## **PROCEEDINGS**

## OF THE FIFTEENTH SOUTH AFRICAN

# **SYMPOSIUM**

ON

# **NUMERICAL MATHEMATICS**

UMHLANGA ROCKS, 17-19 JULY 1989

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

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#### Preface

The fifteenth South African Symposium on Numerical Mathematics was held at Umhlanga Rocks from 17 to 19 July 1989. It was organized by the South African Society for Numerical Mathematics (SANUM), in conjunction with the Department of Computer Science of the University of Natal. Approximately fifty delegates attended the conference, and thirty two papers were presented. The invited speaker from abroad was Prof. Martin Gutknecht from ETH-Zentrum, Zürich, and our local keynote speaker was Prof. Doron Lubinsky from the University of the Witwatersrand, Johannesburg. Prof. F Dias from Worcester Polytechnic Institute, Massachusetts, U.S.A. and Prof. Uri Passy from the Technion, Israel Institute of Technology also attended the Symposium and read papers.

This collection of papers represents an excerpt of those delivered at the conference. Participants had a choice in deciding whether to submit an extended abstract, or a full length paper to these Proceedings. All contributions are published as received from the authors, without any refereeing or editing. A summary of the panel discussion on the teaching of Numerical Mathematics is also included.

All contributors to the Symposium, chairmen of sessions and participants are thanked for their participation. On behalf of the members of SANUM and all delegates present at the Symposium, I sincerely thank Ms Ethel Carte of the Department of Computer Science of the University of Natal, Durban for her invaluable assistance with the organization and smooth running of the Symposium and the publishing of these Proceedings.

Shirley Abelman Secretary, SANUM.

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