pairing and transport in atomic Fermi gases and bilayer systems*, Utrecht University (September 12, 2012, funded by ERC Starting Grant).
19. M.E. Lucassen, *Coupling between Current and Dynamic Magnetization: from Domain Walls to Spin Waves*, Utrecht University (May 16, 2012, funded by NWO VIDI).
20. A.C. Swaving, *Spin Transport and Dynamics in Antiferromagnetic Metals and Magnetic Insulators*, Utrecht University (March 2, 2012, funded by NWO VIDI).

• other professional activities

- Organisation of “Spintronics and Nanomagnetism in The Netherlands” meeting, Utrecht, 8,9 February 2024.

- 2023- Chair of the Departmental Promotion Advisory Committee.
- 2023 Workshop “Erkennen en Waarderen voor leidinggevendenden”.
- Fall 2022 Organization of “Spintronics and Nanomagnetism in the Netherlands” meeting, Utrecht.
- Fall 2022 Inaugural address “Van zwarte gaten tot energiezuinige toepassing”.
- Fall 2022 Chair of an FWF Special Research Program (SFB) committee.
- Masterclass Diversiteit voor leidinggevendenden, 3 November 2022.
- Fall 2021 Committee member/reviewer of a German transregio Collaborative Research Center application.
- Spring 2021 Co-organizer, together with Adolfo Grushin and Gregory Tarnopolsky, of the Mainz ITP virtual workshop *Gravity and Emergent Gauge Fields in Condensed and Synthetic Matter*.
- 2021- Scientific director of the Dutch Research School of Theoretical Physics.
- 2020- Member of the Lorentz Center Physics board (chair from January 2021).
- 2020 Active Bystander Training.
- Fall 2019 Co-organizer, with Jairo Sinova, Andrei Bernevig, and Victor Galitskii, of the KITP program *Spin and heat transport in quantum and topological materials*, and its associated conference.
- 2019 Member of the program committee of the conference Spin Caloritronics X (Groningen, March 20-24, 2019).
- 2019 Member of the NWO-Veni selection committee.
- 2018- Diversity coordinator of the Institute for Theoretical Physics, Utrecht University; based on this, I co-founded the institute’s EDI committee in 2019.
- 2018 Set up the outreach website www.natuurkundetop10.nl (with Dion Hartmann).
- May 2018 Organized meeting on “Spintronics and Nanomagnetism in The Netherlands” (29,30 May, 2018, Nijmegen), with Theo Rasing.
- 2017 Member of the NWO-Veni selection committee.
- 2017- Associate Member of the QuSpin Center, NTNU.
- September 2016 Co-organizer (with Y. Tserkovnyak and Jairo Sinova) of the workshop “Quantum Spintronics” at the SPICE center in Mainz, Germany, September 21-23.
- July 2016 Local organizer for the Seventh Edition of the international workshop series on Spin Caloritronics.
- Spring 2016 Member of the Physics Department Committee on the goals and assessment of the Bachelor Thesis Project.

- January 2016 Organizer (with Dirk Schuricht) of the focus session “Transport Beyond Electrons” at Physics@FOM Veldhoven.
- December 2015 Co-organizer of the conference *NewSpin4: Transport Beyond Electrons*, Utrecht, The Netherlands, December 14-16, 2015.
- 2015- Co-organizer (with Umut GURSOY) of the Utrecht Summer School Theoretical Physics.
 - 2015- Board member of the “Natuurkundig Gezelschap te Utrecht”
 - 2015- Member of FOM committee on Condensed Matter and Optical Physics (“COMOP”).
- August 2014 Co-organizer (with Umut GURSOY and Gleb ARUTYUNOV) of the Utrecht Summer School Theoretical Physics.
- 2014-2016 Chair of Bachelor and Master Theses intervision committee of the Physics Department of Utrecht University.
 - 2014- FOM program leader of the program *Magnon Spintronics*.
 - 2014- Spin Phenomena Interdisciplinary Center (SPICE at Johannes Gutenberg University Mainz) advisory board member.
 - 2014 Member of the focusgroup valorization of the Rathenau Institute.
- March 2014 Organization (with V. Vitelli) of the DRSTP School on condensed matter and statistical physics.
- 2013/2014 Member of the committee for the FOM best physics Ph.D. thesis award.
 - 2013 Initiator (and organizer until 2017) of the Condensed-Matter Theory group meeting and seminar.
 - 2013 Co-organizer of the conference *NewSpin3: From model systems to complex matter*, Mainz, Germany, April 2-9, 2013.
 - 2013-2016 Member of Advisory Editorial Board of Journal of Physics: Condensed Matter.
- March 2013 Organization (with V. Vitelli) of the DRSTP School on condensed matter and statistical physics.
- January 2013 Organizer of the focus session “Spin Caloritronics” at Physics@FOM Veldhoven.
- 2012/2014 Member of the internal peer review committee for ERC starting and consolidator grants in sciences and geosciences at Utrecht University.
 - 2012- Member of the Young Academy of Europe.
 - 2011/2012 Chair of the search committee for an assistant-professorship-appointment in quantum-condensed matter theory.
- March 2012 Organization (with V. Vitelli) of the DRSTP School on condensed matter and statistical physics.

- 2011 Co-organizer of the conference *NewSpin2: Spin physics and topological effects in cold atoms, condensed matter, and beyond*, College Station (TX, USA), December 12-17, 2011.
- March 2011 Organization (with C. Storm) of the DRSTP School on condensed matter and statistical physics.
- 2010- Tutor for BKO/SKO applications.
- 2010 Organization, together with H. Stoof, of the conference *NewSpin, Utrecht 2010: Spin Manipulation in Cold Atoms and Condensed Matter*, Utrecht, January 6-9, 2010.
- 2010 Member of the scientific committee regarding Utrecht University Museum exhibition “Master The Universe”.
- 2006-2014 Member of the Teaching Advisory Committee (Onderwijs Advies Commissie) of the Physics and Astronomy Department (OAC-NS). (Chair from 2009.)

