CONTENTS

LECTURES

Yu. Aminov

THE PROBLEM OF STABILITY OF MINIMAL SUBMANIFOLDS IN RIEMANNIAN AND PSEUDO-RIEMANNIAN SPACES .................. 7
The Vector of Mean Curvature of a Submanifold in the Riemannian Space ..... 8
The Second Variation of the Area of a Minimal Surface in the Euclidean Space $E^3$ ................................................................. 16
On the Stability of Minimal Surfaces in the Riemannian Spaces .................. 19
The Behaviour of the Area of 2-Dimensional Surface in the Pseudo-Euclidean Spaces ........................................................................... 23
Expression of the Riemann Tensor of a Submanifold Defined by a System of Equations ................................................................. 29

G. Naber

A SURVEY OF DONALDSON THEORY .................................................. 33
The Moduli Spaces ................................................................................ 33
The Uhlenbeck Compactification ............................................................. 49
Donaldson’s Theorem on Definite Intersection Forms .............................. 54
The Donaldson Polynomial Invariants .................................................... 57

CONTRIBUTIONS

J. Aledo and L. Alías

SOME ESTIMATES FOR THE CURVATURES OF SPACELIKE HYPER-
SURFACES IN DE SITTER SPACE .................................................. 72

B. Angelov and I. Mladenov

ON THE GEOMETRY OF AXISYMMETRIC VESICLES .......................... 82

G. Arsan and G. Çivi

LAGUERRE’S FUNCTION OF DIRECTION IN A GENERALIZED WEYL
HYPERSONFACE .................................................................................. 93

Z. Bajnok and D. Nógrádi

SYMPLECTIC LEAVES OF W-ALGEBRAS FROM THE REDUCED
KAC–MOODY POINT OF VIEW .............................................................. 99

E. Binz and W. Schempp

QUANTUM HOLOGRAM AND RELATIVISTIC HODOGRAM: MAG-
NETIC RESONANCE TOMOGRAPHY AND
GRavitATIONAL WAVELET DETECTION .......................................... 110
<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>G. Çivi</td>
<td>ON THE BIANCHI IDENTITIES IN A GENERALIZED WEYL SPACE</td>
<td>151</td>
</tr>
<tr>
<td>V. Gerdjikov, G. Grahovski, N. Kostov</td>
<td>ON THE REDUCTIONS AND HAMILTONIAN STRUCTURES OF ( N )-WAVE TYPE EQUATIONS</td>
<td>156</td>
</tr>
<tr>
<td>M. Gürses</td>
<td>SIGMA MODELS, MINIMAL SURFACES AND SOME RICCI FLAT PSEUDO-RIEMANNIAN GEOMETRIES</td>
<td>171</td>
</tr>
<tr>
<td>A. Konechnyi, S. Rajeev, O. Turgut</td>
<td>CLASSICAL MECHANICS ON GRASSMANNIAN AND DISC</td>
<td>181</td>
</tr>
<tr>
<td>V. Kostov</td>
<td>SOME EXAMPLES RELATED TO THE DELIGNE–SIMPSON PROBLEM</td>
<td>208</td>
</tr>
<tr>
<td>V. Matveev</td>
<td>QUANTUM INTEGRABILITY AND COMPLETE SEPARATION OF VARIABLES FOR PROJECTIVELY EQUIVALENT METRICS ON THE TORUS</td>
<td>228</td>
</tr>
<tr>
<td>I. Mladenov</td>
<td>PREQUANTIZATION OF THE ROTATIONAL MOTION</td>
<td>245</td>
</tr>
<tr>
<td>G. Naber</td>
<td>THE WITTEN CONJECTURE</td>
<td>254</td>
</tr>
<tr>
<td>Ch. Prakash</td>
<td>A PRIMER ON OBSERVER THEORY</td>
<td>265</td>
</tr>
<tr>
<td>M. Puta, M. Butur, G. Goldenthal, I. Mos, C. Rujescu</td>
<td>MAXWELL–BLOCH EQUATIONS WITH A QUADRATIC CONTROL ABOUT ( O_x ) AXIS</td>
<td>280</td>
</tr>
<tr>
<td>J. Sarli and J. Torner</td>
<td>THE STRUCTURE OF FORMAL SOLUTIONS TO NAVIER’S EQUILIBRIUM EQUATION</td>
<td>287</td>
</tr>
<tr>
<td>D. Trifonov</td>
<td>DIAGONALIZATION OF HAMILTONIANS, UNCERTAINTY MATRICES AND ROBERTSON INEQUALITY</td>
<td>294</td>
</tr>
<tr>
<td></td>
<td>Subject Index</td>
<td>313</td>
</tr>
<tr>
<td></td>
<td>E-mail addresses</td>
<td>315</td>
</tr>
</tbody>
</table>