CONOR MAYO-WILSON, University of Washington
Potential Infinity and the Aristotelian Plane

Aristotle famously distinguished between *potentially* and *actually* infinite objects. For instance, he claimed that line segments are *potentially* infinitely divisible, in the sense that an idealized geometer can divide them indefinitely. Yet he denied that a segment contains an infinite number of points at any given time. Cantor denied the importance of Aristotle's distinction, arguing that all potentially infinite quantities presuppose the existence of actually infinite ones. In this talk, I investigate whether Aristotle's distinction is (i) mathematically cogent and (ii) useful. After briefly introducing a few ways of formalizing the notion of potential infinity in contemporary set theory (thereby showing Aristotle's distinction is perfectly intelligible by contemporary standards), I argue that Aristotle's distinction helps us to better Euclidean geometry and number theory.