• publications

• highlighted publications

- Huaiyang Yuan, *et al.*, *Quantum magnonics: When magnon spintronics meets quantum information science*, Phys. Rep. **965**, 1 (2022); this paper is one of the first review papers on the emerging field of Quantum Magnonics, and continues to attract a great deal of attention.
- Andreas Rückriegel and Rembert A. Duine, *Long-Range Phonon Spin Transport in Ferromagnetic-Nonmagnetic Insulator Heterostructures*, Phys. Rev. Lett. **124**, 117201 (2020); this paper considers long-range spin transport by phonons. It was highlighted and discussed in [Physics](#). See also [this news item](#) of Eindhoven University.
- Scott A. Bender, Akashdeep Kamra, Wolfgang Belzig, Rembert A. Duine, *Spin current cross-correlations as a probe of magnon coherence*, arXiv:1811.10001 [cond-mat.mes-hall], Phys. Rev. Lett. **122**, 187701 (2019); this paper applies ideas from quantum optics to magnons to propose how to probe magnon coherence. It was discussed in a Viewpoint article in [Physics](#) and at [phys.org](#).
- R. Lebrun, A. Ross, S. A. Bender, A. Qaiumzadeh, L. Baldrati, J. Cramer, A. Brataas, R. A. Duine, M. Kläui, *Electrically controlled long-distance spin transport through an antiferromagnetic insulator*, Nature **561**, 222-225 (2018); this paper is the first demonstration of long-range spin transport through an antiferromagnetic insulator. See the accompanying [News and Views](#), the [press release](#), an [article](#) in the Volkkrant, listen to a [podcast](#) on BNR, and/or check out this [instagram post](#) by NOSop3.
- A. Roldan-Molina, A.S. Nunez, and R.A. Duine, *Magnonic black holes*, Phys. Rev. Lett. **118**, 061301 (2017); this work is the first to give a concrete proposal for implementing event horizons for spin waves. It was mentioned as a research highlight in Nature Physics **13**, 1 (2017). For the university press release, see [here](#). For an article in the Volkskrant, see [here](#).

- B. Flebus, S. A. Bender, Y. Tserkovnyak, and R. A. Duine, *Two-Fluid Theory for Spin Superfluidity in Magnetic Insulators*, Phys. Rev. Lett. **116**, 117201 (2016); this paper provides a unified theoretical description of coherent (superfluid) and incoherent (thermal) spin transport carried by magnons that is rooted in a microscopic theory.
- L.J. Cornelissen, J. Liu, R.A. Duine, J. Ben Youssef, B.J. Van Wees, *Long distance transport of magnon spin information in a magnetic insulator at room temperature*, Nature Physics **11**, 1022 (2015); This paper is the first to demonstrate spin currents through a magnetic insulator. My group contributed by developing its theoretical description that unifies magnon and electron spin transport. I expect this paper to be among the defining publications of “magnon spintronics”, the field which holds the prospect of achieving room-temperature transfer of information without dissipation. See [here](#) for the FOM press release. [Here](#) you can find a short radio item of BNR about this work, and [here](#) you can find a short piece in the Digitaal U-Blad.
- Scott A. Bender, R. A. Duine, and Yaroslav Tserkovnyak, *Electronic Pumping of Quasiequilibrium Bose-Einstein Condensed Magnons*, Phys. Rev. Lett. **108**, 246601 (2012); this paper considers the possibility of integrating metal spintronics with magnon Bose-Einstein condensation and magnon superfluidity.
- F. Jonietz, S. Mühlbauer, C. Pfleiderer, A. Neubauer, W. Münzer, A. Bauer, T. Adams, R. Georgii, P. Böni, R. A. Duine, K. Everschor, M. Garst, and A. Rosch, *Spin Transfer Torques in MnSi at Ultra-low Current Densities*, Science **330**, 1648 (2010); this paper is the first to demonstrate spin-transfer torques in chiral magnets, in particular in the skyrmion lattice phase. The critical currents are several order of magnitude lower than what was previously achieved, and the finding of this paper led to the field of “skyrmionics”, spintronics with skyrmions.
- R.A. Duine and H.T.C. Stoof, *Spin drag in noncondensed Bose gases*, Phys. Rev. Lett. **103**, 170401 (2009); this article is among the first to consider spintronics-like physics in cold-atom systems. Its predictions were in excellent agreement with experiments carried out in the group of Peter van der Straten, see arXiv:1204.6143v2 [cond-mat.quant-gas].
- A.S. Núñez, R.A. Duine, P.M. Haney, and A.H. MacDonald, *Theory of spin torques and giant magnetoresistance in antiferromagnetic metals*, Phys. Rev. B **73**, 214426 (2006); this paper essentially opened a new subfield of physics now dubbed “Antiferromagnetic Spintronics”.
- J.W. Reijnders and R.A. Duine, *Pinning of vortices in a Bose-Einstein condensate by an optical lattice*, Phys. Rev. Lett. **93**, 060401 (2004); this article is the first to propose vortex pinning in atomic Bose-Einstein condensates. This is my first publication that does not involve my Ph. D. supervisor, and its theoretical predictions were experimentally confirmed a few years later in the group of Nobel laureate Eric Cornell [Phys. Rev. Lett. **97**, 240402 (2006)].

- **preprints/publications**

See [this link](#).

- **other publications**

1. R.A. Duine and G.E.W. Bauer, *Spintronica met roostertrillingen*, NTvN (January 2021).
2. R.A. Duine, *Zwarte gaten op een chip*, NTvN **83**, 4 (2017).
3. R.A. Duine, Arne Brataas, Scott A. Bender, Yaroslav Tserkovnyak, *Spintronics and Magnon Bose-Einstein Condensation*, Book Chapter in *Universal Themes of Bose-Einstein Condensation*, N. Proukakis *et al.*, Eds., Cambridge University Press, Cambridge (2017).
4. L.J. Cornelissen, J. Liu, R.A. Duine, J. Ben Youssef, B.J. Van Wees, *Exchange magnon spintronics in the magnetic insulator yttrium iron garnet (Conference Presentation)*, Proc. SPIE 9931, Spintronics IX, 993133 (2016).
5. Rembert Duine, *Spintronics: skyrmions singled out*, Nature Nanotechnology **8**, 800 (2013).
6. Rembert Duine, *Spintronics: an alternating alternative*, Nature Materials **10**, 344 (2011).
7. Rembert Duine, Hedwig van Driel en Henk Stoof, *Koude atomen bieden weerstand*, NTvN **76**, 292 (2010).
8. R.A. Duine, *Fysica 2010 focussessie Nanofysica*, NTvN **76**, 114 (2010).
9. R.A. Duine, *Generation of electric current by a moving domain wall*, Proc. of SPIE **7398**, 7398-26 (2009).
10. R.A. Duine, *Spinning fermions*, Physics **1**, 27 (2008).
11. H.T.C. Stoof en R.A. Duine, *Atoom-molecuul-oscillaties in Bose-Einstein-gecondenseerde gassen*, NTvN **69**, 286 (2003) (In Dutch).
12. R.A. Duine, *Atom-molecule coherence in Bose gases*, Ph. D. Thesis, Utrecht University (2003).

