

CONTENTS

LECTURES

Vladimir V. Kisil

MÖBIUS–LIE GEOMETRY AND ITS EXTENSION	13
1. Introduction	14
2. Möbius–Lie Geometry and the Cycle Library	17
3. Example: Poincaré Extension of Möbius Transformations	22
4. Example: Continued Fractions	38
5. Extension of Möbius–Lie Geometry by Ensembles of Interrelated Cycles	48
6. Mathematical Usage of Libraries Cycle and Figure	54
Acknowledgements	58
References	58

CONTRIBUTIONS

Ciprian Sorin Acatrinei

DISCRETIZATION IN NONCOMMUTATIVE FIELD THEORY	65
---	----

Kamel Al-Khaled

WAVELET–BASED NUMERICAL SCHEME COMPARED WITH VIM FOR SOLVING KAWAHARA EQUATION	79
---	----

Mayeul Arminjon

INTERACTION ENERGY OF A CHARGED MEDIUM AND ITS EM FIELD IN A CURVED SPACETIME	88
--	----

Rutwig Campoamor-Stursberg	
THE LIE ALGEBRA $\mathfrak{sl}(2, \mathbb{R})$ AND NOETHER POINT SYMMETRIES OF LAGRANGIAN SYSTEMS	99
Viorel Laurentiu Cartas	
THE FRACTIONAL ZENER MODEL OF THE SPACETIME	115
Alina Dobrogowska, Grzegorz Jakimowicz, Marzena Szajewska and Karolina Wojciechowicz	
DEFORMATION OF THE POISSON STRUCTURE RELATED TO THE ALGEBROID BRACKET OF DIFFERENTIAL FORMS AND APPLICATION TO REAL LOW DIMENSIONAL LIE ALGEBRAS	122
Dorin Ghisa	
FUNDAMENTAL DOMAINS OF DIRICHLET FUNCTIONS	131
Francisco J. Herranz, Angel Ballesteros, Ivan Gutierrez–Sagredo and Mariano Santander	
CAYLEY–KLEIN POISSON HOMOGENEOUS SPACES	161
Tomoyo Kanazawa and Akira Yoshioka	
QUASI–CLASSICAL CALCULATION OF EIGENVALUES BY MASLOV QUANTIZATION CONDITION	184
Gulgassyl Nugmanova and Akbota Myrzakul	
INTEGRABILITY OF THE TWO-LAYER SPIN SYSTEM	208
Naohisa Ogawa	
GEOMETRIC FLOW APPEARING IN CONSERVATION LAW IN CLASSICAL AND QUANTUM MECHANICS	215
Álvaro Pámpano	
PLANAR P-ELASTICAE AND ROTATIONAL LINEAR WEINGARTEN SURFACES	227

Miroslav S. Petrov and Todor D. Todorov REFINEMENT STRATEGIES FOR 4D REGULAR DOMAINS	239
Vladimir Pulov, Mariana Hadzhilazova and Ivailo Mladenov DEFORMATIONS WITHOUT BENDING: EXPLICIT EXAMPLES	246
Nurettin Cenk Turgay, Alev Kelleci, Rüya Yeğın Şen and Elif Özkara Canfes ON QUASI-MINIMAL ISOMETRIC IMMERSIONS INTO NON- FLAT SEMI RIEMANNIAN SPACE FORMS OF INDEX TWO	255
Abraham A. Ungar RELATIVISTIC-GEOMETRIC ENTANGLEMENT: SYMMETRY GROUPS OF SYSTEMS OF ENTANGLED PARTICLES	266
Tihomir Valchev and Alexandar Yanovski SOLUTIONS TO A VECTOR HEISENBERG FERROMAGNET EQUATION RELATED TO SYMMETRIC SPACES	285
Alexandar Yanovski HIERARCHIES OF SYMPLECTIC STRUCTURES FOR $\mathfrak{sl}(3, \mathbb{C})$ ZAKHAROV-SHABAT SYSTEMS IN CANONICAL AND POLE GAUGE WITH $\mathbb{Z}_2 \times \mathbb{Z}_2$ REDUCTION OF MIKHAILOV TYPE	297
<i>E-mail Addresses</i>	311