# SIAM ACTIVITY GROUP ON ORTHOGONAL POLYNOMIALS AND SPECIAL FUNCTIONS

# NEWSLETTER

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It is a pleasure to report that the SIAM council has approved the formation of an activity group dedicated to orthogonal polynomials and special functions. The SIAM president, Ivar Stakgold, appointed the following officers to three-year terms beginning January 1, 1990:

> Charles Dunkl, University of Virginia, Chair
> Jet Wimp, Drexel University, Vice-Chair
> Mourad Ismail, University of South Florida, Program Director
> George Gasper, Northwestern University, Secretary

Any of these persons will be glad to receive communications or questions dealing with the group.

The purposes of the group include the facilitation of communication among researchers and users in the field, to sponsor sessions at SIAM meetings, and to help in circulating applicable software. Some of these activities are described below.

*Report on the meeting in Chicago, July, 1990*
The group sponsored a minisymposium with the following speakers: George Gasper (Computer Algebra, Positivity, and the Riemann Hypothesis); Jeffrey Geronimo (Orthogonal Polynomials, Limit Periodic Jacobi Matrices and Julia sets); Eric Todd Quinto (The Role of Orthogonal Polynomials in Computed Tomography); Charles Dunkl (Symmetry and Orthogonal Polynomials in Several Variables).

There was also a formal meeting. The discussion led to the following actions: It would be helpful to have an e-mail address registry of the membership, for quick circulation of news, just to name one reason. We encourage readers to send their addresses to one of the officers:

> Charles Dunkl  -       cfd5z@virginia.edu
>                        cfd5z@virginia.bitnet
> George Gasper  -       george@euler.math.nwu.edu

It was agreed that some kind of a publicly accessible software library was desirable. This would contain both symbolic and floating-point codes (that is, Macsyma, Maple, Reduce, Fortran, C, etc.). We found out that one of the other activity groups (linear algebra) already had such an operation by means of the netlib facility maintained at Oak Ridge. It is our intention to use netlib also. We welcome contributions and suggestions. Presumably the netlib index will mention our materials under a recognizable heading. Anyone can send for the index and/or contents of netlib: to get the general netlib index and information on how to use netlib send an e-mail message to:

    netlib@ornl.gov

with the text of the message being (only) send index.

## Upcoming Meetings

There will be a special session on "Hypergeometric functions on domains of positivity, Jack polynomials, and applications" at the A.M.S. meeting in Tampa, Florida, March 22-23, 1991, organized by Don S. Richards of University of Virginia. There are supposed to be meetings in India, January, 1993, and Thailand, January, 1993, but we do not have any more details as yet.

## Current Books of Interest

G. Gasper and M. Rahman, Basic Hypergeometric Series, Cambridge University Press, 1990. The book contains an up-to-date, self-contained and authoritative account of summation, transformation and expansion formulas for basic hypergeometric series. It also covers basic contour integrals, bibasic series, and the Askey-Wilson q-beta integral and gives some applications to orthogonal polynomials and to other fields.

T. Rivlin, Chebyshev Polynomials, 2nd edition, Wiley-Interscience, 1990. This edition has new material on interpolation, polynomials of best uniform approximation, factorization of Chebyshev polynomials over the rationals, as well as the first edition's wealth of information about the subject.

H. Wilf, Generating-Functionology, Academic Press, 1990. The book has a combinatorial emphasis and an introduction to the WZ (Wilf-Zeilberger) method for proving identities.

## Editorial Notes

For this issue the editorial board consists of Charles Dunkl and George Gasper. We welcome any offers of assistance and look forward to receiving your suggestions and submissions. Paul Nevai wishes the research community in this field to know that the Journal of Approximation Theory is now under the editorship of Allen Pinkus and himself and that they welcome good manuscripts in this area. We could consider a modestly-sized "Letters to the Editor" column for informal communications (not research announcements).