- **list of talks/posters**¹

1. *Quantum Magnonics with Synthetic Antiferromagnets*, invited talk given in the Symposium “Nanomagnets for Quantum Information” at the 2024 APS March Meeting, Minneapolis, USA (I).
2. *High-energy physics for low-power consumption*, Colloquim given at Duisburg University, 15 December 2023.
3. Introductory talk on Spintronics at the Lorentz Center workshop on Quantum Magnetic Materials, Leiden, October 2023 (I).
4. *Magnon-electron interactions in spin transport and ultrafast magnetization dynamics*, talk given at the group retreat of TRR 227, 5 October 2023.

¹(I) indicates invited talks at conferences.

5. Zero-frequency chiral magnonic edge states protected by non-equilibrium topology, talk given at Spin Caloritronics XII, Tsukuba, Japan, 25 May 2023.
6. *Topological Magnon Spintronics*, talk given at the QuMat Pillar Meeting, Groningen, May 2023.
7. *Antimagnons, the bosonic Klein paradox, and magnonic black holes*, online talk given for the Differential Equations and Numerical Analysis group of Heraklion, Crete, 1 December 2022.
8. *Antimagnonics*, talk given at the Spin Cavitronics conference, Erlangen, December 2022 (I).
9. *Magnon Spintronics*, talk given at the UAM, Madrid, November 2022.
10. *Antimagnonics*, talk given at the 2022 Northern Lights Conference on magnetism, topology, and superconductivity, Iceland, 12 October 2022 (I).
11. *Enhanced magnon spin current using the bosonic Klein paradox*, talk given at Groningen University, 25 May 2022.
12. *Enhanced magnon spin current using the bosonic Klein paradox*, talk given at the symposium in honour of Theo Rasing's career in physics, 12 May 2022 (I).
13. *Non-local magnon and phonon spin transport*, talked given at the 2022 March Meeting (I).
14. *Black holes on a chip*, talk given at the Van der Waals symposium at Eindhoven University of Technology, 18 January 2022.
15. *Spin-phonon coupling in non-local spin transport through magnetic insulators*, online talk given at the Focus Session on Magnon Polarons at the DPG meeting, 27 September 2021 (I).
16. *Black holes on a chip*, webinar organized by the Dept. of Physics, Pabna University of Science and Technology, Bangladesh, 8 July 2021.
17. *Event horizons and black-hole lasers for spin waves*, talk given at The European Conference Physics of Magnetism 2021, online, 1 July 2021 (I).
18. *Spin currents through insulators*, talk given the IRG-2 seminar of Ohio State University, 25 January 2021.
19. *Non-local spin transport as a probe of viscous magnon fluids*, talk given at the online seminar on electron hydrodynamics, 17 December 2020.
20. *Bose-Einstein condensation and spin superfluidity*, talk given at the online workshop on Condensates of Light, 11 December 2020.
21. *Black Holes on a Chip*, talk given at the M2N group meeting of TU/e, 20 November 2020.
22. *Spin current in all its guises*, talk given at the online workshop on Coherent order and transport in spin-active systems: Interplay between magnetism and superconductivity, 18 November 2020 (I).

23. *De kwantummechanica: niet-alledaagse natuurkunde in het dagelijks leven (en daarbuiten)*, lecture given at the “Masterclass Einstein”, Utrecht, 30 October, 2020.
24. *Long-Range Phonon Spin Transport*, talk given at the Spice+Spin+X online Seminar, 9 September, 2020.
25. *Non-Hermitian topology with spin-torque oscillators*, talk given at the online group meeting of Prof. C. Morais Smith at Utrecht University, 8 July 2020.
26. *Geometry and topology in magnetic dynamics*, talk given at the online QuSpin Seminar, 8 June 2020.
27. *Geometry and topology in magnetic dynamics*, talk given at the online condensed matter group meeting at Jyväskylä University, 27 May 2020.
28. *Geometry and topology in magnetic dynamics*, talk given at the Online Spintronics Seminar Series, 14 May 2020.
29. *Black holes on a chip*, online Nico van Kampen Colloquium Theoretical Physics at Utrecht University, Utrecht, April 1, 2020.
30. *Spin currents through insulators*, focus session talk given at Physics at Veldhoven, January 21, 2020 (I).
31. *Tuning spin structures and transport in synthetic antiferromagnets*, talk given at the MMM conference, Las Vegas, USA, November 7, 2019 (I).
32. *Quantum Magnonics*, blackboard talk given at the KITP Santa Barbara, USA, November 4, 2019.
33. *Spin-Current Cross-Correlations as a Probe of Magnon Coherence*, Cambridge Optomagnonics, Cambridge, UK, September 9, 2020 (I).
34. *De kwantummechanica: niet-alledaagse natuurkunde in het dagelijks leven (en daarbuiten)*, lecture given at the “Masterclass Einstein”, Utrecht, October 11, 2019.
35. *Non-local magnon spin transport*, talk given at the HFML - FELIX User Meeting 2019, Nijmegen, July 10, 2019 (I).
36. *Spin currents and black holes*, colloquium given at the Technical University of Kaiserslautern, July 1, 2019.
37. *Non-local magnon spin transport*, talk given at Spin Caloritronics X, Groningen, March 20, 2019.
38. *Non-local spin transport as a probe of viscous magnon fluids*, talk given at Spin Mechanics 6, Zao, Japan, February 28, 2019 (I).
39. *Event horizons for spin waves (and what we can do with them)*, talk given at the Kavli Institute for Theoretical Sciences during the Workshop “Collective Spin Dynamics in Nanostructures”, Beijing, China, October 15, 2018 (I).

