

# Okke van Garderen

*Postdoctoral Researcher in Mathematics*

SISSA  
Via Bonomea 265  
34136 Trieste, Italy  
✉ [ovangard@sisssa.it](mailto:ovangard@sisssa.it)  
📧 [okkevanguarderen.nl](http://okkevanguarderen.nl)

## Employment

- 2024–present **Assegno di ricerca**, *Scuola Internazionale Superiore di Studi Avanzati (SISSA)*.
- 2022–2024 **Postdoctoral researcher**, *University of Luxembourg*.
- 2021–2022 **Postdoctoral researcher**, *Max Planck Institut für Mathematik Bonn*.

## Education

- 2017–2021 **PhD in Mathematics**, *University of Glasgow*.  
Supervised by Michael Wemyss and Ben Davison
- 2014–2016 **Master of Science in Mathematical Physics**, *University of Amsterdam*.
- 2011–2014 **Bachelor of Science in Mathematics**, *University of Amsterdam*.
- 2011–2014 **Bachelor of Science in Physics**, *University of Amsterdam*.

## Teaching Experience

### As Lecturer

- 2024 **Cryptography and Number Theory**, *University of Luxembourg*.
- 2023 **Refresher Course in Algebra and Topology**, *University of Luxembourg*.

### As Teaching Assistant

- 2024 **Algebra 2**, *University of Luxembourg*.
- 2023 **Complex Analysis**, *University of Luxembourg*.
- 2022 **Analysis 3**, *University of Luxembourg*.
- 2020 **Maths 2C (Real Analysis)**, *University of Glasgow*.
- 2020 **Maths 2A (Calculus)**, *University of Glasgow*.
- 2019 **Maths 2D (Topics in Linear Algebra)**, *University of Glasgow*.
- 2018 **Maths 2B (Linear Algebra)**, *University of Glasgow*.
- 2016 **Computer Algebra/LaTeX**, *University of Amsterdam*.
- 2015 **Introduction to Programming for Mathematicians**, *University of Amsterdam*.
- 2014 **Linear Algebra**, *University of Amsterdam*.

### Students Supervision

- 2023 **Master Thesis: Gabriels Theorem**, *Yacha Dams*, *University of Luxembourg*.
- 2023 **EML Project: Caustic Curves**, *Inês Paiva and Natalija Postolovska (joint with Mélanie Theillière)*, *University of Luxembourg*.
- 2022 **Bachelor Thesis: Cubic Surfaces and lines over finite fields**, *Yacha Dams (joint with Pieter Belmans)*, *University of Luxembourg*.

## Research Areas

Enumerative Geometry, Representation Theory, Noncommutative Geometry, Deformation Theory

## Publication List

### Publications

1. “Cyclic A-infinity Algebras and Calabi–Yau Structures in the Analytic Setting”, to appear in *Moduli*
2. “Central curves on noncommutative surfaces” (with Thilo Baumann and Pieter Belmans), to appear in *Transactions of the American Mathematical Society*
3. “Stability Over  $cDV$  Singularities and Other Complete Local Rings”, *Advanced Studies in Pure Mathematics* 88 (2023)

### Pre-prints

4. “Categorifying Linking/Unlinking of Quivers using CoHA modules”, [arXiv:2409.05605](https://arxiv.org/abs/2409.05605)
5. “Vanishing and Symmetries of BPS Invariants for  $CDV$  Singularities”, [arXiv:2207.13540](https://arxiv.org/abs/2207.13540)
6. “Donaldson-Thomas invariants of length 2 flops”, [arXiv:2008.02591](https://arxiv.org/abs/2008.02591)

## Conference and Seminar Talks

- 2025 **Algebra, Geometry, and Mathematical Physics Seminar**, *University of Amsterdam*.  
2025 **TULFS 2025**, *University of Ferrara*.  
2025 **SQUARE conference**, *University of Trento*.  
2024 **SISSA Algebraic Geometry seminar**, *SISSA*.  
2024 **MFO-RIMS Tandem Workshop: Algebraic Geometry and Noncommutative Projective Varieties**, *Oberwolfach*.  
2023 **Workshop on Moduli spaces of vector bundles and curves**, *Université Cergy–Pontoise*.  
2023 **Bielefeld–Paderborn Representation Theory Seminar**, *University of Paderborn*.  
2022 **Conference on Geometric and Combinatorial Methods in Homological Algebra**, *University of Aarhus*.  
2022 **Enumerative Geometry Seminar**, *Tsinghua University*.  
2022 **Seminar Algebraic Geometry**, *University of Bonn*.  
2022 **Oberseminar**, *Max-Planck Institute for Mathematics Bonn*.  
2021 **LAGOON seminar**, *University of Leicester*.  
2020 **Nottingham Algebraic Geometry Seminar**, *University of Nottingham*.  
2019 **Glasgow Algebra Seminar**, *University of Glasgow*.  
2019 **Young Person’s COW**, *University of Warwick*.

## Other Activities

- 2022 Organiser for the Alternative Geometry (AlGe) seminar at MPIM Bonn  
2018–2021 Co-organiser for the Glasgow–Edinburgh Research Student (GEARS) seminar

## Languages

Native	Dutch, English
Intermediate	German, French
Basic	Italian

## Programming Languages

Singular, Macaulay2, MAGMA, Sage, Mathematica, C/C++, Rust, Python, Bash, elisp, HTML/CSS, Javascript