**Advantages of multicopy nonlocality distillation and its application to minimizing communication complexity**

Giorgos Eftaxias

Korea Institute for Advanced Study (KIAS), South Korea

Nonlocality has been proved a resource for various information-processing tasks, a fact that naturally raised its distillation endeavours. Here we introduce several nonlocality distillation schemes, some are sequential algorithms that repeatedly discover optimal two-copy protocols, while others are genuine three-copy protocols. The impact of our schemes is twofold. On the one hand, they unlock the distillability of quantum correlations not known to be distillable before, this way, they offer practical distillation of observed correlations by easy means. On the other hand, they uncover more non-signalling correlations that trivialize communication-complexity, and others that defy information-causality. This brings us closer to an understanding of the sets of nonlocal correlations that can be recovered from information-theoretic postulates, which in turn, enhances our understanding of what is special about quantum theory.