40. *Viscous Spintronics*, talk given at the UK-NL workshop, Oxford, UK, August 23, 2018 (I).
41. *Event horizons and black-hole lasers for spin waves*, talk given at Spin Summit 2018, Xingyi, China, August 17, 2018 (I).
42. *Spin currents: from domain walls to black holes*, colloquium at Bielefeld University, Bielefeld, Germany, July 17, 2018.
43. *Magnon-electron and magnon-phonon interactions*, talk given at the Spin Caloritronics 9 Conference, Columbus, Ohio, USA, June 26, 2018 (I).
44. *Black holes on a chip*, talk given at the Department's Day of Physics, Utrecht University, 22 March 2018.
45. *Spin currents: from domain walls to black holes*, colloquium given at the Belgium Quantum Physics Initiative, Brussels, February 15, 2018.
46. *Spin-vorticity coupling in viscous electron fluids*, talk given at Spin Mechanics 5, Les Houches, France, 12 February 2018 (I).
47. *Skyrmions in antiferromagnets*, talk given at the focus session on magnetic skyrmions in Physics at Veldhoven 2018, 24 January 2018 (I).
48. *Magnetic insulator spintronics*, colloquium given at the Joint Quantum Institute of NIST and the University of Maryland, Maryland, U.S.A., November 6, 2017.
49. *Magnetic Insulator Spintronics*, Condensed-matter Theory Seminar give at the Paul Scherrer Institute, Villigen, Switzerland, September 26, 2017.
50. *Spin transport between normal metals and quantum magnets*, invited talk given at the Quantum Spintronics at Interfaces conference, San Sebastian, Spain, September 8, 2017 (I).
51. *Spin currents, magnons, fluid dynamics, and a bit of gravity*, invited talk given at the Magnonics Conference in Oxford, UK, August 9, 2017 (I).
52. *Enhanced Spin Conductance through a thin-film insulating antiferromagnet*, invited talk given at the conference Spin Caloritronics 8, Regensburg, June 13, 2017 (I).
53. Lectures on *Spintronics and Magnon Bose-Einstein Condensation*, International School on Magnetism in Real and Synthetic Materials Tutzing, Germany, March 27-30, 2017.
54. *Spin currents: from domain walls to black holes*, Lunchlezing voor de Vereniging voor Technische Physica, Delft, March 21, 2017.
55. *Spin currents: from domain walls to black holes*, Physics Colloquium given at University of Jyväskylä, Finland, March 17, 2017.
56. *Zwarte gaten op een chip*, Natuurkundig Gezelschap te Utrecht, March 7 2017.
57. *New Horizons for Spintronics*, talk given at the conference Spin Superfluidity in French Polynesia, Mo'orea, February 13, 2017 (I).

58. *Spin currents: from domain walls to black holes*, the Nico van Kampen colloquium in Theoretical Physics, Utrecht, December 21, 2016.
59. *Magnonic black holes*, talk given at nanoQT-2016, Kiev, October 11, 2016 (I).
60. *Spin currents through antiferromagnets*, talk given at the Antiferromagnetic Spintronics Workshop at the SPICE Center, Mainz, Germany, September 28, 2016 (I).
61. *Two-fluid theory for the spin Seebeck effect in magnetic insulators*, talk given at Insulatorics 2016, Longyearbyen, Spitsbergen, May 28, 2016 (I).
62. *Superfluidity and spin superfluidity*, talk given at the 616th WE-Heraeus seminar on “Ultracold Quantum Gases - Current Trends and Future Perspectives”, Bad Honnef, Germany, May 10, 2016 (I).
63. *Skyrmions in ferromagnets and antiferromagnets*, talk given at the workshop Los Andes Spintronicos, Santiago, Chile, March 14, 2016 (I).
64. *Spin transport through magnetic insulators*, condensed-matter seminar given at the University of Amster (UvA), Amsterdam, February 2, 2016.
65. *Theory of spintronics: Interactions between spin-polarized current and dynamic magnetic textures*, lectures given at the School on Spintronics, Teheran, Iran, November 4-6, 2015 (I).
66. *Quasi-particle Berry curvature in spin-orbit coupled bosonic Mott insulators*, talk given at the workshop Mathematical Approach to Topological Phases in Spintronics, Sendai, Japan, October 8, 2015.
67. *Degeneracies and quantum fluctuations of skyrmionic magnetic matter*, talk given at the GRC Conference on Spn Dynamics in Nanostructures, Hong Kong, July 28, 2015 (I).
68. *Spin transport and magnon-phonon interactions in magnetic insulators*, talk given at Spin Mechanics 3, Munich, Germany, June 25, 2015 (I).
69. *Néel skyrmions in confined geometries and at nonzero temperatures*, theory seminar given at NTNU Trondheim, Norway, May 22, 2015.
70. *Spin currents: from cold-atom systems to magnetic insulators*, condensed-matter theory seminar given at Frankfurt University, Germany, April 24, 2015.
71. *Theory of spintronics: interactions between spin-polarized current and magnetic textures*, two invited lectures given at the IGER International Symposium on Science of Molecular Assembly and Biomolecular Systems 2015 : Spins in Action, Nagoya, Japan, March 26 and 27, 2015 (I).
72. *Spintronics and Magnon Bose-Einstein condensation*, condensed-matter theory seminar given at Radboud University Nijmegen, The Netherlands, January 29, 2015.
73. *Interactions near interfaces: from skyrmion stabilization to magnon condensation*, theory seminar given at Konstanz University, Germany, October 27, 2014.

