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Dmitry Khavinson* (dkhavins@usf.edu). *Vanishing of reproducing kernels in spaces of analytic functions.*

In most situations we are accustomed to, e.g., Bergman and Hardy spaces in the disk, the reproducing kernels do not vanish. Neither they do if we consider the later spaces with fairly general weights, for example comprised from modulus of analytic functions. Yet in the "cut-off spaces" formed by polynomials of degree less or equal to n this is not necessarily true. Moreover, almost nothing is known regarding zeros of linear combinations of reproducing kernels at different points, an important question if one tries solving various extremal problems We shall discuss what is known and the numerous compelling open problems that remain. (Received July 14, 2017)