

In this talk, we demonstrate how a simple linear receiver can successfully recover data drawn from higher-order modulation, even when the signals are processed through a 1-bit ADC. We explain how massive MIMO and stochastic resonance act as key enablers for detecting higher-order constellations after 1-bit quantization with linear reception. In addition, we introduce an enhanced system-level detection method and a transmit-constellation design tailored for 1-bit ADC massive SIMO communication system.