Curriculum Vitae Prof.dr. N.P. Landsman (1963), December 2019

Academic positions

1985–1989: Scientific Assistant, University of Amsterdam, Institute for Theoretical Physics

1989–1991: Research Assistant, DAMTP, University of Cambridge

1991–1993: Advanced Research Fellow, DAMTP, University of Cambridge

1993–1994: Alexander von Humboldt Fellow, II. ITP, University of Hamburg

1994–1997: Advanced Research Fellow, DAMTP, University of Cambridge

1997–2002: KNAW Research Fellow, KdV Institute, University of Amsterdam

1999–2000: Assistant Professor of Mathematics, KdV, University of Amsterdam

2000–2001: Associate Professor of Mathematics, KdV, University of Amsterdam

2001–2004: Full Professor of Mathematical Physics, KdV, University of Amsterdam

2004–2007: Full Professor of Analysis, IMAPP, Radboud University Nijmegen

2007–present: Full Professor of Mathematical Physics (IMAPP), Radboud University

2016–present: Visiting Fellow (Commoner), Trinity College, Cambridge, UK

Awards

Cum laude for MSc (1985) and PhD (1989) degrees

Advanced Research Fellowship, EPSRC (UK), 1991–1993, 1994–1997

Alexander von Humboldt Fellowship, Germany (FRG), 1993–94

KNAW (Royal Netherlands Academy of Arts and Sciences) Fellowship, 1997–2002

NWO (Dutch Science Organisation) Pioneer Award, 1 Million Euro, 2002–2007

Bronze Medal, Radboud University, 2011

Teaching Prize for Mathematics, FNWI, 2013

Other external funding as Principal Investigator

2000–2002: Spin-statistics connection and Unruh effect in QFT, 1 postdoc

2001–2003: Braided categories, operator algebras and quantum groupoids, 1 postdoc

2002–2005: Quantization and E-theory, 1 PhD student

2006–2010: Geometry and Quantum Theory (2.8M), national mathematics cluster

2009–2013: Topos theory, noncommutative geometry, and quantum logic, 1 PhD

2011–2015: The logic of composite quantum systems, NWO TOP-GO, 3PhD, 1 postdoc (with B. Jacobs and I. Moerdijk)

2013–2016: Invariants of noncommutative manifolds, NWO VC, 1 postdoc

External funding as co-applicant

2013–2016: Experimental tests of quantum reality, TWCF, 2 postdocs at RU (joint project with A. Briggs as PI, Oxford, and H. Halvorson, Princeton)

2013–2018: Quantum gravity and the search for quantum spacetime, FOM, 3 postdocs, 3 PhD students (joint project with R. Loll as PI, F. Saueressig, W. van Suijekom)

Administration

2001–2006: Board member, Dutch Association of Mathematical Physics

2005–2007: Chair, Teaching Committee for Mathematics, Radboud University

2006: Co-author, *Zelfevaluatierapport Bachelor- en masteropleiding wiskunde*

2006–2009: Deputy director, IMAPP, Radboud University

2006–2008: Member, Mathematics Sounding Board (Resonansgroep Wiskunde) of the Dutch Ministry of Education, Culture and Science (OC&W)

2006–2008: Member, Scientific Council of *Talentenkracht* (National research programme on children aged 5-8)

2007–2009: Ambassador, Platform Beta Techniek of the Dutch Government

2007–2012: Member, Mathematics Council of Lorentz Center (Leiden)

2007–2012: Member, Board of the Senate of the Radboud University Nijmegen

2008: Co-author, *Masterplan Toekomst Wiskunde* (Master Plan for the Future of Mathematics) for the Dutch Minister of Education, Culture and Science

2008–2016: Member, Council for Technical Sciences, Mathematics, Informatics, and Natural Sciences of the Royal Netherlands Academy of Arts and Sciences

2009: Coordinator and author, *Self-Evaluation of Mathematics Research at the RU*

