



## TABLE OF CONTENTS

<b>FOREWORD</b>	A. J. GOUDE
<b>ACKNOWLEDGEMENTS</b>	<b>xvii</b>
<b>LIST OF PARTICIPANTS</b>	<b>xix</b>
<b>PLENARY SESSIONS</b>	
KRIGE D.G., GUARASCIO M. and CAMISANI-CALZOLARI F.A.	M.R. BERTHARD
Early South African geostatistical techniques in today's perspective .....	1
MATHERON G.	
The internal consistency of models in geostatistics.....	21
MONESTIEZ P., HABIB R. and AUDERGON J.M.	
Estimation de la covariance et du variogramme pour une fonction aléatoire à support arborescent : application à l'étude des arbres fruitiers .....	39
CHILES J.P.	
Modélisation géostatistique de réseaux de fractures.....	57
BRUNO R. and RASPA G.	
Geostatistical characterization of fractal models of surfaces .....	77
RIVOIRARD J.	
Models with orthogonal indicator residuals.....	91
OMRE H., HALVORSEN K.B. and BERTEIG V.	
A Bayesian approach to kriging.....	109
<b>THEORY I</b>	
SWITZER P.	
Non-stationary spatial covariances estimated from monitoring data .....	127
CHAUVET P.	
Quelques aspects de l'analyse structurale des FAI-k à 1 dimension.....	139

DOWD P.A.	
Generalised cross-covariances.....	151
CRESSIE N.	
The many faces of spatial prediction.....	163
OBLED C. & BRAUD I.	
Analogies entre géostatistique et analyse en composantes principales de processus ou analyse EOFs.....	177
<b>THEORY II</b>	
JEULIN D.	
Sequential random functions models.....	189
CHAUTRU J.M.	
The use of Boolean random functions in geostatistics.....	201
SOARES A.O.	
Use of a mathematical morphology tool in characterizing covariances of indicator data.....	213
ALLISON H.J.	
Regularization in geostatistics and in ill-posed inverse problems.....	225
DONG A.	
Kriging variables that satisfy the partial differential equation $\Delta Z = Y$ .....	237
<b>THEORY III</b>	
CALLE E.O.F. and VAN HETEREN J.	
Statistical inference of trend and covariance of a random field with nonstationary mean and stationary covariance properties ...	249
BOULANGER F.	
Géostatistique et processus autorégressifs : une nouvelle méthode de modélisation.....	259
STEIN M.L.	
The loss of efficiency in kriging prediction caused by misspecifications of the covariance structure.....	273
MYERS D.E.	
Vector conditional simulation.....	283
SRIVASTAVA R.M. and PARKER H.M.	
Robust measures of spatial continuity .....	295

<b>THEORY IV</b>	
MATHERON G.	
Two classes of isofactorial models .....	309
LAJAUNIE C. and LANTUEJOUL C.	
Setting up the general methodology for discrete isofactorial models.....	323
HU L.Y.	
Comparing gamma isofactorial disjunctive kriging and indicator kriging for estimating local spatial distributions .....	335
KLEINGELD W.J. and OOSTERVELD M.M.	
Researching local reserve estimates for a sporadic, discrete particles deposit.....	347
PUENTE C.E.	
Practical use of disjunctive kriging: effects of two dimensional parameterizations.....	359
<b>SOIL SCIENCE</b>	
LEENAERS H., OKX J.P. and BURROUGH P.A	
Co-kriging: an accurate and inexpensive means of mapping floodplain soil pollution by using elevation data .....	371
OLIVER M.A. and WEBSTER R.	
Geostatistically constrained multivariate classification.....	383
GOULARD M.	
Inference in a coregionalization model.....	397
WACKERNAGEL H., PETITGAS P. and TOUFFAIT Y.	
Overview of methods for co-regionalization analysis.....	409
WEBSTER R. and OLIVER M.A.	
Disjunctive kriging in agriculture.....	421
<b>OCEANOGRAPHY</b>	
GOHIN F.	
Analyse structurale de la température de surface de la mer.....	433
MUGE F.H. and CABECADAS G.	
A geostatistical approach to eutrophication modelling.....	445

PEREIRA H.G. and SOARES A.O.	459
Application of geostatistics to groundfish survey data.....	
YOUNG D.S.	469
Geostatistics coupled with physics model for ELF signal strength analysis.....	
SEGURET S.A.	481
Filtering periodic noise by using trigonometric kriging.....	
 CONTINUOUS SPATIAL DATA MATERIALS AND METHODS	
RODRIGUEZ J.M.	483
The use of Boolean events sufficient to generate the semi-variogram.....	
SOARES A.O.	513
Use of a mathematical morphology tool in characterizing correlations of indicator data.....	
MARSHALL R.J.	513
Regularization in geostatistics and its 1st-order improved problems.....	
SOARES A.O. and VILLEMEZ J.P.	539
Bayesian approach to assess environmental hot spots as spatial-temporal variables: most probable prior by deriving from multiblock fitting variables that satisfy the partial differential equation of P.D.E.....	
SOARES A.O. and VILLEMEZ J.P.	569
Geostatistics and spatial statistics: a comparison	589
SOARES A.O.	589
Statistical inference of mean and covariance of a random field with nonstationary mean and covariance: constrained maximum likelihood estimation of partial covariances	609
SOARES A.O.	609
Geostatistique et processus stochastiques: une nouvelle méthode de modélisation.....	
SPAIN G.L.	629
The loss of efficiency in kriging predictions caused by misspecification of the covariance structure.....	
SPAIN G.L.	649
Use of the cosine of anisotropy of the covariance matrix	649
SPAIN G.L.	649
Vector conditional simulation.....	
SPAIN G.L., VILLEMEZ J.P., and PARDELLA R.M.	669
Equilibrium polycrystalline of felsic rocks isotropicity A	669
SPAIN G.L.	669
Robust measures of spatial continuity.....	