

PROGRAMME

THIRTEENTH

SOUTH AFRICAN SYMPOSIUM

ON

NUMERICAL MATHEMATICS

UMHLANGA ROCKS, 13, 14 & 15 JULY 1987

PARTICIPANTS - DEELNEMERS

GUESTS

G Fairweather
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D M Sloan
G A Watson

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DELEGATES

M L Baart
J G Benadé
M U Blecher
J D Botha
J F Botha
A Cloot
C P Crosby
J M De Villiers
M De Villiers
A Du Plooy
J A Engelbrecht
D Eyre
R Gonin
V M Gorringer
J Greben
B M Herbst
A Knopfmacher
D P Laurie
P G L Leach
D F B Louw
D S Lubinsky
D M Martin
H G Miller
D M Murrey
H C Murrell
M E Orlowska
M W Orlowski
M Pachter
L Pretorius
R M Quick
C H Rohwer
A Shapiro
M Sniedovitch
J A Snyman
J Van Heerden
M Van Rooyen
C B Van Wyk
A Venter
L M Venter
D A Vermeulen
P J Vermeulen
J P Verwey
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TITELS VAN REFERATE - TITLES OF PAPERS

<u>NAME</u>	<u>TITLE</u>
Baart L	<i>Classification of two-dimensional parametric cubics</i>
Benade J G	<i>Criticity with respect to vertex partition parameters of graphs</i>
Bird W W and Martin J B	<i>Consistent predictors and the solution of the piecewise holonomic incremental problem in elasto-plasticity</i>
Blecher M H and Leach P G L	<i>The application of reduce to the analytic solution of a 1-D Schrödinger Equation</i>
Botha J F	<i>Modelling unsaturated/saturated ground-water flow</i>
Botha J D and Shapiro A	<i>Dual algorithms for procrustes rotations</i>
Cloot A and Herbst B M	<i>A model for the propagation of rounding error in a Klein-Gordon Equation</i>
Crosby C P, Meyer J P and Mathews E H	<i>Numerical prediction of wind-induced pressure distributions on film clad greenhouses</i>
Delic G, Louw D F B and Neethling J D	<i>Solving a system of non-linear PDE's with a spectral function method</i>
De Villiers J M	<i>Nodal splines and quadrature</i>
De Villiers M and Pretorius L	<i>Thermal description of enclosed cavities</i>
Du Plooy A	<i>A three-dimensional geoelectrical problem modelled by a boundary integral method</i>
Eyre D	<i>Numerical treatment of the stochastic collection equation</i>
Fairweather G	<i>Packages for solving certain almost block diagonal linear systems</i>
	<i>The method of fundamental solutions for plane biharmonic problems</i>

Gledhill I

Parallel processing applied to plasma simulation

Gorringe V M and Leach P G L

The application of reduce to the determination of symmetries of differential equations

Greben J M

Numerical solution of non-linear integral differential equations arising from QCD

Herbst B M, Weideman J A C and Cloot A

A numerical studie of the non-linear Schrödinger equation involving quintic terms

Knopfmacher A

Weighted Markov-Bernstein inequalities

Laurie D P

How to evaluate practical error estimates

Lubinsky D S

Determinants of Toeplitz matrices and PADE approximants

Miller H G, Quick J P F and Quick R M

A simple strategy for finding the low-lying solutions of the non-linear hartree fock equations

Murray D M

An alternative procedure for the computation of relative weights in SAATY's AHP

Orlowski M

On the largest empty rectangle and other maxdominance problems

Orlowska M E

An efficient algorithm for finding holes in whole

Pachter M

The calculation of the region of capturability/control-lability in differential games and optimal control problems

Pretorius L

A three dimensional thermal analysis of plug flow

Quick R M, Maré E Lancken M vd and Miller H G

An optimized "2N_x2N" Lanczos algorithm

Rabinowitz P

Product integration based on generalized Hermite-Fejer interpolation

Rohwer C H

The fast computation of Dolph-Chebyshev coefficients

Sloan D M

*A comparison of pseudospectral
methods for the KdV equation*

Sniedovich M

*Interactive computing, model-
ling and analysis*

Snyman J A

*A feasible direction interior
method for solving LP-problems*

Watson G A

*Data fitting by sums of ex-
ponentials*

*Solving overdetermined systems
of complex linear equations*

Yavin Y and de Villiers R

*A pursuit-evasion differential
game with the probability of a
random measure as a cost func-
tion*

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