

Department of Mathematics
ETH Zurich
Rämistrasse 101
8092 Zürich, Switzerland

March 4, 2025

To Whom It May Concern,

Dear Sir or Madam,

I am pleased to provide a reference for Martha Mustermeier, whom I have come to know well through her coursework, independent study, and ongoing Master's thesis research at ETH Zurich.

I first encountered Martha when she took my course on Algebraic Geometry, where she distinguished herself through exceptional motivation and mastery of the material, as demonstrated by her excellent performance in the oral examination. Subsequently, Martha pursued an intensive reading course under my supervision, working through Hartshorne's foundational text on algebraic geometry. Throughout this period, she consistently demonstrated thorough preparation, a high level of insight, and remarkable independence. Her meticulous approach and thoughtful questions facilitated her swift progression to the advanced topic of algebraic curves.

Currently, Martha is conducting her Master's thesis research with me, focused on intricate excess intersection calculations in the moduli space of curves, specifically studying admissible cover cycles. Even at this early stage, Martha has made significant progress: she has independently classified the components of an intersection problem in genus 3 and correctly calculated the associated intersection numbers. Her ability to grasp complex concepts rapidly and translate them into concrete mathematical results is particularly impressive.

Martha's academic record is outstanding, marked by consistently excellent grades across a broad range of mathematical disciplines, including Algebraic Geometry, Algebraic Topology, and Number Theory. Her academic excellence has been recognized through an ETH Excellence Scholarship and multiple inclusions on the Dean's List. Additionally, her extracurricular involvement is commendable; notably, she served as President of the ETH Mathematics Student Association and successfully organized the ETH Mathematical Symposium.

She has also gained valuable teaching experience as a teaching assistant for foundational mathematics courses, earning positive student feedback.

Overall, Martha is highly self-motivated, hardworking, and intellectually curious. It has always been a genuine pleasure to interact with her, and I have no doubt she will excel in any rigorous academic environment. I recommend her

wholeheartedly and without reservation.

Please feel free to contact me directly for any further information.

Yours sincerely,

Prof. Dr. Anna Bergmann