University of Rochester Department of Electrical and Computer Engineering

Physics-Based Communication Security

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Wednesday, April 12th 12:00PM – 1:00PM Computer Studies Building (CSB) 209

Abstract: Assured communication security continues to grow in importance in both the commercial and military communities, as the amount of data transmitted and the importance of that data increases rapidly. Traditional communication security (COMSEC) protocols rely on trust models that can be proven faulty or algorithmic techniques rooted in conjectures in complexity theory. These COMSEC protocols are being challenged by sophisticated network intrusion techniques, omni-present channel monitoring, and the emerging threat of quantum computation. Quantum key distribution (QKD) emerged as one of the first applications of quantum in-6(pp for()]TJ)11.4(e)-633(on (Q)5(nd t)11.3(hns)5.hed arst pro(um)-5.otl \mathbf{Q}

