Aria Halavati
Curriculum Vitae

✉ Aria.Halavati@cims.nyu.edu
⌂ cims.nyu.edu/ ah5160
🌐 ariahala

Research Interest	**My research interests are in the areas of Calculus of Variations, Geometric measure theory and Partial differential equations.**.

Education

2020-present	**Courant, NYU**, *PhD in Mathematics, New York, NY.* Advisors: Guido De Philippis & Fang-Hua Lin
2015-2019	**Sharif University of Technology**, *Bachelors in Applied Mathematics,Tehran, Iran* . Advisor: Morteza Fotouhi

Research

Oct 2023	**New weighted inequalities on two-manifolds**, *preprint.*
Oct 2023	**Quantitative stability of Yang-Mills-Higgs instantons in two dimensions**, *submitted.*
in preparation	**Decay of Excess for the Abelian Higgs model**, *(Joint with Guido De Philippis and Alessandro Pigati).*

Experience

June 2024	**Simons Laufer Mathematical Sciences Institute (SLMath)**, *TA for Special Geometric Structures and Analysis (St. Mary's College).*
Fall 2019-present	**TA at Courant Institute**, *Calc 1, Great Ideas in math, Prob and stat, Analysis, Linear Algebra, Math for Econ.*
Summer and Fall 2020	**RiskEcon lab**, *Statistical research on electricity consumption in New York city.*
Fall 2020-present	**Research assistant**, *Courant Institute (NYU).*

Technical Skills

Programming	**Python, Tensorflow (GPU), PyTorch, Matlab, Java, C++, R**

Awards and Honors

2023	**Peter Lax Fellowship**, *Awarded each year to an outstanding Mathematics PhD student at Courant.*.
Aug 2017	**IMC First Prize**, *International mathematical competition held by University College London in Bulgaria.*
Jul 2015	**IMO Gold**, *the International Mathematical Olympiad held in Thailand.*
Sep 2014	**Iran's NMO Gold**, *National Mathematical Olympiad of Iran.*

Talks and seminars and conferences

Feb 2024	**University of Toronto, Student PDE and Analysis seminar (online)**, *Quantitative stability in the 2D Abelian Higgs model.*
Jan 2024	**JMM (Joint Mathematics meeting)**, *held in SF*, attended.
June 2023	**Oberwolfach Workshop, Partial Differential Equations 2330**, *Invited.*