

FM 88: Plenary Talk: Extreme Entanglement

Time: Friday 8:30–9:30

Location: Audi Max

Plenary Talk

FM 88.1 Fri 8:30 Audi Max

What can be done with extreme entanglement? — ●RICHARD CLEVE — University of Waterloo, Waterloo, Canada

In 2017, William Slofstra showed that there are correlations (i.e., variants of the Bell inequality) that require an infinite amount of quantum entanglement to produce exactly, and a very large amount of entan-

glement to approximate. Since this work, there have been interesting advances in a lively exploration of deep connections between different notions of entanglement, the theory of computation, and the theory of operator algebras. I will explain various notions of infinite entanglement and describe some simple operational tasks that require large or infinite entanglement to perform.