

## SQUID-based Multiplexing by Slope Switching and Binary-to-Hadamard Address Translation

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**Abstract** - We have demonstrated multiplexing and demultiplexing of seven test signals using the Hadamard basis set. The encoding utilizes the sign change of the SQUID gain when a  $\Phi_0/2$  flux shift occurs. The periodicity of the SQUID response allows recursive construction of in principle arbitrarily high order Hadamard matrices out of binary addresses and hence makes possible to access  $N$  channels by  $\log_2 N$  address lines.

**Index Terms** - Code division multiplexing, SQUIDs, Superconducting photodetectors.

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