74. *Spin currents: from cold atoms to magnetic insulators*, Joint Colloquium given at Université de Liège, Belgium, October 22, 2014.
75. *Interactions near interfaces: from skyrmion stabilization to magnon condensation*, condensed-matter seminar given at Groningen University, The Netherlands, September 29, 2014.
76. *Current-induced torques in antiferromagnets*, talk given at the symposium on Antiferromagnetic Spintronics at the 2014 Fall meeting of the European Materials Research Society, Warschau, Poland, September 18, 2014 (I).
77. *Magnon Bose-Einstein condensation via spin-current injection*, talk given at “Spin Caloritronics VI”, Irsee, Germany, July 17, 2014 (I).
78. *Magnon Bose-Einstein condensation*, seminar at Newcastle University, Newcastle, May 9, 2014.
79. *Magnon Bose-Einstein condensation via spin-current injection*, talk given at the 2nd International Symposium on “Novel states in correlated condensed matter - from model systems to real materials”, Konigstein, Germany, April 9, 2014 (I).
80. *Creep of chiral domain walls*, talk given at the Mainz-Lanna theory meeting, Mainz, Germany, March 24, 2014.
81. *Creep of chiral domain walls*, talk given at minisymposium at Technical University Eindhoven, Eindhoven, 20 March, 2014.
82. *Geometric transport in spinor quantum gases*, talk given at the Banff Cold Atoms Meeting, Banff, Canada, 19 February, 2014 (I).
83. *Magnon Bose-Einstein condensation via spin-current injection*, talk given during the 550. WE-Heraeus-Seminar on Spin Transport Beyond Boltzmann, Bad Honnef, Germany, January 9, 2014 (I).
84. *Magnetic skyrmions*, talk given during the KITP workshop on Progress in Spintronics, Santa Barbara, California, U.S.A., November 7, 2013 (I).
85. *Currents along interfaces in textured magnetic heterostructures*, talk given at the Gordon Research Conference on Spin Dynamics in Nanostructures, Hong Kong, August 20, 2013 (I).
86. *Magnon Bose-Einstein condensation via spin-current injection*, Theoretical Physics colloquium at Utrecht University, Utrecht, June 19, 2013.
87. *Tangential spin, charge, and heat currents*, talk given at the workshop Spin Caloritronics V, Columbus, Ohio, U.S.A., May 14, 2013 (I).
88. *Spintronics with cold atoms*, seminar given at SNS Pisa, Pisa, Italy, April 23, 2013.
89. *Theory of spintronics: Interactions between spin-polarized current and dynamic magnetic textures*, lecture at the NewSpin3 Spring School, Mainz, Germany, April 5, 2013.

90. *Magnetic-texture-controlled transverse spin injection*, talk given at the APS March Meeting, Baltimore, U.S.A., March 22, 2013.
91. *Topological transport in spin-orbit coupled bosonic Mott insulators*, talk given at the APS March Meeting, Baltimore, U.S.A., March 19, 2013.
92. *Magnon Bose-Einstein condensation by spin-current injection*, talk given at the workshop Universal Themes of Bose-Einstein Condensation, Leiden, March 13, 2013 (I).
93. *Spin currents and magnetization dynamics in a Bose gas*, seminar given at The University of Texas at Austin, Austin, TX, U.S.A., November 8, 2012.
94. *Novel mechanisms and new materials for current-driven domain-wall motion*, seminar given at NIST, Gaithersburg, MD, U.S.A., November 5, 2012.
95. *De kwantummechanica: niet-alledaagse natuurkunde in het dagelijks leven (en daarbuiten)*, lecture given at the “Masterclass Einstein”, Utrecht, October 19, 2012.
96. *Current-induced torques and domain-wall motion in layered magnetic materials*, condensed matter seminar at Leeds University, Leeds, UK, October 10, 2012.
97. *Novel mechanisms and new materials for current-driven domain-wall motion*, talk given at the International Materials Research Congress, Cancun, Mexico, August 16, 2012 (I).
98. Spin transfer mechanism for magnon-drag thermopower, talk given at Spin Caloritronics IV, Sendai, Japan, June 3, 2012 (I).
99. *Symmetries, current-induced torques, and domain walls*, talk given at the International Symposium on the Dynamics of Domain Walls 2012, Hamburg, Germany, May 31, 2012 (I).
100. *Spin currents and spin drag in a Bose gas*, Condensed Matter Theory Seminar at Cologne University, April 20, 2012.
101. *Spintronics with magnons and other bosons*, talk at DuNo Spin 2012 (Dutch-Norwegian workshop on spin), January 31, 2012 (I).
102. *Spintronics with cold atoms*, Winter School lecture given at the “NewSpin2: Spin physics and topological effects in cold atoms, condensed matter, and beyond” conference, College Station, TX, USA, December 12, 2011.
103. *Current-driven domain walls at nonzero temperature*, magnetism seminar given at LPS, Paris, France, October 6, 2011.
104. *Spin Currents and Spin Drag in Atomic Bose Gases*, colloquium at the University of Chile, Santiago, Chile, September 2, 2011.
105. *Current-driven domain-wall motion*, FOM SPIN Programme meeting, Nijmegen, The Netherlands, June 20, 2011.
106. *Novel methods and new materials for current-induced magnetization dynamics*, SFB Colloquium, Hamburg, Germany, May 31, 2011.

107. *Spin caloritronics with cold atom*, talk given at the workshop Spin Caloritronics III at the Lorentz Center, Leiden, The Netherlands, May 12, 2011 (I).
108. *Theory of spin transport in semiconductors, ferromagnets, and cold-atom systems*, APS March Meeting pre-meeting spintronics tutorial, Dallas, U.S.A., March 20, 2011 (I).
109. *De magie van meerdere deeltjes* (in Dutch), Utrecht University Museum, Utrecht, The Netherlands, January 30, 2011.
110. *Novel mechanisms and new materials for current-driven magnetization dynamics*, Another Spin in the Wall Symposium, Eindhoven, The Netherlands, January 27, 2011 (I).
111. *Non-universal aspects of electromotive forces induced by domain-wall motion*, Cambridge-Leiden Easymeeting, Cambridge, UK, September 3, 2010 (I).
112. *Non-universal aspects of electromotive forces induced by domain-wall motion*, Trends in Spintronics, 2nd NWO-NRF Korean-Dutch workshop, Eindhoven, The Netherlands June 24, 2010 (I).
113. *Meer is Anders*, Bèta onder de Dom, Utrecht, June 11, 2010.
114. *Spin Drag in Bose and Fermi Gases*, APS March Meeting, Portland, U.S.A., March 15, 2010.
115. *Spin Drag in Bose and Fermi Gases*, Theoretical Physics Colloquium, University of Amsterdam, March 4, 2010.
116. *Van 't Hooft-Polyakov-monopool naar Ipod*, voordracht tijdens werkbezoek vaste tweede kamercommissie voor OCW aan de landelijke onderzoeksscholen, Utrecht, 12 Februari, 2010.
117. *Spin Drag*, theory seminar at Groningen University, November 23, 2009.
118. *Spin motive forces*, seminar given at SNS Pisa, Pisa, Italy, October 8, 2009.
119. *Generation of Electric Current by a Moving Domain Wall*, talk given at the 16-th International Summer School Nicolás Cabrera on Spin Transport and Dynamics in Nanostructures, Madrid, Spain, September 14-18 2009 (I).
120. *Antiferromagnetic Metal Spintronics*, lecture given at the 16-th International Summer School Nicolás Cabrera on Spin Transport and Dynamics in Nanostructures, Madrid, Spain, September 14-18 2009 (I).
121. *Generation of Electric Current by a Moving Domain Wall*, talk given at the Spintronics II symposium at SPIE Optics and Photonics, San Diego, CA, August 4, 2009 (I).
122. *Gauge Fields in Spintronics*, talk given at “Trends in Theory 2009” 8th biennial symposium of the Dutch Research School of Theoretical Physics, Dalfsen, May 14, 2009 (I).
123. *A strongly interacting Bose gas: Nozières and Schmitt-Rink theory and beyond*, talk given at the Cambridge - Leiden: easyMeeting on Quantum Matter at the Lorentz Center, Leiden, May 7, 2009 (I).

