

# Sonja Maria Farr

## Curriculum Vitae

revised: 14th of May 2025

---

### Contact Information

Post Department of Mathematics and Statistics  
University of Nevada, Reno  
1664 N. Virginia Street  
Reno, NV 89557-0084 USA  
E-Mail sonjaf@unr.edu sonjafarr.math@gmail.com  
Web <http://sonjafarr.com>

---

### Research Interests

Application of categorical homotopy theory to algebraic geometry, higher algebra, and study of the combinatorial objects arising in these areas.

---

### Education

- 2022–present **Ph.D in Mathematics**, *University of Nevada, Reno*  
Advisor: Christopher Rogers
- 2021–2022 **M.Sc. in Mathematics**, *University of Muenster*  
Without degree.
- 2017–2021 **B.Sc. in Mathematics**, *Georg-August University Goettingen*  
**Thesis Title:** Duality of Tensor Categories and Affine Supergroups and its Implications for Quantum Field Theory  
Advisor: Victor Pidstrygach
- 20017–2020 **B.Sc. in Physics**, *Georg-August University Goettingen*  
**Thesis Title:** The Haag-Łopuszański-Sohnius Theorem  
Advisor: Dorothea Bahns

---

### Grants and Awards

- August 2024 **Selected participant: Oberwolfach Workshop Homotopical Algebra and Higher Structures**, *Mathematisches Forschungsinstitut Oberwolfach (MFO)*  
Funded by MFO via the "US Junior Oberwolfach Fellows" program
- July 2024 **Selected participant: PCMI Graduate Summer School on Motivic Homotopy Theory**, *Park City Mathematics Institute*  
Partially funded by PCMI

- June 2023 **Selected participant: Summer Graduate School Introduction to Derived Algebraic Geometry**, *Simons Laufer Mathematical Sciences Institute*  
Funded by SLMath
- 2023-present **Graduate Research Assistant** supported by Dr. Chris Rogers' NSF grant DMS-2305407
- 2022 **Graduate Dean's Merit Scholarship** University of Nevada, Reno
- 2017–2022 **Studenstiftung des Deutschen Volkes** scholarship for Bachelor in Physics and Mathematics, Scholarship for Master in Mathematics

## Manuscripts in Progress

S. Farr, " $E_2$ -algebra structures on the derived center of an algebraic scheme"

## Invited Talks

- May 2025 **Geometric Actions on Formality Morphisms in Deformation Quantization**, *Essen Seminar for Algebraic Geometry and Arithmetic*
- April 2025 **Hochschild Cohomology and Higher Centers**, *UC Irvine Geometry and Topology Seminar*
- December 2024 **Geometric GRT actions and Deligne's conjecture on Hochschild cochains**, *YoungHom online seminar*

## Conferences Attended

- September 2024 **An Invitation to Derived Geometry**, *University of Padova*
- May 2024 **Higher Algebra, Geometry, and Topology**, *Centre International de Rencontres Mathématiques (CIRM)*  
Partially funded by CIRM
- June 2023 **Arbeitstagung 2023 on Condensed Mathematics**, *Max Planck Institute For Mathematics*  
Partially funded by the MPI for mathematics
- March 2023 **Homotopy theory in honor of Paul Goerss**, *Northwestern University*

## Teaching

- University of Nevada, Reno
- Spring 2023 Math 182: Calculus II (as TA)
- Fall 2022 Math 182: Calculus II (as TA)
- University of Münster
- Summer 2022 Linear Algebra II (as TA)
- University of Goettingen
- Winter 2021 Seminar "How to prove it"

## Service

2024-present Co-organizer UNR Mathematics Graduate Student Seminar  
Spring 2024 Co-organizer Gradventure recruiting event  
2023–2024 Co-organizer UNR Homological Algebra Seminar