

CURRICULUM VITAE

RAF BOCKLANDT

PERSONAL DETAILS

First Names: Rafaël Robert Julia
Surname: Bocklandt
Gender: Male
Date of birth: 6th of October, 1977
Place of birth: Hamme, Belgium
Citizenship: Belgian

LANGUAGE KNOWLEDGE

Dutch	native
English	good
French	good
Italian	fair
Portuguese	basic

EDUCATION

- 10/1995–07/1999 Licentiaat Zuivere Wiskunde (\cong Master in Pure Mathematics) at Ghent University
Thesis: *Knot invariants and the Jones Polynomial*
Supervisor: Prof. Dr. W. Mielants
- 10/1996–07/2000 Licentiaat Theoretische Natuurkunde (\cong Master in Theoretical Physics) at Ghent University
Thesis: *Noncommutative geometry and the Standard Model*
Supervisor: Prof. Dr. H. Verschelde
- 10/2000–07/2001 Aggregaat Natuurkunde (\cong Master in Teaching Physics) at Ghent University
- 10/2001–07/2002 Advanced Master in Linguistics at Ghent University
Thesis: *Dialect Loss among the youth in Hamme*
Supervisor: Prof. Dr. J. Taeldeman
- 10/1999–04/2002 Phd in Mathematics at the University of Antwerp
Thesis: *The Geometry of Quotient Varieties of Quivers*
Supervisor: Prof. Dr. L. Le Bruyn.

02/2013–01/2014 University teaching qualification (BKO) at the University of Amsterdam

WORKING EXPERIENCE

10/1999–08/2002 Full time teaching assistant algebra and geometry at the University of Antwerp

09/2002–09/2003 Part time teaching assistant algebra and geometry at the University of Antwerp

09/2002–10/2002 Post-doctoral research fellow for the TMR at the University of Bielefeld

11/2002–07/2003 Post-doctoral research fellow at the University La Sapienza in Rome

10/2003–12/2008 Post-doctoral research fellow for the Flemish Science Fund (FWO) at the University of Antwerp

2/2009–6/2009 Part time high school teacher at KAB in Antwerp.

1/2009–1/2013 Lecturer in mathematics at the University of Newcastle.

1/2013–Now Lecturer in mathematics at the University of Amsterdam.

TEACHING

At Koninklijk Atheneum Berchem:

02/2009–06/2009 Chemistry and Physics for 16-17 year old high school students

At the University of Antwerp:

1999–2006 Exercises classes in Algebra, Commutative Algebra and Differential Geometry for 3rd year mathematics students

2003–2008 Full Courses on Representation Theory, Coding Theory and Cryptography and Differential Geometry II for 3rd and 4th year mathematics students

2005–2008 Advanced Master Courses in Geometric Invariant theory, Kleinian Singularities and Knot theory

At the University of Newcastle:

2009–2012 *Linear Algebra* for 2nd year mathematics students

2009–2012 *Coding Theory* for 3rd year mathematics students

At the University of Amsterdam:

2013–2017	<i>Van orde tot chaos</i> for 2nd year beta-gamma students
2014–2018	<i>Algebra I</i> for 1st year Bachelor Mathematics students
2018–2020	<i>Topologie</i> for 2nd year Bachelor Mathematics students
2016–Now	<i>Mirror Symmetry</i> and <i>Blowups and deformations</i> for Master Mathematics students.
2019	<i>Basiswiskunde</i> for 1st year Bachelor Mathematics students
2021	<i>Itereren en Visualizeren</i> for 1st year Bachelor Mathematics students

Supervising:

Supervisor of several bachelor (± 20) and master projects (± 15) at the universities of Antwerp, Newcastle and Amsterdam.

Cosupervisor of the graduate thesis of Nick Loughlin (2011-2012) at the university of Newcastle and Jasper van de Kreeke at the University of Amsterdam (2018-Now).

COMMITTEES

2004–2008	Member of the Educational Committee for the department of Mathematics at the University of Antwerp.
2009–2012	Member of the Staff-Student Committee for the school of Mathematics at the University of Newcastle.
2018–Now	Member of Wiskforall Committee.
2018–Now	Member of the organizing committee for Nationale Wiskunde Dagen.
2019–Now	Member of the curriculum reform committee of the Bachelor Mathematics.
2020–Now	Chair of the Outreach Committee of the KdVi.

EDITING

2018–Now	Chief editor of Nieuw Archief voor Wiskunde.
2016–Now	Editor for London Mathematical Society.

OUTREACH AND SCIENCE POPULARIZATION

2005–2008	I gave several lectures about connections between geometry, algebra and its applications to cryptography and GPS-systems in Belgium to high school students and high school teachers.
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2013–Now	I gave several lectures to students, prospective students and the general public at the UvA on outreach events (Open days, Leve de Wiskunde, Ouderdag, ...)
2018–Now	Speaker and co-organizer for the Nationale Wiskunde Dagen (Tropical Geometry, GPS-systems, Math Pub quiz)
2019	Speaker for Universiteit van Nederland. Title: Hoe vind je een gat in een onzichtbare ruimte (https://www.youtube.com/watch?v=1zVAPVUhrFO).

RESEARCH

I work in the field of geometric representation theory with applications to mathematical physics. In particular my interests are in the following areas.

- Representation theory of quivers
- Resolutions of singularities
- Noncommutative geometry
- Geometric invariant theory
- Homological mirror symmetry

Below is a short selection of most cited papers. An overview of my publications can be found on <https://mathscinet.ams.org/mathscinet/>.

- Bocklandt, Raf. "Noncommutative mirror symmetry for punctured surfaces." *Transactions of the American Mathematical Society* 368.1 (2016): 429-469.
- Bocklandt, Raf. "A dimer abc." *Bulletin of the London Mathematical Society* 48.3 (2016): 387-451.
- Bocklandt, Raf. "Consistency conditions for dimer models." *Glasgow Mathematical Journal* 54.2 (2012): 429-447.
- Bocklandt, Raf, Travis Schedler, and Michael Wemyss. "Superpotentials and higher order derivations." *Journal of pure and applied algebra* 214.9 (2010): 1501-1522.
- Bocklandt, Raf. "Graded Calabi Yau algebras of dimension 3." *Journal of pure and applied algebra* 212.1 (2008): 14-32.