2011–present: Chair, Teaching Committee for Mathematics, Radboud University

2012–2015: Head of the Department of Mathematical Physics, Radboud University

2013–present: Member, Programmaraad *Radboud Honours Academy FNWI*

2013: Co-oauthor, *Kritische Reflectie Bachelor- en masteropleiding wiskunde*

2016–2017: Director of Master?s Program in Mathematics, Radboud University

2016–present: Board Member, Route 2 of the NWA = National Science Agenda (Building blocks of matter and fundaments of space and time)

2017–present: Board Member/cofounder, Dutch Institute for Emergent Phenomena (DIEP)

Editorships

International Journal of Geometric Methods in Modern Physics, editor, 2004–present

Studies in History and Philosophy of Modern Physics, associate editor, 2006–present

Nieuw Archief voor Wiskunde (Dutch Mathematical Journal), editor, 2006–2010

Annals of Functional Analysis, editor, 2011–2017

Fundamental Theories in Physics, Springer-Verlag, series editor, 2010–present

Mathematical Physics Studies, Springer-Verlag, series editor, 2012–present

PhD students

1. Urs A. Wiedemann, *Constraints and Symmetry Breaking in Quantum Field Theory* (Cambridge, 1994).

2. Thomas Breuer, *Classical Observables, Measurement, and Quantum Mechanics* (Cambridge, 1995).

3. Mark A. Robson, *The Geometric Quantization of Constrained Systems* (Cambridge, 1995).

4. Ken K. Wren, *Constrained Quantization of Yang-Mills Theory via Rieffel Induction* (Cambridge, 1998).

5. Hessel Posthuma, *Quantization of Hamiltonian loop group actions* (UvA, 2003).

6. Rogier Bos, *Groupoids in geometric quantization* (RU, 2007).

7. Peter Hochs, *Quantisation commutes with reduction for cocompact Hamiltonian group actions* (RU, 2008).

8. Niels Kowalzig, *Hopf algebroids and their cyclic theory* (UU, 2009).

9. Chris Heunen, *Categorical quantum models and logics* (RU, 2010)

10. Pieter Naaijkens, *Anyons in infinite quantum systems* (RU, 2012)

11. Sander Wolters, *Quantum Toposophy* (RU, 2013)

12. Jord Boeijink, *Dirac operators, gauge systems and quantisation* (RU, 2014)

13. Roberta Iseppi, *The BV Formalism for Matrix Models: A Noncommutative Geometry Approach* (RU, 2015)

14. Bert Lindenhovius, *C(A)* (RU, 2016)

List of publications N.P. Landsman (1963), December 2019

Research monographs

1. *Concepts in Thermal Field Theory*, PhD Thesis (University of Amsterdam, 1989).

2. *Mathematical Topics Between Classical and Quantum Mechanics* (Springer, 1998).

3. *Foundations of Quantum Theory: From Classical Concepts to Operator Algebras* (Springer, 2017).

Edited Volumes

1. *Quantization of Singular Symplectic Quotients* (Birkhäuser , 2001). With M. Pflaum & M. Schlichenmaier.

2. *The Challenge of Chance* (Springer, 2016). With E. van Wolde.

Popular science books (in Dutch)

1. *Requiem voor Newton* (Contact, 2005).

2. *Naar alle ONwaarschijnlijkheid: Toeval in de ?wetenschap en filosofie* (Prometheus, 2018).

Book chapters

1. Quantized reduction as a tensor product. *Quantization of Singular Symplectic Quotients*, eds. N.P. Landsman, M. Pflaum, M. Schlichenmaier, pp. 137–180 (Birkhäuser, Basel, 2001). `arXiv:math-ph/0008004`.

2. Between classical and quantum. *Handbook of the Philosophy of Science, Vol. 2: Philosophy of Physics*, Eds. J. Butterfield & J. Earman, pp. 417–554 (North-Holland, Amsterdam, 2007). `arXiv:quant-ph/0506082`.

3. Algebraic quantum mechanics. The Born rule and its interpretation. Quantization (systematic). Quasi-classical limit. *Compendium of Quantum Physics*, Eds. D. Greenberger, K. Hentschel, and F. Weinert, pp. 6–9, 64–70, 510–513, 626–629 (Springer, 2009).

4. Bohrification (with C. Heunen and B. Spitters). *Deep Beauty: Understanding the Quantum World through Mathematical Innovation*, Ed. H. Halvorson, pp. 271–313 (Cambridge University Press, 2011). `arXiv:0909.3468`.

