

## **Curriculum Vitae Prof.dr. N.P. Landsman (1963), January 2014**

### **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

### **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
- Visiting Fellowship, Trinity College, Cambridge, 2014

### **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, *Zelfevaluatie rapport 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 Math-  
ematics) for the Dutch Minister of Education, Culture and Science
- 2008–present: 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–present: Head of the Department of Mathematical Physics, Radboud University
- 2013–present: Member, Programmaraad *Radboud Honours Academy FNWI*
- 2013: Co-author, *Kritische Reflectie Bachelor- en masteropleiding wiskunde*

## 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–present
- 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 Naaijken, *Anyons in infinite quantum systems* (RU, 2012)
11. Sander Wolters, *Quantum Toposophy* (RU, 2013)

## MSc students

1. Edwin Koopman, *Dimensional reduction at high temperature revisited* (UvA, 1989)
2. Joris Portegies Zwart, *BRST reduction and quantization of constrained Hamiltonian systems* (UvA, 1998)
3. Erik van Erp, *The Atiyah-Singer index theorem, K-theory, and quantization* (UvA, 2000)
4. Rachel Brouwer, *A bicategorical approach to Morita equivalence for rings and von Neumann algebras* (UvA, 2001)
5. Walter van Suijlekom, *The noncommutative Lorentzian cylinder as an isospectral deformation* (UvA, 2002)
6. Fonger Ypma, *Quasicrystals, C\*-algebras and K-theory* (UvA, 2004)
7. Bram Buijs, *The cohomological descent method* (UvA, 2005)
8. Bram Mesland, *Algebraic K-theory, periodic cyclic homology, and the Connes-Moscovici index theorem* (UvA, 2005)
9. Michelangelo Vargas Rivera, *Noncommutative geometry and the integer quantum Hall effect* (UvA, 2005)
10. Martijn Caspers, *Gelfand spectra of C\*-algebras in topos theory* (RU, 2008)

11. Hanneke Janssen (†), *Reconstructing Reality* (RU, 2008)
12. Ronnie Hermens, *Quantum Mechanics: From Realism to Intuitionism* (RU, 2009)
13. Richard Sanders, *Connes' reconstruction theorem* (RU, 2012)
14. Sander Uijlen, *Categorical aspects of von Neumann algebras and  $AW^*$ -algebras* (RU, 2013)

**Invited plenary presentations at international conference (1998–2011)**

- Workshop on Non-Commutative Geometry and Fundamental Interactions (Vietri, 1998)
- International Seminar on Current Topics in Mathematical Cosmology (Potsdam, 1998)
- XVII'th Workshop on Geometric Methods in Physics (Bialowieza, 1998)
- Foundations and Constructive Aspects of Quantum Field Theory (Potsdam, 1998)
- Conference on Groupoids in Physics, Geometry, and Analysis (Boulder, 1999)
- Quantum Theory and Symmetries (Goslar, 1999)
- XVIIIth Workshop on Geometric Methods in Physics (Bialowieza, 1999)
- Gauge Theories and Noncommutative Geometry (Leiden, 1999)
- Noncommutative Geometry (Oberwolfach, 2000)
- Workshop on Quantization (Warwick, 2000)
- Noncommutative Spaces and Gauge Theory (Berlin, 2001)
- Quantization and Noncommutative Geometry (MSRI, Berkeley, 2001)
- Operator Algebras and Mathematical Physics (Constanta, Romania, 2001)
- New Homological and Categorical Methods in Mathematical Physics (Manchester, 2001)
- Quantization of Poisson spaces with Singularities, (Oberwolfach, 2003)
- Noncommutative Geometry in Mathematics and Physics (Marseille-Luminy, 2004)
- Geometric Analysis (Marseille-Luminy, 2004)
- Workshop zu Indextheorie und Quantisierung (Frankfurt, 2004)
- MRI Workshop on Lie Groups in Analysis, Geometry, and Mechanics (Utrecht, 2004)
- K-theory and Noncommutative Geometry (Paris, 2004)
- Foundations of Physics (Pittsburgh, 2004)
- New Directions in the Foundations of Physics (Maryland, 2005)
- Seven Pines Symposium IX: The Classical-Quantum Borderland (Stillwater, 2005)
- Joint BeNeLuxFra Conference in Mathematics (Gent, 2005)

Noncommutative Geometry and Quantum Field Theory (Oberwolfach, 2005)  
Dutch Mathematical Congress (Delft, 2006)  
Cats, Kets and Cloisters (Oxford, 2006)  
Groupoids in operator algebras and noncommutative geometry (Paris, 2007)  
Operational quantum physics and the quantum-classical contrast (Waterloo, 2007)  
XVI International Fall Workshop on Geometry and Physics (Lisabon, 2007)  
Deep Beauty: John von Neumann memorial conference (Princeton, 2007)  
Fredenhagen Fest (Hamburg, 2007)  
Reduction and the Special Sciences (Tilburg, 2008)  
Classical Concepts & Metaphysical Presuppositions in Quantum Theory (Granada, 2008)  
Foundations and Constructive Aspects of Quantum Field Theory (Göttingen, 2009)  
New Directions in the Foundations of Physics (Washington DC, 2009)  
Categories, Quanta, Concepts (Perimeter Institute, Waterloo, 2009)  
ESF Conference on ‘The Philosophy of Science in a European Perspective’ (Zeist, 2009)  
North American Annual Meeting, Association for Symbolic Logic (Washington DC, 2010)  
Geometry and Quantum Field Theory: Carey60 (Bonn, 2010)  
Quantum Physics and the Nature of Reality (Oxford, 2010)  
Eight Annual East Coast Operator Algebras Symposium (Hanover, 2010)  
Category Theoretical Reflections on the Foundations of Physics (Montreal, 2010)  
Quantization of Singular Spaces (Aarhus, 2010)  
Nederlands Mathematisch Congres (Enschede, 2011)  
Categories and Physics (Paris, 2011)  
Modeling Mother Nature (Groningen, 2011).

**Organisation of international conferences (1998–2010)**

*Workshop on Quantization, Operator Algebras, and Knots*, Enschede, 8–10-10-1998;  
*First Dutch Spring School on Mathematical Physics*, Nijmegen, 8–12-3-1999;  
*Quantization of Singular Symplectic Quotients*, Oberwolfach, 2–7-08-1999;  
*Workshop on Quantization and Noncommutative Geometry*, Berkeley, 23–27-04-2001;  
*Quantization of Poisson spaces with Singularities*, Oberwolfach, 19–25-01-2003;

*Workshop on Noncommutative Geometry*, Amsterdam, 21–23-05-2003;

*IMAPP-Symposium*, Nijmegen, 13-10-2006, featuring Küng, Penrose, 't Hooft, Zagier;

*Workshop on index theory on singular spaces*, Nijmegen 28–29-11-2006.

*Mathematical Physics Symposium*, 9-3-2007, featuring Atiyah, Penrose, Yoccoz, Werner;

*Applications of Noncommutative Geometry*, 17-7-2008, Amsterdam (5ecm).

*Workshop on Sheaves in Geometry and Quantum Theory*, Nijmegen, 3–5-09-2008.