Editorial Introduction

This volume contains the proceedings of the International Workshop on Operator Theory and Applications (IWOTA) which was held at the University of Connecticut, Storrs, USA, July 24–27, 2005. This was the sixteenth IWOTA; in fact, the workshop was held biannually since 1981, and annually in recent years (starting in 2002) rotating among ten countries on three continents. Here is the list of the fifteen workshops:

IWOTA'1981: Santa Monica, California, USA (J.W. Helton, Chair)
IWOTA'1983: Rehovot, Israel (H. Dym, Chair)
IWOTA'1985: Amsterdam, The Netherlands (M.A. Kaashoek, Chair)
IWOTA'1987: Mesa, Arizona, USA (L. Rodman, Chair)
IWOTA'1989: Rotterdam, The Netherlands (H. Bart, Chair)
IWOTA'1991: Sapporo, Hokkaido, Japan (T. Ando, Chair)
IWOTA'1993: Vienna, Austria (H. Langer, Chair)
IWOTA'1995: Regensburg, Germany (R. Mennicken, Chair)
IWOTA'1996: Bloomington, Indiana, USA (H. Bercovici, C. Foias, Co-chairs)
IWOTA'1998: Groningen, The Netherlands (A. Dijksma, Chair)
IWOTA'2000: Faro, Portugal (A.F. dos Santos, Chair)
IWOTA'2002: Blacksburg, Virginia, USA (J. Ball, Chair)
IWOTA'2003: Cagliari, Italy (S. Seatzu, C. van der Mee, Co-Chairs)
IWOTA'2004: Newcastle upon Tyne, UK (M.A. Dritschel, Chair)
IWOTA'2005: Storrs, Connecticut, USA (V. Olshevsky, Chair)

The aim of the 2005 IWOTA was to review recent advances in operator theory and its applications to several areas including mathematical systems theory and control theory.

Among the main topics of the workshop was the study of structured matrices, their applications, and their role in the design of fast and numerically reliable algorithms. This topic had already received a considerable attention at IWOTA'2002 and IWOTA'2003 when the main focus was mostly on the structures of Toeplitz, Hankel and Pick types. In the year 2005 the interest shifted towards matrices with quasiseparable structure.

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