

# Contents

Report on the Symposium Riccardo Barzaghi .....	1
The Molodensky Scalar Boundary Value Problem in Spherical Coordinates: a New Result (abstract only) Jesús Otero, Fernando Sansò .....	3
The Slepian Problem on the Sphere (abstract only) A.Albertella, F.Sansò, N.Sneeuw .....	4
White Noise Stochastic BVP's and Cimmino's Theory F. Sansò, G. Venuti.....	5
Simulation of the Goce Gravity Field Mission Nico Sneeuw, Raul Dorobantu, Christian Gerlach, Jürgen Müller, Helmut Oberndorfer, Reiner Rummel, Radboud Koop, Pieter Visser, Peter Hoyng, Avri Selig, Martijn Smit .....	14
Quality Improvement of Global Gravity Field Models by Combining Satellite Gradiometry and Airborne Gravimetry Johannes Bouman, Radboud Koop .....	21
On the Determination of Geopotential Differences from Satellite-to-Satellite Tracking Christopher Jekeli .....	33
On the Topographic Effects of Helmert's Method of Condensation Lars E. Sjöberg .....	40
Distance Measurement with Electromagnetic Wave Dispersion Michele Caputo .....	48
A Global Topographic-Isostatic Model Based on a Loading Theory Wenke Sun, Lars E. Sjöberg .....	61
Stochastic Modelling of Non-stationary Smooth Phenomena V. Tornatore, F. Migliaccio .....	77
Deformation Detection According to a Bayesian Approach B. Betti, F. Sansò, M. Crespi.....	83
Block Elimination and Weight Matrices (abstract only) Kai Borre .....	89
Construction of An-isotropic Covariance-Functions Using Sums of Riesz-Representers (abstract only) C.C.Tscherning.....	90
New Covariance Models for Local Applications of Collocation R. Barzaghi, A. Borghi, G. Sona .....	91
Approximation of Harmonic Covariance Functions on the Sphere by non Harmonic Locally Supported Ones (abstract only) G. Moreaux, C.C. Tscherning, F. Sansò .....	102
Integration of a Priori Gravity Field Models in Boundary Element Formulations to Geodetic Boundary Value Problems Roland Klees, Rüdiger Lehmann .....	103

On the Solution of the Inverse Stokes Problem Including Ellipsoidal Effects (abstract only) Bernhard Heck .....	110
The Spheroidal Stokes Boundary Value Problem (extended abstract) A. Ardalan, E. W. Grafarend, M.G. Sideris .....	111
The Hotine Rectified Skew Orthomorphic Projection (Oblique Mercator Projection) Revisited (abstract only) E. W. Grafarend, J. Engels .....	122
A Solution of the Korn-Lichtenstein Equations of Conformal Mapping which Directly Generates Ellipsoidal Gauß-Krüger Conformal Coordinates or the Transverse Mercator Projection (abstract only) R. Syffus .....	123
An Iterative Solution of the Scalar Free Boundary Value Problem and the Choice of the Reference Surface (abstract only) Kurt Seitz .....	124
On the Use of Galerkin's Method in the Solution of the Geodetic Boundary Value Problem (abstract only) Petr Holota .....	125
Numerical Aspects of Altimetry-Gravimetry Problems Rüdiger Lehmann .....	126
Fast Numerical Solution of the Vector Molodensky Problem Roland Klees, Christian Lage, Christoph Schwab .....	137
Softly Unbiased Prediction Part 2: The Random Effects Model Burkhard Schaffrin .....	145
Fractale, Brownian Motion, Wiener Process, Krige Variogram, Kolmogorov Structure Function: Geodetic Examples (abstract only) E. W. Grafarend .....	146
The General Linear Model – a Solution by Means of the Condition Adjustment Gabriel Nkuite, Jan van Mierlo .....	147
Iteration Procedure for Evaluating High Degree Potential Coefficients from Gravity Data M.S. Petrovskaya .....	158
On the Adjustment of Combined GPS/Levelling/Geoid Networks (abstract only) Christopher Kotsakis, Michael G. Sideris .....	165
Alternative Formulas for Terrain Reduction and Comparison with Existing Formulas Hussein A. Abd-Elmotaal .....	166
Error Detection in GPS Observations by Means of Multi-Process Models Enrik F. Thomsen .....	172
A Concept for Satellite Orbit Sensitivity Analysis (abstract only) Erik W. Grafarend, Christof Schafer .....	181
Index of Authors .....	182
List of Participants .....	183