5. The Fine-Tuning Argument. *The Challenge of Chance*, pp. 111–130 (2016).

6. Bohrification: From classical concepts to commutative algebras. *Niels Bohr and the Philosophy of Physics: Twenty-First Century Perspectives*, eds. J. Faye and J. Folse, pp. 335–366 (Bloomsbury, 2017).

7. Symmetries in exact Bohrification (with A.J. Lindenhovius). *Reality and Measurement in Algebraic Quantum Theory*, eds. M. Ozawa et al, pp. 97–118 (Springer, 2018).

8. The logic of quantum mechanics (revisited). *New Spaces in Mathematics and Physics: Formal and Philosophical Reflections*, eds. G. Catren and M. Anel (Springer, 2019).

9. Quantum theory and functional analysis. To appear in the *Oxford Handbook of the History of Interpretations and Foundations of Quantum Mechanics*, ed. O. Freire (Oxford University Press, 2021).

Refereed journal articles

1. Consistent real-time propagators for any spin, mass, temperature and density, *Physics Letters* **B172**, 46–48 (1986).

2. Real- and imaginary-time field theory at finite temperature and density (with Ch.G. van Weert), *Physics Reports* **145**, 141–249 (1987). > 1300 citations in Google Scolar.

3. Hilbert space and propagator in thermal field theory, *Physical Review Letters* **60**, 1909–1912 (1988).

4. Non-shell unstable particles in thermal field theory, *Annals of Physics (N.Y.)* **186**, 141–205 (1988).

5. How dissipation solves the infrared problem in thermal QCD, *Physica* **A158**, 200–224 (1989).

6. Limitations to dimensional reduction at high temperature, *Nuclear Physics* **B322**, 498–530 (1989). 200 citations in Google Scolar.

7. Large-mass and high-temperature behaviour in perturbative quantum field theory, *Communications in Mathematical Physics* **125**, 643–660 (1989).

8. Dimensional reduction at high temperature revisited (with E.L.M. Koopman), *Physics Letters* **B223**, 421–424 (1989).

9. A gauge-independent coupling constant in thermal QCD, *Physics Letters* **B232**, 240–246 (1989).

10. C^*-algebraic quantization and the origin of topological quantum effects, *Letters in Mathematical Physics* **20**, 11–18 (1990).

11. Quantization and superselection sectors I. Transformation group C^*-algebras, *Reviews in Mathematical Physics* **2**, 45–72 (1990).

12. Quantization and superselection sectors II. Dirac Monopole and Aharonov-Bohm effect, *Reviews in Mathematical Physics* **2**, 73–104 (1990).

13. Algebraic theory of superselection sectors and the measurement problem in quantum mechanics, *International Journal of Modern Physics* **A6**, 5349–5372 (1991).

14. The geometry of inequivalent quantizations (with N. Linden), *Nuclear Physics* **B365**, 121–160 (1991).

15. Superselection rules from Dirac and BRST quantization of constrained systems (with N. Linden), *Nuclear Physics* **B371**, 415–433 (1992).

16. Induced representations, gauge fields, and quantization on homogeneous spaces, *Reviews in Mathematical Physics* **4**, 503–528 (1992).

17. Deformations of algebras of observables and the classical limit of quantum mechanics, *Reviews in Mathematical Physics* **5**, 775–806 (1993).

18. Quantization and classicization: from Jordan-Lie algebras of observables to gauge fields, *Classical and Quantum Gravity*, **10**, S101–S108 (1993).

19. Quantization on Riemannian spaces from groupoid C^*-algebras, *International Journal of Modern Physics* Proc. Suppl. **3A**, 347–350 (1993).

20. Strict deformation quantization of a particle in external gravitational and Yang-Mills fields, *Journal of Geometry and Physics* **12**, 93–132 (1993).

21. Inaccuracy and spontaneous symmetry breaking in quantum measurements (with T. Breuer and A. Amann), *Journal of Mathematical Physics* **34**, 5441–5450 (1993).

