

**PROCEEDINGS
OF THE TWELFTH SOUTH AFRICAN

SYMPOSIUM
ON
NUMERICAL MATHEMATICS**

UMHLANGA ROCKS, 14, 15 & 16 JULY 1986

**SANUM & THE
DEPT. OF COMPUTER SCIENCE
UNIVERSITY OF NATAL
DURBAN**

Proceedings of the twelfth South African

SYMPOSIUM

ON

NUMERICAL MATHEMATICS

Umhlanga Rocks, 14-16 July 1986

edited by

T.J. Ypma

PREFACE

The Twelfth South African Symposium on Numerical Mathematics took place at Umhlanga Rocks, Natal, from 14 to 16 July 1986. This event was organized by the South African Society for Numerical Mathematics (SANUM) in conjunction with the Department of Computer Science of the University of Natal, Durban. A total of 42 papers were delivered to a gathering of nearly 70 delegates.

Invited papers were presented by C.A. Brebbia, of the Institute for Computational Mechanics, Southampton; J.M. de Villiers of the Department of Applied Mathematics of the University of Stellenbosch; B.M. Herbst of the Department of Applied Mathematics of the University of the Orange Free State; and G. Maier of the Politecnico di Milano.

These Proceedings are a published record of most of the papers presented. The choice was left to the authors concerned whether they wished to publish their papers in full or as a summary. All contributions published in these Proceedings appear as received from the authors without any refereeing or editing.

The organizers are grateful to IBM (South Africa) for their continued generous financial support of these Symposia. This support made it possible to invite our distinguished overseas visitors to participate in this Symposium and undoubtedly contributed greatly to the success of the meeting.

On behalf of the members of SANUM and all delegates present at the Symposium I thank Ms. Ethel Carte of the Department of Computer Science of the University of Natal, Durban, for her invaluable assistance in helping to organize the Symposium.

Note that no Proceedings in the same format as the current volume appeared in 1985. Nine of the papers presented at the Eleventh South African Symposium on Numerical Mathematics in July 1985 are to appear in full in a special issue of the Journal of Computational and Applied Mathematics. Together with the previously published Abstracts of papers presented at that Symposium, and any papers presented at the Symposium which may be published in full elsewhere, that issue of that journal constitutes the only published record of papers presented at the 1985 Symposium.

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Published by the Department of Computer Science
University of Natal, Durban 1986

ISBN 0 86980 518 5

ISSN 0379 8844

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