

Computational and Applied Mathematics Student Seminar

ANDREW DENNEHY

COMMITTEE ON COMPUTATIONAL AND APPLIED MATHEMATICS University of Chicago

Crouzeix's Conjecture and the Cauchy Integral Transform

TUESDAY, January 17th 12:30pm Jones Laboratory, Room 303

ABSTRACT

We discuss Crouzeix's conjecture, which provides a connection between matrices and their field of values, a rather poorly understood structure in non-normal matrices. In particular, we will discuss the most recent substantial step towards proving this conjecture. As a part of this, we will discuss the Cauchy Integral Transform and how it can be used to provide an analytic surrogate for the conjugate of a holomorphic function.