124. *Current-driven domain walls at nonzero temperature*, talk given at the workshop “Spin Caloritronics” at the Lorentz Center, Leiden, February 12, 2009 (I).
125. *Spintronics*, talk given for “De Leidsche Fles”, Leiden, February 11, 2009.
126. *Generation of Electric Current by a Moving Domain Wall*, STCM Workshop, Kyoto, Japan, November 4, 2008 (I).
127. *Berry’s phase, motive forces, and domain walls*, Ehrenfest colloquium, Leiden, October 15, 2008.
128. *Spintronica: van lading naar spin*, Natuurkundig Gezelschap, Utrecht, October 7, 2008.
129. *Spintronics*, General Physics Colloquium about ERC starting grant together with Andre Mischke, Utrecht, October 3, 2008.
130. *Generation of Electric Current by a Moving Domain Wall*, Konstanz, Germany, July 18, 2008.
131. *Generation of Electric Current by a Moving Domain Wall*, SFB 668 seminar, Hamburg, Germany, July 4, 2008.
132. *Magnetism and Quantum Phase Transitions in Cold-Atom Systems*, invited talk at the CIFAR Quantum Materials Program Meeting, Toronto, Canada, May 8, 2008 (I).
133. *Current-induced torques in magnetic textures and in antiferromagnets*, invited talk given at the APS March Meeting, New Orleans, LA, March 10, 2008 (I).
134. *Spin transfer and spin pumping*, Munich Physics Colloquium, Munich, January 14th, 2008.
135. *The 2007 Nobel prize in Physics*, General Physics Colloquium (together with Pedro Zeijlmans van Emmichoven), Utrecht, December 14th, 2007.
136. *Spin pumping by domain walls*, talk given at the National Seminar Condensed Matter Physics, Utrecht, December 7th, 2007.
137. *Spin transfer and spin pumping*, Ornstein Colloquium, Utrecht, November 8th, 2007.
138. *Spin transfer and spin pumping*, talk given at University of Freiburg, Freiburg, Germany, July 5th, 2007.
139. *Current-driven domain-wall motion and spin pumping*, invited talk given at the “SpinNor 2007: spin and charge flow in nanostructures” conference, Centre for Advanced Study, Oslo, Norway, June 27th, 2007 (I).
140. *Spin transfer: from spin valves to current-driven domain walls*, theory colloquium given at the University of Groningen, April 16th, 2007.
141. *Spin transfer: from spin valves to current-driven domain walls*, talk given at Physics of Nanostructures group at Eindhoven University of Technology, Eindhoven, April 3rd, 2007.
142. *Thermally-Assisted Current-Driven Domain Wall Motion*, talk given at the APS March Meeting, Denver, CO, March 6, 2007.

143. *Theory of current-driven domain wall motion*, talk given at physics@Veldhoven 2007, Veldhoven, January 23rd, 2007.
144. *Giant Magnetoresistance and Current-Induced Torques in Antiferromagnetic Metals*, talk given at the group meeting of B. Van Wees, Universiteit Groningen, December 19th, 2006.
145. *Theory of Current-Driven Domain Wall Motion*, condensed-matter theory seminar given at Köln University, Köln, Germany, November 3rd, 2006.
146. *Spin transfer: from spin valves to current-driven domain walls*, talk given at The Institute for Theoretical Physics (ITFA) at the University of Amsterdam (UvA), Amsterdam, The Netherlands, October 12th, 2006.
147. *Giant Magnetoresistance and Spin Transfer Torques in Antiferromagnetic Metals*, talk given at the International Workshop on Spin Transfer, Nancy, France, October 3rd, 2006.
148. *Theory of Antiferromagnetic Metal Spintronics*, talk at the APS March Meeting, Baltimore, MD, March 13th, 2006.
149. *Antiferromagnetic Metal Spintronics*, Theoretical Physics Seminar given at the Kavli Institute of Nanoscience, Delft University of Technology, Delft, The Netherlands, November 24th, 2005.
150. *(Anti)ferromagnetic Metal Spintronics*, Theoretical Physics Colloquium given at The Institute for Theoretical Physics, Utrecht University, Utrecht, The Netherlands, November 23rd, 2005.
151. *Antiferromagnetic Metal Spintronics*, talk given at the COLLECT meeting at Columbia University, New York City, NY, October 22nd, 2005.
152. *Itinerant Ferromagnetism in Cold Fermi Gases*, talk given at the Institute For Theoretical Physics of The University of Amsterdam (UVA), Amsterdam, The Netherlands, May 23rd, 2005.
153. *Itinerant Ferromagnetism in Cold Fermi Gases*, talk at the APS March Meeting, Los Angeles, CA, March 22nd, 2005.
154. *Condensed matter physics with cold atom systems: Vortex Pinning, Superconductivity and Ferromagnetism*, condensed matter seminar given at The University of Texas at Austin, Austin, TX, February 1st, 2005.
155. *Condensed matter physics with cold atom systems: Vortex Pinning, Superconductivity and Ferromagnetism*, condensed matter seminar given at Rice University, Houston, TX, November 29th, 2004.
156. *Dynamics and Pinning of Vortices in a Bose-Einstein Condensate*, condensed matter seminar given at Texas A & M University, College Station, TX, September 1st, 2004.
157. *Pinning of vortices in a Bose-Einstein condensate by an optical lattice*, student talk given at the Boulder Summer School for Condensed Matter and Materials Physics, University of Colorado at Boulder, July 27th, 2004.

