

1116-AB-2920 **Alon Pinto*** (alonp@berkeley.edu). *The same content, but very different lectures: The decisions collegiate mathematics instructors make and how they shape the mathematics in their classrooms.*

Lectures in courses for math majors typically revolve around definitions, theorems, and proofs, but the lessons students learn about mathematics extend far beyond the scope of the content discussed explicitly. There is extensive literature describing how students pick up practices, language, norms, and values through instruction, regardless of what is explicitly taught. Still, only little is known on how instruction at university shapes the learning of ways of doing and thinking about mathematics. In my research, I explore the mathematics in lectures from the perspectives of both instructors and students. I have found that a significant portion of the mathematics instructors try to convey in lectures remain implicit. Furthermore, I have found that even when discussing the same explicit content, the mathematical ideas that different instructors try to convey, and consequently what students experience, can be radically different. In my presentation, I will discuss examples from lectures of different instructors, describe practices instructors use to decide what mathematical ideas to teach and how, explore the factors that shape these decisions, and discuss their strengths and limitations. I will conclude with some implications for professional development at the collegiate level. (Received September 23, 2015)