22. Rieffel induction as generalized quantum Marsden-Weinstein reduction, *Journal of Geometry and Physics* **15**, 285–319 (1995), Err. **17** (1995) 298, `arXiv:hep-th/9305088`. 111 citations in Google Scolar.

23. Observation and superselection in quantum mechanics, *Studies in History and Philosophy of Modern Physics* **26**, 45–73 (1995). `arXiv:hep-th/9411173`.

24. Massless particles, electromagnetism, and Rieffel induction (with U.A. Wiedemann), *Reviews in Mathematical Physics* **7**, 923–958 (1995). `arXiv:hep-th/9411174`.

25. The Stueckelberg-Kibble model as an example of quantized symplectic reduction (with U.A. Wiedemann), *Journal of Mathematical Physics* **37**, 2731–2747, (1996). `arXiv:hep-th/9508134`.

26. Local Quantum Physics, *Studies in History and Philosophy of Modern Physics* **27**, 511–525 (1996).

27. Classical behaviour in quantum mechanics: a transition probability approach, *International Journal of Modern Physics* **B10**, 1545–1554 (1996). `arXiv:quant-ph/9511001`.

28. Against the Wheeler-DeWitt equation, *Classical and Quantum Gravity* **12**, L119–L123 (1995). `arXiv:gr-qc/9510033`.

29. Poisson spaces with a transition probability, *Reviews in Mathematical Physics* **9**, 29–57 (1997). `arXiv:quant-ph/9603005`.

30. Simple new axioms for quantum mechanics, *International Journal of Theoretical Physics* **37** (1998) 343–348, `arXiv:quant-ph/9604008`.

31. Constrained quantization and θ-angles (with K.K. Wren), *Nuclear Physics* **B502** [PM], 537–560 (1997). `arXiv:hep-th/9706178`.

32. Quantum Mechanics on Phase Space, *Studies in History and Philosophy of Modern Physics* **30**, 287–305 (1999).

33. Representations of the infinite unitary group from constrained quantization, *Journal of Nonlinear Mathematical Physics* **6**, 161–180 (1999).

34. Lie groupoid C^*-algebras and Weyl quantization, *Communications in Mathematical Physics* **206**, 367–381 (1999). `arXiv:math-ph/9903039`.

35. Strict quantization of coadjoint orbits, *Journal of Mathematical Physics* **39**, 6372–6383 (1998). `arXiv:math-ph/9807027`.

36. Twisted Lie group C^*-algebras as strict quantizations, *Letters in Mathematical Physics* **46**, 181–188 (1998). `arXiv:math-ph/9807028`.

37. Comment on "What is a gauge transformation in quantum mechanics?", *Physical Review Letters* **83**, 1070 (1999).

38. Bicategories of operator algebras and Poisson manifolds, *Mathematical Physics in Mathematics and Physics: Quantum and Operator Algebraic Aspects*, ed. R. Longo, *Fields Institute Communications* **30**, 271–286 (2001). `arXiv:math-ph/0008003`.

39. The Muhly-Renault-Williams theorem for Lie groupoids and its classical counterpart, *Letters in Mathematical Physics* **54**, 43–59 (2001). `arXiv:math-ph/0008005`.

40. Operator algebras and Poisson manifolds associated to groupoids, *Communications in Mathematical Physics* **222**, 97–116 (2001). `arXiv:math-ph/0008036`.

41. Getting even with Heisenberg, *Studies in History and Philosophy of Modern Physics* **33**, 297–325 (2002).

42. Deformation quantization and the Baum–Connes conjecture, *Communications in Mathematical Physics*, **237**, 87–103 (2003). `arXiv:math-ph/0210015`.

43. Quantum mechanics and representation theory: the new synthesis, *Acta Applicandae Mathematica* **81**, 167-189 (2004).

44. Lie Groupoids and Lie algebroids in physics and noncommutative geometry, *Journal of Geometry and Physics* **56**, 24–54 (2006). `arXiv:math-ph/0506024`

45. When champions meet: Rethinking the Bohr–Einstein debate, *Studies in History and Philosophy of Modern Physics*, **37**, 212–242 (2006). `arXiv:quant-ph/0507220`.

