

**Year: 2006****Vol.: 68****Fasc.: 1-2**

Title: Polarization constants for products of linear functionals over $\mathbb{R}^2$ and $\mathbb{C}^2$ and Chebyshev constants of the unit sphere

Author(s): Vasilios A. Anagnostopoulos and Szilárd Gy. Révész

The topic of this work is the estimation of the *linear polarization constant* of normed spaces. In finite dimensional Hilbert spaces we study the linear polarization constant and the *Chebyshev constant*. By constructing certain generalized trigonometric functions, our investigation leads to the connection of the polarization constant on a 2-dimensional complex Hilbert space and the Chebyshev constant of S^2 . This provides estimates for the n^{th} polarization constants. Our main result is asymptotically best possible.

Address:

Vasilios A. Anagnostopoulos
Department of Mathematics
Faculty of Applied Sciences
National Technical University of Athens
Zografou Campus 157 80, Athens
Greece
E-mail: vanag@telecom.ntua.gr

Address:

Szilárd Gy. Révész
A. Rényi Institute of Mathematics
Hungarian Academy of Sciences
P.O. Box 127, 1364
Hungary
E-mail: revesz@renyi.hu