

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, May 6
2:00 – 3:00 PM
Maria Sanford, Room 101

STRUCTURED MATRICES AND SOME RESULTS ON QUASISEPARABLE MATRICES

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ABSTRACT

In this talk we give an overview of research in structured matrices, and discuss in particular the computation of the matrix–vector product for a quasiseparable matrix, a computation at the heart of many fast algorithms involving the class. The usual parametrization of a quasiseparable matrix can introduce errors, even when algorithms are structured backward stable. We derive a nested factorization involving Householders to give a fast, stable algorithm. This talk is based on joint work with Vadim Olshevsky and Michael Stewart.

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