

## Continuous logic and products of metric structures

Mary Leah Karker

Providence College

mkarker@providence.edu

In recent years continuous logic has emerged as an appropriate setting for applying model-theoretic tools to the study of metric spaces. This talk will focus on product constructions within this continuous logic framework and present analogues of some preservation properties known to hold in classical logic. In particular, we will show that a natural continuous-logic version of the direct product enjoys the following property: if a sentence  $\theta$  is true in  $\prod_{i=0}^k \mathcal{M}_i$  for every  $k \in \mathbb{N}$ , then  $\theta$  is true in  $\prod_{i \in \mathbb{N}} \mathcal{M}_i$ .