TEUN D. H. VAN NULAND

Mathematician working in operator algebras, noncommutative geometry, and mathematical physics.

Amsterdam, the Netherlands teun-van-nuland-292b85a9

ORGANISED CONFERENCE

Noncommutativity behind the dunes
Organised jointly with F. Arici, M. Caspers, B. Mesland, M. Vernooij, & S. Zegers

28/10/2024 Delft

SUBSTITUTE LECTURER

for the courses:

Noncommutative Geometry

Measure Theory

Functional Analysis

TEACHING ASSISTANT

for the courses:

Lie Groups (MM)

Operator Algebras (MM)

Noncommutative Geometry

Introductory Mathematical Physics

Introductory Functional Analysis

Complex Analysis

Linear Algebra

Does chance exist?

EMPLOYMENT

Research Associate | TU Delft

1 Nov 2023 - 1 Nov 2025 Delft, The Netherlands

- In the group of Dr. Martijn Caspers
- Teaching a 6EC course in spring 2025

Research Associate | UNSW Sydney

29 Aug 2022 - 29 Aug 2023 Sydney, Australia

- In the group of Prof. Fedor Sukochev

NSF CAREER Research Fellow | University of New Mexico

1 Feb 2022 - 26 Aug 2022 Albuquerque, USA

- In the group of Prof. Anna Skripka

Lecturer | HAN University of Applied Sciences

1 Feb 2022 - 1 May 2022 Nijmegen, the Netherlands

- Lecturer of the Statistics course in the 'master leraar wiskunde' program

Promovendus (PhD) | Radboud University

1 Dec 2017 – 1 Dec 2021 Nijmegen, the Netherlands

- Supervised by Prof. Walter van Suijlekom
- C*-algebraic results in the search for quantum gauge fields
- Cum Laude

ACCEPTED ARTICLES

- T. D. H. van Nuland, F. Sukochev, & D. Zanin (2023). Local invariants of conformally deformed non-commutative tori II: multiple operator integrals. *J. Funct Anal.* **288** (4), 110754.
- T. D. H. van Nuland (2024). Noncompact uniform universal approximation. *Neural Networks* **173**, 106181.
- D. Buchholz & T. D. H. van Nuland (2023). The basic resolvents of position and momentum operators form a total set in the resolvent algebra. *Lett. Math. Phys.* **113**, no. 119.
- T. D. H. van Nuland and A. Skripka (2022). Higher-order spectral shift function for resolvent comparable perturbations. *J. Operat. Theor.*, to appear.
- T. D. H. van Nuland & W. D. van Suijlekom (2022). Cyclic cocycles and one-loop corrections in the spectral action. In: *Cyclic Cohomology at 40: Achievements and Future Prospects* (Eds.: A. Connes, C. Consani, B. I. Dundas, M. Khalkhali, H. Moscovici) Proceedings of Symposia in Pure Mathematics, AMS.
- T. D. H. van Nuland & W. D. van Suijlekom (2022). One-loop corrections to the spectral action. *J. High Energy Phys.* **2022.5** (078), 1–15.
- T. D. H. van Nuland (2022). Strict deformation quantization of abelian lattice gauge fields. *Lett. Math. Phys.* **112** (34), 1–29.
- T. D. H. van Nuland & A. Skripka (2022). Spectral shift for relative Schatten class perturbations. *J. Spectr. Theor.* **12**, 1347–1382.
- T. D. H. van Nuland & W. D. van Suijlekom (2021). Cyclic cocycles in the spectral action. *J. Noncommut. Geom.* **16**, 1103–1135.

INVITED SPEAKER

NSeaG conference
26/5/2025 Edinburgh

Mathematics seminar
7/4/2025 Göttingen

NCG Seminar Leiden
6/3/2024 Leiden

PhiMac Seminar
1/12/2023 McMaster U

Minicourse NCG
5-11/9/2023 Sichuan U

Global NCG Seminar (Americas)
28/10/2022 Online

OANCG Seminar
27/10/2022 U Wollongong

Online NCG day
10/12/2021 Online

Math Seminar
25/6/2021 Leipzig U

Global NCG Seminar (Europe)
15/12/2020 Online

Math Colloquium
28/9/2020 U New Mexico

Math Seminar
2/5/2019 U Tübingen

Physics Seminar
12/7/2017 U Göttingen

- T. D. H. van Nuland & R. Stienstra (2020). Classical and quantised resolvent algebras for the cylinder. *Annales Henri Poincaré* **2024**.
- T. D. H. van Nuland (2019). Quantization and the resolvent algebra. *J. Funct. Anal.* **277** (8), 2815–2838.

PREPRINTS

- T. D. H. van Nuland & C. J. F. van de Ven (2023). Classical dynamics of infinite particle systems in an operator algebraic framework. arXiv:2309.06242 [math.OA].
- A. Chattopadhyay, T. D. H. van Nuland, & C. Pradhan (2024). Differentiation, Taylor series, and all order spectral shift functions, for relatively bounded perturbations. arXiv:2404.18422 [math.FA]
- E. McDonald, E. Hekkelman, & T. D. H. van Nuland (2024). Multiple operator integrals, pseudodifferential calculus, and asymptotic expansions. arXiv:2404.16338 [math.FA]

WORKSHOP AND CONFERENCE TALKS

NSeaG Conference on Noncommutative Geometry
19-23 Aug 2024 SDU Odense

Noncommutative Geometry and Applications
24-28 Jun 2024 Cortona

48th LQP workshop and Detlev-Fest
5-8 Jun 2024 ITP Universität Leipzig

Noncommutative Geometry meets Topological Recursion 2023
24-28 Apr 2023 ESI Vienna

AustMS Conference
5-9 Dec 2022 UNSW Sydney

Workshop Index Theory
19-20 May 2022 RU Nijmegen

Noncommutative Calculus and the Spectral Action
5-9 Aug 2019 UNSW Sydney

EDUCATION

Master Mathematical Physics | Radboud University
Feb 2016 – Nov 2017 Nijmegen, the Netherlands

- 9.0 average
- Mathematics master's with physics minor
- Master's thesis supervised by Prof. Klaas Landsman

Bachelor Mathematics and Physics | Radboud University
Sep 2012 – Jan 2016 Nijmegen, the Netherlands

- Cum laude Bsc Mathematics
- Cum laude Bsc Physics and Astronomy
- Minor Informatics