46. The Guillemin-Sternberg conjecture for noncompact groups and spaces (with P. Hochs). Journal of K-theory **1**, 473–533 (2008). `arXiv:math-ph/0512022`.

47. Macroscopic observables and the Born rule, *Reviews in Mathematical Physics* **20**, 1173–1190 (2008). `arXiv:0804.4849`.

48. A topos for algebraic quantum theory (with C. Heunen and B. Spitters), *Communications in Mathematical Physics* **291**, 63–110 (2009). `arXiv:0709.4364`.

49. Intuitionistic quantum logic of an n-level system (with M. Caspers, C. Heunen and B. Spitters), *Foundations of Physics* **39**, 731–759 (2009). `arXiv:0902.3201`.

50. Bohrification of operator algebras and quantum logic (with C. Heunen and B. Spitters), *Synthese*, **186**, 719–752 (2012). `arXiv:0905.2275`.

51. The Gelfand spectrum of a noncommutative C*-algebra: a topos-theoretic approach (with C. Heunen, B. Spitters, and S. Wolters), *J. Australian Mathematical Society* **90**, 32–59 (2011). `arXiv:1010.2050`.

52. A Flea on Schrödinger's Cat (with R. Reuvers), *Foundation of Physics* **43**, 373–407 (2013). `arXiv:1210.2353`.

53. Spontaneous symmetry breaking in quantum systems: Emergence or reduction? *Studies in History and Philosophy of Modern Physics* **44**, 379–394 (2013). `arXiv:1305.4473`.

54. Constraints on determinism: Bell versus Conway & Kochen (with E. Cator), *Foundation of Physics* **44**, 781–791 (2014). `arXiv:1402.1972`.

55. On the Colbeck-Renner Theorem, *Journal of Mathematical Physics* **56**, 122103 (2015). `arXiv:1509.08498`.

56. A bounded transform approach to self-adjoint operators: Functional calculus and affiliated von Neumann algebras (with C. Budde). *Annals of Functional Analysis* **7**, 411–420 (2016). `arXiv:1508.06772`.

57. Quantization and superselection sectors III: Multiply connected spaces and indistinguishable particles, *Reviews in Mathematical Physics* **28**, 1650019 (2016). `arXiv:1302.3637`.

58. The Kadison-Singer conjecture (with M. Stevens), *Nieuw Archief voor Wiskunde* **17**, 41–46 (2016).

59. On the notion of free will in the Free Will Theorem, *Studies in History and Philosophy of Modern Physics*, **57**, 98–103 (2017). `philsci-archive.pitt.edu/12579/`.

60. Quantisation commutes with singular reduction: cotangent bundles of compact Lie groups (wit J. Boeijink and W. van Suijlekom), *Reviews in Mathematical Physics* `https://doi.org/10.1142/S0129055X19500168` (2018). `arXiv:1508.06763`.

61. Quantum spin systems versus Schroedinger operators: A case study in spontaneous symmetry breaking (with C. J. F. van de Ven, G. C. Groenenboom, and R. Reuvers), submitted to *SciPost*. `arXiv:1811.12109`.

62. Randomness? What Randomness? *Foundations of Physics*. `arXiv:1908.07068`.

63. Strict deformation quantization of the state space of $M_k(\mathbb{C})$ with applications to the Curie–Weiss model (with V. Moretti and C.J.F. van de Ven), submitted to *Reviews in Mathematical Physics*, `arXiv:1909.10947`.

64. (No) Wigner Theorem for C*-algebras (with K. Rang), to appear in *Reviews in Mathematical Physics*, `arXiv:1911.06635`.

Refereed conference proceedings

1. Universal quantum field theory, *Proceedings of the CAP-NSERC Summer Institute in Theoretical Physics*, eds. F.C.Khanna and H. Umezawa (World Scientific, Singapore), 204–226 (1988).

2. The inherent non-perturbativeness of thermal field theories (and a possible perturbativization), *Nuclear Physics* **A525** *Proceedings Supplement, Quark Matter '90*, 397c–400c (1991).

3. Classical and quantum representation theory, *Proc. Sem. Mathematical Structures in Field Theory 1989-1990*, eds. E. A. de Kerf and H.G.J. Pijls, CWI-syllabus **39**, Amsterdam, 135–163 (1996), `arXiv:hep-th/9411172`.

