Duncan Clark completed his BS in mathematics at Ohio State in 2015 and is currently a PhD student (pre-candidacy) in the department of mathematics. His area of interest is homotopy theory, a subfield of algebraic topology. Most generally, algebraic topology is a discipline of mathematics which describes properties of shapes and spaces. One basic notion is that of homotopy, which is a way of capturing when two spaces (or shapes) may be continuously deformed from one to another. A favorite example of topologists is that a coffee mug and a donut are the same shape up to homotopy\(^1\). Homotopy theory itself is a modern interpretation of these concepts in a more formal setting, using the abstract mathematical framework of categories to phrase similar questions from the classical theory in different and more general settings.

With respect to teaching, Duncan has been a TA in the math department for three years, starting from his final year as an undergraduate student. He has taught various levels of calculus and precalculus and is also involved with training and mentoring new graduate TAs within the math department.

He attended Montessori schools from preschool through eighth grade and has always sought to bring many aspects of this educational upbringing to his classroom (along with a good bit of humor as well). As such, he encourages students to ask questions and participate in class, and strives to give an intuitive understanding of underlying concepts, rather than just having students memorize the equations. Calculus (and math in general) can seem vast and complex, but breaking it into smaller pieces, relating new material to old, and emphasizing the motivation behind various techniques can help uncover the bigger picture as well as build intuition for how to solve and understand problems. He is also fond of inserting little snippets of higher-level mathematics into his recitations, partially as a way to keep students interested, but also as a way to demonstrate some of the life and beauty of mathematics beyond calculus.

Duncan plans to continue in academia after graduation with aspirations of being a professor of mathematics.