

March 4, 2025

To Whom It May Concern

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I am writing to recommend Martha Mustermeier, who is currently completing her Master's thesis under my supervision at ETH Zurich. I have known Martha since 2023, when she took my Algebraic Geometry course and subsequently pursued deeper study in this field through a reading course and her thesis research.

Martha's academic record speaks for itself: she has earned consistently high marks across a broad spectrum of mathematical disciplines, demonstrating both analytical depth and intellectual breadth. Her performance in my Algebraic Geometry course was particularly impressive. In the oral examination, she not only demonstrated mastery of the technical material but also showed an intuitive grasp of the geometric concepts that often elude students at this level.

Beyond formal coursework, Martha undertook a reading course with me focused on Hartshorne's foundational text in algebraic geometry. Throughout this independent study, she displayed remarkable self-discipline, arriving at our weekly meetings with thoughtfully prepared questions that revealed her thorough engagement with the material. What distinguished Martha was her persistence in working through the challenging sections on scheme theory and progressing all the way to the theory of curves—a trajectory that requires considerable mathematical maturity.

Martha is currently writing her Master's thesis under my supervision on intersection theory in the moduli space of curves, specifically focusing on excess intersection calculations involving admissible cover cycles. Though she only began this project a few weeks ago, she has already made significant progress by successfully classifying the components of a particular intersection in genus 3 and obtaining the correct intersection number—an achievement that demonstrates both technical skill and mathematical creativity.

As a teaching assistant for "Linear Algebra II" and "Analysis I," Martha has shown dedication to helping others understand mathematical concepts. While student evaluations indicated that she is a competent instructor who communicates mathematical ideas clearly, there remains room for her to develop a more dynamic teaching presence—a skill that typically develops with experience.

Beyond her academic pursuits, Martha has demonstrated leadership as the President of the ETH Zurich Mathematics Student Association and as an organizer of the ETH Zurich Mathematical Symposium. Her involvement in training young mathematicians through the Swiss Mathematical Olympiad preparation camps further reflects her commitment to the mathematical community.

What impresses me most about Martha is her combination of intellectual capability and work ethic. She approaches mathematical problems with both rigorous precision and creative insight. In our interactions, I have found her to be pleasant, respectful, and genuinely curious—qualities that make her an ideal collaborator.

In conclusion, I give Martha Mustermeier my highest recommendation. Her exceptional academic record, research potential, and personal qualities make her an outstanding candidate for graduate study or research positions in mathematics. I am confident that she will continue to make meaningful contributions to the field.

Please do not hesitate to contact me if you require any further information.

Sincerely,

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