@ *matthijs.lau@gmail.com*
+31 6 5520 8778
✉ *Zichtstraat 1b, 6532VC, Nijmegen, The Netherlands*
⚑ *Dutch*
🔗 *linkedin.com/in/matthijslau*

Personal Statement

I have always been passionate about learning and tackling complex problem solving, which I pursued in my Bachelors of Science in Mathematics and in Physics and Astronomy, and later by completing my Master of Science in Mathematics. My focus during my studies lies in differential geometry, functional analysis and topics in mathematical physics. Both my Bachelor's and Master's degrees had a particular focus on research. Additionally, by taking part in many workshops, conferences and seminars, I got to see a glimpse of the academic life. These experiences have inspired me to pursue a career as a PhD student. Beyond my studies, I love to travel, teach and participate in committees of the study association and mathematics department. My passion for mathematics motivates me not only to keep learning but also to share knowledge with others through teaching and other educational activities.

Education

PhD Mathematics at *University of Salerno*   Nov 2025 - Present

⋄ *Advisor:* Prof. Luca Vitagliano
⋄ Research in the field of Lie groupoids, differentiable stacks and *G*-structures.

MSc Mathematics at *Radboud University, Nijmegen*   Sep 2023 - Aug 2025

⋄ *Track:* Mathematical Physics, Gravity +
⋄ Graduated August 31st 2025 *cum laude*, final grade: 8.603/10, or 4.0 GPA
⋄ Specialised in mathematical physics, with a strong background in both differential geometry and functional analysis.
⋄ *Thesis/Research project:* Fibred Lie groupoids and multiplicative connections, supervised by Dr. Ioan Mărcuț.

BSc Mathematics at *Radboud University, Nijmegen*   Sep 2019 - Jun 2023

⋄ Graduated June 30th 2023 *cum laude*, final grade: 8.489/10, or 4.0 GPA
⋄ Focused on differential geometry, functional analysis, and mathematical physics.
⋄ *Thesis:* Symplectic geometry: Darboux's theorem and Hamiltonian systems, supervisor: Dr. Ioan Mărcuț. Included a digression on physics and the role of symplectic geometry in this field.
⋄ Completed 268 ECTS instead of the required 225 and followed a minor in Philosphy of 16 ECTS

BSc Physics & Astronomy at *Radboud University, Nijmegen*   Sep 2019 - Jun 2023

⋄ Graduated June 30th 2023 *cum laude*, final grade: 8.473/10, or 4.0 GPA
⋄ Focused on general relativity and quantum mechanics, related to high energy particle physics
⋄ Collaborated on research-oriented projects with practical applications.
⋄ Completed 268 ECTS instead of the required 225 and followed a minor in Philosphy of 16 ECTS

VWO (N&T, N&G) at *Het Rhedens Rozendaal*   Sep 2013 - Jun 2019

⋄ Graduated *cum laude*, final grade: 4.0 GPA
⋄ Majored in both Nature and Engineering, and Nature and Health.

Experience

Teaching Assistent at *Radboud University, Nijmegen*   Jan 2021 - Aug 2025

◇ Tutored for many courses in mathematics, physics and computing science, such as: introduction to mathematics, group theory, multivariable analysis, complex analysis, (vector) calculus, linear algebra, special relativity, and programming courses. I was often asked by professors in following years to teach their courses again.
◇ Lead tutorial sessions and small lectures with students returning in my tutorial sessions for later courses as well.
◇ Graded homework and exams, wrote homework solutions, and coordinated the tutorial side courses.

Tutor   Aug 2017 - Jun 2020

◇ Taught high-school students in exact sciences —mathematics, physics, chemistry, biology —as a freelance tutor.
◇ Students were referred through teachers, and stayed on for multiple years.

Publications

[1] Matthijs Lau and Ioan Mărcuț. "Completeness of multiplicative Ehresmann connection on Lie groupoid fibrations". In preparation. 2025.

[2] Matthijs Lau. "Fibred Lie groupoids and multiplicative connections". Master's thesis. Nijmegen: Radboud University, 2025.

[3] Matthijs Lau. "Symplectic geometry: Darboux's theorem and Hamiltonian systems". Bachelor's thesis. Nijmegen: Radboud University, 2023.

Conferences, workshops and seminars

◇ Higher Geometric Structures along the Lower Rhine XIX at *University of Cologne*   Sep 25-26 2025
◇ Around Singularities in Poisson Geometry at *IASM, Hangzhou (Online)*   Aug 3-8 2025
◇ Interactions of Poisson Geometry, Lie Theory and Symmetry at *Instituto Superior Técnico, Lisbon*   Jun 30 - Jul 4 2025
◇ Non-commutative geometry of foliations at *Radboud University, Nijmegen*   Feb - Jul 2025
◇ Higher Geometric Structures along the Lower Rhine XVIII at *Radboud University, Nijmegen*   Jan 23-24 2025
◇ Central Europe Relativity Seminar 15 at *Radboud University, Nijmegen*   Jan 22 - 23 2025
◇ Poisson aan de Waal 4 at *Radboud University, Nijmegen, Utrecht University*   Jun 27 - 28 2024

Talks and Posters

◇ "Completeness of multiplicative connections on fibred Lie groupoids" for Interactions of Poisson Geometry, Lie Theory and Symmetry, July 2 2025
◇ "Lie groupoids; Holonomy and Monodromy groupoids of a foliation" for local noncommutative geometry seminar on foliations, March 20 2025

Extracurricular

Chair of the Education Committee at *Study association Marie Curie Nijmegen*   Sep 2022 - Jul 2025

◇ Managed a committee of around 15 members to organize the educational oriented activities for physics students.
◇ Organized and implemented new educational activities, like colloquia, seminars, excursions, and study afternoons.

Student Committee Member of BAC at *Radboud University, Nijmegen*   Sep 2023 - Jan 2024 and
                                                                                          Nov 2024 - Apr 2025

◇ Advised on the appointment advisory committee for promotions of academics within the mathematics department on two separate occasion pertaining to teaching capabilities and educational related activities.

Skills

◇ Languages: Dutch (Native), English (C2), Italian (Basic)
◇ Leadership, project management, public speaking, problem-solving, creative thinking, independent research.

References

◇ References available on request.