Niloofar Taherian H.

Dr. rer. Nat.

Born on **27.01.1992** in Isfahan, Iran.

Authorized to work in Germany
- Niederlassungerlaubnis
- Erwerbstätigkeit

Valid German driving license: Class B

Contact Details

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IT-Skill

- **Programming languages:** Python, MATLAB, SQL
- **Tools:** Jupyter Notebook, Visual Studio Code, pgAdmin, Git (Github)
- **Software:** LaTeX, Adobe Illustrator, Microsoft Office (Excel, Word, PowerPoint)

Language

- **English** (Fluent-C2)
- **German** (Fluent-C1)
- **Farsi** (Native)

Reference

- **Prof. Dr. Andrea Cavalleri**
  andrea.cavalleri@mpsd.mpg.de
- **Dr. Guido Meier**
  guido.meier@mpsd.mpg.de

About me

As a PhD graduate in experimental physics, I bring a wealth of hands-on experience in optics, laser, cryogenics, sample preparation as well as analytical expertise in data analysis, simulation and modelling. I have proven my ability to lead complex research projects, exercising strong and effective communication across diverse teams. For the next step in my career, I am looking for a position in which I can apply my expertise and expand my professional capabilities.

Professional Experience

Postdoctoral researcher at Max-Planck-Institut für Struktur und Dynamik der Materie (MPSD) **02/2025 - 09/2025**

- Led a five-person research team performing experiments;
- Developed an automated data-analysis workflow to understand the experimental findings.

Doctoral researcher at MPSD **11/2019-02/2025**

◇ **Independently led a multi-year research project from conception to successful completion;**
- Designed, built, and executed advanced table-top optical experiments to study complex systems.

◇ **Data analysis and visualization;**
- Collected and processed large-scale raw data, preparing it for detailed analysis using Python and MATLAB.
- Developed and applied automated fitting algorithms to extract key parameters from large datasets.
- Identified and interpreted hidden trends and critical factors to enable data-driven evaluation of experimental results.

◇ **Modeling and simulations of the solid-state systems;**
- Modeled experimental results by numerically solving multi-dimensional non-linear coupled equations of motion.
- Numerically simulated physical processes under uncertainty using statistical methods.

◇ **Communication and collaboration;**
- Presented and communicated results to both internal and external experts as well as non-specialist audiences.
- Selected as the sole PhD student to represent my department at the triennial Scientific Advisory Board Meeting of the MPSD.
- Collaborated in international and multicultural teams at the MPSD.
- Authored and published three articles in high-impact scientific journals.

Engagement

◇ **PhD student representative** - IMPRS-UFAST graduate school MPSD. **2021-2022**
◇ **Elementary school teacher** - First to fifth grade **2018-2019**
◇ **Private Tutoring** - Maths, Physics and English. **2017-2019**
◇ **Contributing author** - Award-winning student magazine “Sepehr”. **2012**
◇ **Active member** - University of Isfahan astronomy committee. **2010-2014**

Education

◇ **PhD in Physics** *MPSD und University of Hamburg.* **2019–2025**
(1.0 with distinction)

◇ **M.Sc. in Nanotechnology** *Tarbiat Modares University*, Teheran, Iran. **2015–2017**

◇ **B.Sc. in Physics** *University of Isfahan* , Isfahan, Iran. **2010–2014**