158. S. Masmanidis, J. Honolka, M. Li, H. X. Tang, M. L. Roukes, R. A. Duine, A. H. MacDonald, R. K. Kawakami, and D. D. Awschalom, *Carrier-Carrier Interactions and Weak Localization in (Ga,Mn)As*, poster presented by S. Masmanidis during The 3rd International Conference On Physics And Applications Of Spin-Related Phenomena In Semiconductors, Santa Barbara, CA, July 21-23, 2004
159. *Many-body Physics with Atomic Gases near a Feshbach Resonance*, talk given at the APS March Meeting 2004, Montreal, Canada, March 24th, 2004.
160. *Many-body Theory of Feshbach Resonances in Ultracold Atomic gases*, talk given at Dan Heinzen's group meeting at The University of Texas at Austin, Austin, TX, March 9th, 2004.
161. *Feshbach Resonances in Ultracold Atomic Gases*, talk given at Jim Eisenstein's Group meeting at the California Institute of Technology, Pasadena, CA, February 10th, 2004.
162. *Many-body physics with atomic Bose gases near a Feshbach resonance*, talk given at the Wetenschappelijke FOM-dagen Gecondenseerde Materie, Veldhoven, The Netherlands, December 17th, 2003 (I).
163. *Noisy Dynamics of a Vortex in Bose-Einstein Condensates*, Special ITP Seminar, Utrecht, The Netherlands, December 2nd, 2003.
164. *Many-body physics with atomic gases near a Feshbach resonance*, invited talk given at the Second International Workshop on the Theory of Quantum Gases and Quantum Coherence, Levico (Trento), Italy, June 12th, 2003 (I).
165. *The bosonic Kondo effect*, talk given at the workshop on Correlation Effects in Bose Condensates and Optical Lattices at the William I. Fine Theoretical Physics Institute, Minneapolis, USA, May 2nd, 2003.
166. *Atom-molecule coherence*, talk given at the BEC groupmeeting at NORDITA, Copenhagen, Denmark, April 10th, 2003.
167. *Theory of atom-molecule coherence in ultracold gases*, invited talk given at the Landelijk Seminarium Statistische Mechanica, Leiden, The Netherlands, February 21st, 2003.
168. *Atom-molecule coherence in Bose gases*, talk given at the Wetenschappelijke Vergadering voor de FOM Werkgroep Statistische Fysica, Lunteren, The Netherlands, January 23d, 2003.
169. *Microscopic many-body theory of Feshbach resonances in a Bose gas*, poster presented at the 7th International Workshop on Atom Optics and Interferometry, Lunteren, The Netherlands, September 28th - October 1st, 2002.
170. *Stochastic Dynamics of a Trapped Bose-Einstein Condensate*, talk given at the BEC Summer Programme at the ECT*, Trento, Italy, July 30th, 2002.
171. *Stochastic Dynamics of a Trapped Bose-Einstein Condensate*, talk given at the Wetenschappelijke vergadering voor de FOM werkgemeenschap voor de gecondenseerde materie, Veldhoven, The Netherlands, December 19th, 2001.

172. *Stochastic Dynamics of a Trapped Bose-Einstein Condensate*, poster presented at the Euroconference on the Physics of Atomic Gases at Low Temperature in San Feliu de Guixols, Spain, September 11-15, 2001.
173. *Explosion of a Collapsing Bose-Einstein Condensate*, talk given at the Wetenschappelijke Vergadering voor de FOM Werkgroep Statistische Fysica, Lunteren, The Netherlands, February 2nd, 2001.
174. *Explosion of a Collapsing Bose-Einstein Condensate*, talk given at the Institute for Theoretical Physics, Utrecht University, The Netherlands, January 26th, 2001.
175. *Collapsing Condensates*, talk given at the CECAM Workshop on Dynamics of Attractive BEC's, Lyon, France, May 30th, 2000.

● conferences/schools/workshops visited

1. MMM, Las Vegas, November 2019.
2. Cambridge Optomagnonics
3. Spin Caloritronics X
4. HFML - FELIX User Meeting 2019
5. Spin Mechanics 6, 2019
6. Collective Spin Dynamics in Nanostructures at the KITS, Beijing, 2018
7. UK-NL workshop 2018
8. Spin Summit Conference, 2018
9. Spin Caloritronics IX, 2018
10. Spin Mechanics 5, Les Houches, France, February 12-16 (2018).
11. Quantum Spintronics at Interfaces, San Sebastian, Spain, September 4-8, 2017.
12. Magnonics 2017, Oxford, UK, August 7-10, 2017.
13. Spin Caloritronics 8, Regensburg, Germany, June 12-15, 2017.
14. Spin Superfluidity in French Polynesia, Mo'orea, February 13-17, 2017.
15. NanoQT-2016, Kiev, Ukraine, October 8-14, 2016.
16. SPICE Workshop on Antiferromagnetic Spintronics, Mainz, Germany, September 26-30, 2016.
17. Insulatronics 2016, Longyearbyen, Spitsbergen, May 27-31, 2016.
18. 616th WE-Heraeus seminar on "Ultracold Quantum Gases - Current Trends and Future Perspectives", Bad Honnef, Germany, May 9-13, 2016.