4. Disjoint final states in quantum measurements (with T. Breuer and A. Amann), *Proc. Symp. Foundations of Modern Physics 1993*, eds. P. Busch, P. Lahti, and P. Mittelstaedt (World Scientific, Singapore), 118–126 (1993).

5. The quantization of constrained systems: from symplectic reduction to Rieffel induction, *Quantization, Coherent States and Poisson Structures. Proc. XIV'th Workshop on Geometric Methods in Physics, Białowieża, 1995*, eds. A. Strasburger et al. (Polish Scientific Publishers, Warsaw), 73–89 (1998), `arXiv:dg-ga/9601009`.

6. Classical reduction and quantum induction in constrained systems, *Physical Applications and Mathematical Aspects of Geometry, Groups, and Algebras, Proc. XXI Int. Colloquium on Group Theoretical Methods in Physics, Goslar 1996, Vol. 1*, eds. H.-D. Doebner, W. Scherer, and P. Nattermann (World Scientific, Singapore), 368–372 (1997).

7. Constrained quantization in algebraic field theory, *Meeting with the Platypus. Proc. XIIth Int. Congress of Mathematical Physics, Brisbane 1997*, eds. A.J. Bracken et al. (International Press, Boston), pp. 191–196 (1999). `arXiv:math-ph/9807029`.

8. Quantization of singular systems and incomplete motions, *Current Topics in Mathematical Cosmology*, eds. M. Rainer and H.-J. Schmidt (World Scientific, Singapore), 256–263 (1998), `arXiv:gr-qc/9807069`.

9. Hall's coherent states, the Cameron-Martin theorem, and the quantization of Yang-Mills theory on a circle (with K.K. Wren), *Coherent States, Quantization and Gravity*, eds. M. Schlichenmaier et al. (WUW, Warszaw, 2001), 23–36, `arXiv:math-ph/9812012`.

10. Compact quantum groupoids, *Quantum Theory and Symmetries*, (Goslar 1999), eds. H.-D. Doebner et al., 421–431 (World Scientific, 2000), `arXiv:math-ph/9912006`.

11. Quantization of Poisson algebras associated to Lie algebroids (with B. Ramazan), *Proceedings of the Conference on Groupoids in Physics, Analysis and Geometry* (Boulder 1999), eds. A. Ramsay and J. Renault, *Contemporary Mathematics* **282**, 159–192 (AMS, Providence, 2001), `arXiv:math-ph/0001005`.

12. Quantization as a functor, *Quantization, Poisson Brackets, and Beyond*, ed. T. Voronov, *Contemporary Mathematics* **315**, 9–24 (AMS, Providence, 2002). `arXiv:math-ph/0107023`.

13. Quantization and the tangent groupoid, *Operator Algebras and Mathematical Physics*, eds. J.-M. Combes, et al., 251–265 (Theta Foundation, 2003), `arXiv:math-ph/0208004`.

14. Functorial Quantization and the Guillemin-Sternberg Conjecture, in: *Twenty Years of Bialowieza: A Mathematical Anthology. Aspects of Differential Geometric Methods in Physics*, (eds. S.T. Ali, G.G. Emch, A. Odzijewicz, M. Schlichenmaier, S.L. Woronowicz), pp. 23–45 (World Scientific, Singapore, 2005). `arXiv:math-ph/0307059`.

15. The principle of general tovariance (with C. Heunen and B. Spitters). *Proc. XVI International Fall Workshop on Geometry and Physics (Lisabon, 2007)*, eds. R.L. Fernandes and R. Picken, pp. 93–102 (American Physical Society, Melville, 2008). `philsci-archive:3931`.

