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## Research Letter

## A High-Throughput Random Access Protocol for Multiuser MIMO Systems

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### Abstract

We propose a high-throughput random access protocol for  $2 \times 2$  multiuser multiple-input multiple-output (MIMO) systems. The cross-layer mechanism utilizes the packets combining technique to exploit the advantages of both spatial multiplexing and multipacket reception. Analytical result indicates that the proposed scheme achieves 0.669 per spatial degree of freedom in stable throughput, which is much higher than those in the existed studies.