

## RECENT TRENDS ON ANALYTIC PROPERTIES OF MATRIX ORTHONORMAL POLYNOMIALS \*

F. MARCELLÁN<sup>†</sup> AND H. O. YAKHLEF<sup>‡</sup>

**Abstract.** In this paper we give an overview of recent results on analytic properties of matrix orthonormal polynomials. We focus our attention on the distribution of their zeros as well as on the asymptotic behavior of such polynomials under some restrictions about the measure of orthogonality.

**Key words.** matrix orthogonal polynomials, zeros, asymptotic behavior.

**AMS subject classifications.** 42C05, 15A15, 15A23.

---

\*The first author was supported by Ministerio de Ciencia y Tecnología (Dirección General de Investigación) of Spain under grant BHA2000-0206-C04-01. Received December 12, 2001. Accepted for publication May 21, 2001. Communicated by Sven Ehrlich.

<sup>†</sup> Departamento de Matemáticas, Universidad Carlos III de Madrid, Spain. (pacomarc@ing.uc3m.es).

<sup>‡</sup> Departamento de Matemática Aplicada, Universidad de Granada, Spain. (houlad@goliat.ugr.es).