

1125-94-1014 **Lara Dolecek***, Engineering IV, 56-147B, Los Angeles, CA 90095. *Coding-Theoretic Techniques for Modern Memories.*

Driven by the needs of emerging data-centric applications, modern memories must be reliable, cheap, and dense. In this talk, we overview some of our recent research on novel channel coding methods for modern memories, including context-aware coding for on-chip memories and graph-based methods for dense non-volatile memories. We demonstrate several new constructions and show how carefully designed channel codes can substantially improve the performance of memories. We also discuss several new research directions in this area. (Received September 14, 2016)