How Do Mathematicians Make Sense of Definitions?
Preliminary Report

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ABSTRACT: It seems clear that students' activity while working with definitions differs from that of mathematicians. The constructs of concept definition and concept image have served to support analyses of both mathematicians' and students' work with definitions (c.f. Edwards & Ward, 2004; Tall & Vinner, 1981). As part of an ongoing study, we chose to look closely at how mathematicians make sense of definitions in hopes of informing the ways in which we interpret students' activity and support their understanding of definitions. We conducted interviews with mathematicians in an attempt to reveal their process when making sense of definitions. A striking observation relates to the role of examples. We will share a preliminary analysis of these interviews and engage the audience in reflecting on the ideas.

KEY WORDS: mathematical definitions, advanced mathematical thinking, mathematicians' practice, examples