Popular articles in Dutch (links: www.math.ru.nl/∼landsman/popular.html)

1. De erfenis van Dirac en von Neumann, Nederlands Tijdschrift voor Natuurkunde 64 (1998), 151-153.

2. Heisenberg en de Duitse atoombom, Nederlands Tijdschrift voor Natuurkunde 67 (2001), 178-181.

3. Hoe geef ik een wiskundige voordracht?, Nieuw Archief voor Wiskunde 5/2 (2001), 351-355.

4. Wiskunde aan de grenzen van de natuurkunde, Nieuw Archief voor Wiskunde 5/3 (2002), 24-32.

5. Wie was Thomas Young?, Nederlands Tijdschrift voor Natuurkunde 69 (2003), 40-44).

6. De dramatiek van de natuurkunde: toneelstukken van Frayn en Rijnders onder de loep, Kunst en Wetenschap 12 (2) (2003), 5-8.

7. Briljante gifmenger: een portret van Isaac Newton, Academische Boekengids 39 (juni 2003), 13-14.

8. De indexstelling van Atiyah en Singer, Nieuw Archief voor Wiskunde 5/5 (2004), 207-211.

9. Op het kruispunt, Nieuw Archief voor Wiskunde 5/6 (2005), 206-214.

10. Waarom is er iets en niet niets? De visie van Hans Küng, Nederlands Tijdschrift voor Natuurkunde 72 (2006), 270-272.

11. Bestaat Toeval?, Nieuwe Wiskrant 26 (1) (2006), 21-26.

12. Op zoek naar de intellectueel, Civis Mundi 46 (1) (2007), 40-49.

13. Taal en werkelijkheid: Einstein tegen Bohr, BLIND! online.

14. Plato, wiskunde en het gymnasium, Amphora 25 (6) (2006), 8-10.

15. Blijf niet mokkend aan de kant staan, Nieuw Archief voor Wiskunde 5/8 (2007), 51-55.

16. Toeval is logisch, Nieuwe Wiskrant 26 (4) (2007), 42-47.

17. A random walk down Wall Street (Nieuw Archief voor Wiskunde 5/9 (2008), 18-23.

18. Where have all the students gone? (Nieuw Archief voor Wiskunde 5/9 (2008), 138-140.

19. Wanneer ga ik dood?, Nederlands Tijdschrift voor Natuurkunde 74 (2008), 98-101.

20. Wiskundetoernooi 2008: wat kun je nu eigenlijk met wiskunde? (met Dion Coumans en Mirte Dekkers) (Nieuwe Wiskrant 28, 12-14 2008)

21. Christiaan Huygens: Traité de la Lumiere (with Fokko Jan Dijksterhuis), Boeken-wijsheid, Jan Bos en Erik Geleijns (red.), pp. 177–185 (Walburg Pers, Zuthpen, 2009).

22. Spiritualiteit tussen kwal en kosmos, Zien Is Geloven, Manon Duintjer (red.), pp. 115-127 (Ambo, Amsterdam, 2009).

23. Terug naar de werkelijkheid, Nieuw Archief voor Wiskunde 5/10 (2009), 48-50.

24. De overval: Fox-IT, with Matthijs Coster and Bart Jacobs, Nieuw Archief voor Wiskunde 5/10 (2009), 91-93.

25. De "Vrije Wil-Stelling van Conway en Kochen, Nieuw Archief voor Wiskunde 5/10 (2009), 228-234.

26. De overval: AllOptions, with Hans Melissen and Wil Schilders, Nieuw Archief voor Wiskunde 5/10 (2009), 245-249.

27. Wiskunde opstuwen in de vaart der volkeren: Interview met Chris Zaal (met Rainer Kaenders), Nieuw Archief voor Wiskunde 5/11 (2010), 39-42

28. Newton voor Jan en alleman, Nieuw Archief voor Wiskunde 5/11 (2010), 178-184

29. The flashes of insight never came for free: Interview with Alain Connes (met Gunther Cornelissen and Walter van Suijelekom), Nieuw Archief voor Wiskunde 5/11 (2010), 250-256

30. Het mysterie van het lijk in de Waal (met Tom Huls en Tim Verheijen), Pythagoras 50(2), 22-25 (2010).

31. The Dutch mathematical landscape, *Evaluation Report Mathematics Clusters 2005-2010*, pp. 163–166 (NWO, The Hague, 2010).

32. De Lucia-zaak heeft mijn leven ingrijpend veranderd: Interview met Richard Gill (met Hans Maassen), Nieuw Archief voor Wiskunde 5/13 (2012), 84-91.

