

IMAGE

The Bulletin of the International Matrix Group
serving The International Linear Algebra Community

Volume 1, Number 1

January, 1988

Free to IMG members

\$15 (U.S.) per year to libraries and commercial firms

An announcement

Editorial

We are pleased to announce the establishment of IMG/TILAC-the International Matrix Group/The International Linear Algebra Community. IMG was constituted during the recent Combinatorial Matrix Analysis Conference in Victoria (Canada), May, 1987. The general goal of IMG is to encourage activity in linear algebra.

A more specific aim is to support groups and individuals active in organizing meetings or publications in all aspects of linear algebra. We have no intention of supplanting or competing with existing organizations, our entire purpose is international coordination, to assist the development of linear algebra. We may add new activities where and when desirable. We welcome activities in all applications of linear algebra and we desire a proper share for theoretical matrix analysis and abstract linear algebra.

We plan the following.

1. IMG will initiate, encourage and coordinate linear algebra meetings, and support them by the means available, such as information delivery and (eventually) the solicitation of financial support.

2. IMG will edit and distribute a bulletin (named IMAGE) to serve as a stage for discussions and opinions. It will contain essays related to linear algebra, as well as information about various activities, including publicity about future meetings, about new papers accepted by the linear algebra journals, about recently written theses, and about individuals (new positions, sabbaticals, leaves, etc.) It may contain letters to the editor or signed columns of opinion.

3. IMG will maintain an electronic mail service, IMG-NET. We will transmit announcements of IMG activities and circulate other notices of interest to linear algebraists.

Membership in IMG is open to all mathematicians interested in furthering its aims or participating in its activities. Initially there will be no cost to individuals, and we hope that costs will always be low.

The group now has the following structure:

Officers:	Chairman	- Hans Schneider
	Editor of IMAGE (The IMG Bulletin)	- Robert C. Thompson
	Secretary	- Daniel Hershkowitz
Committee members:	Richard A. Brualdi, David H. Carlson, Charles R. Johnson	

A key feature is an international board consisting of a representative from each of several countries, and an at large representative. Initially the board consists of:

Belgium	- P. Van Dooren	Ireland	- T. Laffey
Canada	- P. Lancaster	Israel	- A. Berman
Czechoslovakia	- M. Fiedler	Japan	- T. Ando
Germany	- L. Elsner	Netherlands	- H. Bart
Great Britain	- S. Barnett	Portugal	- G. N. de Oliveira

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Greece	- J. Maroulas	Spain	- V. Hernandez
Hong Kong	- Y. Au-Yeung	United States	- G. Golub
Hungary	- P. Rosza	At large	- B. Datta

As an initial step we are consulting the members of the international board to identify useful support that we can give to linear algebra activities. If you have any suggestions please communicate with your national representative or with any of the undersigned officers. Contributions for IMAGE are invited and should be sent to Bob Thompson, at Santa Barbara. If you wish to contribute an announcement for circulation on IMG-NET, please contact Danny Hershkowitz, at the Technion, Haifa. If you wish to be placed on the mailing list to receive IMAGE, please return the coupon on page 8, or otherwise contact Bob Thompson. To get on IMG-NET, please contact Danny Hershkowitz.

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News

Valencia linear algebra meeting successful

The most recent in a series of linear algebra meetings in Iberia was held at Valencia, Spain, September 28-30, 1987. The meeting was well attended, with participants from many corners of the world, reflecting the increasingly prominent stature of this series of conferences. Most addresses were in English, but some adopted a format in which the screen display was in English but the spoken address in another language. Major addresses were delivered by C. W. Gear, G. Golub, C. R. Johnson, H. Schneider, and T. Kailath. Two important scheduled participants, I. Gohberg and L. Rodman, could not attend and their planned addresses were not given. A noteworthy aspect was the impressively strong group of young linear algebraists from Spain and Portugal presenting papers. Summary: a productive meeting.

News

Santa Barbara linear algebra conference held

An annual regional linear algebra conference has been established in southern California. The first meeting was at San Diego State University, in November, 1986, and was organized by S. Pierce. The second meeting was at the University of California at Santa Barbara, November 21, 1987, and was organized by Robert C. Thompson. Principal speakers included R. Grone, R. Guralnick, C. R. Johnson, C. Koc, A. Krieg, C. K. Li, M. Marcus, S. Pierce, B. Tam, O. Taussky-Todd and J. Todd, and S. G. Williamson. Guralnick's talk was on his solution (with L. Levy) of the diagonalization problem (= Smith form diagonalization) for matrices with elements in a noncommutative principal ideal domain. There was an interesting interplay between this talk and that of A. Krieg (on Hecke algebras) in that the rank one case, presumably the easiest case but in fact the only one in which the full diagonalization theorem is false, is genuinely exceptional in that only it

corresponds to a noncommutative Hecke algebra. Selecting some other titles for mention here, the Marcus talk was on Bessel's inequality in tensor space and its relation to the permanent on top conjecture, that of Grone on the Laplacian spectrum of a graph, and C. K. Li spoke on unitarily invariant norms and the numerical radius.

Current planning is that this meeting next be held in November or December, 1988, at a site yet to be determined, but probably to be Santa Barbara.

News

New title for Marvin Marcus

Marvin Marcus, who has been a faculty member at the University of California at Santa Barbara since 1962, has changed his departmental alignment from a joint full professorship in the the Mathematics Department and the Computer Science Department to a full professorship in the Computer Science Department only. His very active research program in linear algebra and in multilinear algebra continues with full vigor, however, and he continues to participate in the editorial supervision of *Linear and Multilinear Algebra*. He also continues his editorial duties with other journals.

News

College of William and Mary focuses on matrix theory

The College of William and Mary, located in Williamsburg, Virginia, USA, has focussed on matrix theory in an impressive way, through the appointments of Charles R. Johnson and Leiba Rodman to faculty positions. Readers will recall that Johnson is the coauthor (with R. Horn) of the books *Matrix analysis* and *Topics in matrix analysis*, and Rodman is coauthor (with I. Gohberg and P. Lancaster) of a series of three volumes: *Matrix polynomials*, *Matrices and indefinite scalar products*, and *Invariant subspaces of matrices with applications*. Ion Zaballa (Vitoria, Spain) and John Maybee (Colorado) will be visitors during the spring, 1988, semester. Johnson's appointment is as Class of 1961 Professor, an endowed chair, and another appointment in the field is anticipated for next year.

News

West coast number theory

The *West coast number theory meeting* is not primarily a matrix theory conference, but since parts of number theory involve matrix theory, quadratic forms being a notable example, some hard linear algebra is always visible at this conference. The conference has a unique structure in that no program is prepared in advance: On the first day an organizational meeting is held to determine when individual contributed papers are to be given, each contributor being allocated the same amount of time. The meeting is held on four days immediately before Christmas each year, the most recent being December 17-21, 1987, at the very scenic Asilomar conference grounds in Pacific Grove, California, USA. The meeting was well attended. The next meeting in this series will be at Las Vegas, Nevada, USA, December, 1988. John Selfridge, now at Northern Illinois University, DeKalb, Illinois 60115, USA, is a major force behind the continuing success of this series of meetings.

News

B. and K. Datta in San Diego

B. N. and K. Datta, both of Northern Illinois University, are spending academic 1987-88 at the University of California, San Diego. B. N. Datta is especially well known to linear algebraists as an organizer or co-organizer of several succesful meetings.