19. Workshop Los Andes Spintronics, Santiago, Chile, March 14, 2016.
20. Conference Fysica 2016, Nijmegen, The Netherlands, February 8, 2016.
21. School on Spintronics, Teheran, Iran, November 4-6, 2015.
22. Workshop Mathematical Approach to Topological Phases in Spintronics, Sendai, Japan, October 8, 2015.
23. GRC Conference Spin Dynamics in Nanostructures, Hong Kong, July 26-31, 2015.
24. Spin Mechanics 3, Munich, June 22-26, 2015.
25. Symposium Trends in Theory 2015, Dalfsen, The Netherlands, May 28-29, 2015.
26. IGER International Symposium on Science of Molecular Assembly and Biomolecular Systems 2015 : Spins in Action, Nagoya, Japan, March 26-27, 2015.
27. Visit to the KITP as a follow-on to the 2013 Spintronics workshop, Santa Barbara, USA, March 2-6, 2015.
28. 2014 Fall meeting of the European Materials Research Society, Warschau, Poland, September 15-18, 2014.
29. Spin caloritronics VI, Irsee, Germany, July 14-18, 2014.
30. Second International Symposium on "Novel states in correlated condensed matter - from model systems to real materials", Konigstein, Germany, April 8-10, 2014.
31. Banff Cold Atoms Meeting, Banff, Canada, February 19-21, 2014.
32. 550. WE-Heraeus-Seminar on Spin Transport Beyond Boltzmann, Bad Honnef, Germany, January 8-10, 2014.
33. KITP program on Progress in Spintronics, Fall 2013.
34. Gordon Research Conference on Spin Dynamics in Nanostructures, Hong Kong, August 18-23, 2013.
35. Spin caloritronics V, Columbus, Ohio, U.S.A., May 12-15, 2013.
36. Workshop on Universal Themes in Bose-Einstein Condensation, Leiden, March 11-15, 2013.
37. APS March Meeting, Baltimore, U.S.A., March 18-22, 2013.
38. Annual meeting of the Young Academy of Europe, Brussels, December 7-8, 2012.
39. IMRC, Cancun, Mexico, August 12-17, 2012.
40. 4th International Workshop on Spin Caloritronics, Sendai, Japan, June 2 - 5, 2012.
41. International Symposium on the Dynamics of Domain Walls 2012, Hamburg, Germany, May 30-June 1, 2012.

42. ICAB conferentie, Nijkerk, May 23, 2012.
43. DuNo Spin 2012 (Dutch-Norwegian workshop on spin), Oppdal, Norway, January 30-31, 2012.
44. NewSpin2: Spin physics and topological effects in cold atoms, condensed matter, and beyond, College Station (TX, USA), December 12-17, 2011.
45. Spin Caloritronics III, Lorentz Center, Leiden, May 9-13, 2011.
46. APS March Meeting, Dallas, USA, March 21-25, 2011.
47. Cambridge - Leiden: easyMeeting on Quantum Matter, Cambridge, September 2010.
48. Trends in Spintronics, 2nd NWO-NRF Korean-Dutch workshop, Eindhoven/Amsterdam, The Netherlands June 23 - 27, 2010.
49. APS March Meeting, Portland, U.S.A, March 15-19, 2010.
50. Physics@FOM, Veldhoven, The Netherlands, January 19,20 2010.
51. International Summer School Nicolás Cabrera on Spin Transport and Dynamics in Nanostructures, Madrid, Spain, September 14-18 2009
52. Spintronics II symposium of SPIE Optics and Photonics, San Diego, CA, August 2009.
53. “Trends in Theory 2009” 8th biennial symposium of the Dutch Research School of Theoretical Physics, Dalfsen, May 2009.
54. Cambridge - Leiden: easyMeeting on Quantum Matter, Leiden, May 2009.
55. Workshop “Spin Caloritronics” at the Lorentz Center, Leiden, February 2009.
56. Physics@FOM Veldhoven, Veldhoven, The Netherlands, January 2009.
57. ICAM Workshop, Cambridge, UK, January 2009.
58. Spin Transport in Condensed Matter, The 23rd Nishinomiya-Yukawa Memorial International Workshop, Kyoto, Japan, November 2008.
59. CIFAR Quantum Materials Program Meeting, Toronto, Canada, May 2008.
60. APS March Meeting, New Orleans, USA, March 2008.
61. Workshop “Disorder in Condensed Matter and Cold Atoms”, September 24-28, 2007, Lorentz Center, Leiden.
62. “SpinNor 2007: spin and charge flow in nanostructures” conference, Centre for Advanced Study, Oslo, Norway, June 27-30, 2007.
63. APS March Meeting, Denver, CO, USA, March 2007.
64. Physics@Veldhoven, Veldhoven, Netherlands, January 23-24, 2007.

65. Shell-FOM workshop, Rijsbergen, Netherlands, January 10, 2007.
66. DRSTP Young, Driebergen, Netherlands, October 27-27, 2006.
67. International Workshop on Spin Transfer, Nancy, France, October 2-4, 2006.
68. APS March Meeting, Baltimore, MD, USA, March 2006.
69. COLLECT Meeting, Columbia University, New York City, USA, October 20-22, 2005.
70. CIAR Ultracold Matter Workshop, Toronto, Canada, October 13-15, 2005.
71. APS March Meeting, Los Angeles, USA, March 2005.
72. Boulder Summer School for Condensed Matter and Materials Physics, University of Colorado at Boulder.
73. APS March Meeting, Montreal, Canada, March 2004.
74. Second International Workshop on the Theory of Quantum Gases and Quantum Coherence, Levico (Trento), Italy, June 2003.
75. Workshop on Correlation Effects in Bose Condensates and Optical Lattices at the William I. Fine Theoretical Physics Institute, Minneapolis, USA, May 2003.
76. 7th International Workshop on Atom Optics and Interferometry, Lunteren, The Netherlands, September 28th - October 1st, 2002
77. BEC Summer Programme at the ECT*, Trento, Italy, July 2002.
78. Euroconference on the Physics of Atomic Gases at Low Temperature in San Feliu de Guixols, Spain, September 2001/2003.
79. Summerschool "Fundamental Problems in Statistical Mechanics", Altenberg, Germany, August 20 - September 4, 2001.
80. DRSTP School Statistical Physics and Theory of Condensed matter, Nijmegen, The Netherlands, May 2000/2001/2002.
81. CECAM Workshop on Dynamics of Attractive BEC's, Lyon, France, May 2000.

• other interests and activities

Sports: Ice-skating and cycling.

Music: I have played guitar and drums in several rock bands. I have also been a guitar teacher for a period of two years.

Other: Reading.

• references

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