# Multivariable Orthogonal Polynomials and Structured Matrix Computations

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The recurrence coefficients of polynomials in one variable with respect to a discrete inner product can be computed by solving a structured inverse eigenvalue problem. In this talk we will investigate how this inverse eigenvalue problem is modified in case of multivariable orthogonal polynomials. We will also indicate how this inverse eigenvalue problem can be solved only using orthogonal similarity transformations. Some numerical experiments will show the validity of this approach.