

1116-30-2159 **Alexandre Eremenko** and **Erik Lundberg*** (elundber@fau.edu). *The classification problem for arclength null-quadrature domains.*

A null-quadrature domain is a domain for which integration of any function in the domain's Bergman space vanishes. M Sakai classified (planar) null-quadrature domains in 1981. Considering the Smirnov space of the domain instead of the Bergman space leads to the notion of an arclength null-quadrature domain. The corresponding classification problem remains open. We discuss recent progress and useful unexpected connections to fluid dynamics (hollow vortex equilibria) and minimal surfaces. (Received September 22, 2015)