33. Oosterse Wortelsoep voor 2 (!) personen, Volgens Bartjes, juli 2012, pp. 4-6.

34. De kenniseconomie valt niet centraal te sturen (met Willem Halffman, Floris Heukelom, Christoph Luethy, Esther-Mirjam Sent, Robert-Jan Wille), `www.mejudice.nl`.

35. De universiteit verdient meer vertrouwen (idem), De Volkskrant 3-9-2012, p. 21.

36. Wetenschap en welvaart: een paradoxaal krachtenveld, VAWO-Nieuws, januari 2014.

37. 100 jaar Algemene Relativiteitstheorie, Voxweb 15-11-2015.

38. Wiskunde is al moeilijk genoeg in het Nederlands, Voxweb oktober 2016

39. Mulholland Estates, Volgens Bartjens oktober 2016

40. Als het water stijgt: Over investeren in de fundamentele wetenschap (2017)

41. Afscheid, Volgens Bartjens (herfst 2017)

42. Veehouderij is zo goed als failliet, Volkskrant Opinie en Debat, 14 juni 2018 (met H. Moll. P. Struik, R. Vonk e.a.)

43. Beter geslagen door de waarheid dan gekust door een leugen, www.degrotevragen.nl, 21 juni 2018

Book reviews (links: www.math.ru.nl/~landsman/reviews.html)

1. *John von Neumann: The Scientific Genius who Pioneered the Modern Computer, Game Theory, Nuclear Deterrence, and Much More* by N. Macrea, and *John von Neumann and Norbert Wiener: From Mathematics to the Technologies of Life and Death* by S. Heims (in Dutch), STROOM.

2. *QED and the Men Who Made* it by S.S. Schweber (in Dutch), Nederlands Tijdschrift voor Natuurkunde.

3. *An Introduction to Noncommutative Spaces and their Geometries* by G. Landi (in Dutch), Nieuw Archief voor Wiskunde.

4. *Quantum Field Theory for Mathematicians* by R. Ticciati (in Dutch), Nieuw Archief voor Wiskunde.

5. *The Physics of Quantum Fields* by M. Stone, Nieuw Archief voor Wiskunde.

6. *Analytic K-Homology* by N. Higson and J. Roe (in Dutch), Nieuw Archief voor Wiskunde.

7. *Stochastic Processes and Operator Calculus on Quantum Groups* by U. Franz and R. Schott (in Dutch), Nieuw Archief voor Wiskunde.

8. *State Spaces of Operator Algebras* by E. Alfsen and F. Shultz (in Dutch), Nieuw Archief voor Wiskunde.

9. *Guardians of the Humanist Legacy: The Classicism of T.S. Eliot's Criterion Network and its Relevance to our Postmodern World* by Jeroen Vanheste and *Beginnen met Filosofie: Met andere ogen kijken naar je eigen leven* by Luc Ferry (in Dutch). Unpublished.

10. *Michael Frayn's "Copenhagen" in Debate: Historical Essays and Documents on the 1941 Meeting Between Niels Bohr and Werner Heisenberg*, Studies in History and Philosophy of Modern Physics.

11. *Decoherence and the Quantum-To-Classical Transition* by Maximilian Schlosshauer, Studies in History and Philosophy of Modern Physics.

12. *Linear Operators and their Spectra* by Brian Davies, Mathematical Intelligencer.

13. *Einstein's Unification* by Jeroen van Dongen, Mathematical Intelligencer.

14. *How Physics Makes Us Free* by J.T. Ismael, Metascience.

Lecture Notes (links: www.math.ru.nl/~landsman/notes.html)

1. Bestaat Toeval? De Bell-ongelijkheden

2. Bestaat Toeval? De Stellingen van Conway, Kochen en Specker

3. Noncommutative Geometry (2010)

4. Spontaneous Symmetry Breaking and the Higgs Mechanism (2011)

5. Quantum Phase Transitions (2012)

6. Propositielogica (2017)

7. Predikaatlogica (2017)

8. Verzamelingenleer (2017)

9. Inleiding in de Wiskunde (2017)

10. Introductory Mathematical Physics (2018)

11. Foundations of General Relativity (2018)