

TABLE OF CONTENTS

PREFACE	5
IN MEMORIAM PROFESSOR JULIAN ŁAWRYNOWICZ (1939-2020)	11
Part I: HISTORY OF MATHEMATICS	13
Eugeniusz Barcz	
NEWTON AND THE OTHER GIANTS OF HIS TIME	15
Jan Koroński	
IRENA ŁOJCYK-KRÓLIKIEWICZ (1922 - 2019) IN THE CONTEXT OF JACEK SZARSKI'S (1921 - 1980) CRACOW SCHOOL OF DIFFERENTIAL INEQUALITIES	21
Part II: PURE AND APPLIED MATHEMATICS	33
Molla Basir Ahamed, Vasudevarao Allu, Himadri Halder	
ON THE BOHR PHENOMENON	35
Eugeniusz Barcz	
FIXED POINT THEOREMS OF THE GENERALIZED HUTCHINSON OPERATOR WITH BROWDER CONTRACTIONS AND CONSTRUCTION OF CERTAIN FRACTALS	61
Nak Eun Cho, Oh Sang Kwon, Young Jae Sim	
A NOTE ON THE COEFFICIENTS OF GAMMA AND STRONGLY STARLIKE FUNCTIONS	69
Ewa Dąbrowska	
A PROBABILISTIC APPROACH TO THE PREDICTION OF A MARITIME OIL SPILL MOVEMENT	81
Renata Długosz, Piotr Liczbenski	
BAVRIN'S FAMILIES OF HOLOMORPHIC FUNCTIONS OF SEVERAL COMPLEX VARIABLES, PAST AND PRESENT	99
Anna Dobosz, Bożena Sołtysek	
THE THIRD-ORDER HERMITIAN TOEPLITZ DETERMINANT FOR GAMMA-STARLIKE FUNCTIONS	117
Marek Golasiński	
AN ALGEBRAIC APPROACH TO HARMONIC POLYNOMIALS AND POLYNOMIAL MAPS OF TORI	125
Piotr Jastrzębski	
GAP SYSTEM - HOW SOFTWARE CAN HELP IN LIE GROUP THEORY?	139

In Hwa Kim, Nak Eun Cho INTEGRAL PRESERVING AND GEOMETRIC PROPERTIES OF CERTAIN ANALYTIC FUNCTIONS	149
Mikhail Kolev, Irina Naskinova THE ROLE OF THE INFECTIVITY RATE IN BACTERIAL INFECTIOUS DISEASES	159
Mikhail Kolev, Iveta Nikolova ON THE ROLE OF THE DAMAGING RATE OF TARGET CELLS IN AUTOIMMUNE DISEASES	167
Krzysztof Kołowrocki SAFETY ANALYSIS OF MULTI-STATE AGEING SYSTEMS WITH INSIDE DEPENDENCIES AND OUTSIDE IMPACTS	175
Krzysztof Kołowrocki, Beata Magryta-Mut OPERATION COST AND SAFETY OPTIMIZATION OF MARITIME TRANSPORTATION SYSTEM	215
Bogumiła Kowalczyk, Bożena Sołytysek DIFFERENTIAL SUBORDINATIONS OF ARITHMETIC AND GEOMETRIC MEANS CONNECTED WITH A SECTOR	249
Adam Lecko, Gangadharan Murugusundaramoorthy, Srikandan Sivasubramanian ON A SUBCLASS OF CLOSE-TO-CONVEX FUNCTIONS INVOLVING A LIMAÇON DOMAIN	259
See Keong Lee THE ZALCMAN CONJECTURE	275
Wiesław Majchrzak HARMONIC PLANAR MAPPINGS STARLIKE IN ONE DIRECTION	303
Jacek Marchwicki VARIOUS FACTS OF ACHIEVEMENT SETS	313
Dariusz Partyka, Ken-ichi Sakan QUASICONFORMALITY OF HARMONIC MAPPINGS OF THE UNIT DISK	327
Saminathan Ponnusamy, Ramakrishnan Vijayakumar NOTE ON IMPROVED BOHR INEQUALITY FOR HARMONIC MAPPINGS	353
Young Jae Sim, Derek K. Thomas SUCCESSIVE COEFFICIENTS OF UNIVALENT FUNCTIONS	361
Toshiyuki Sugawa ON THE INVERSE COEFFICIENTS OF UNIVALENT FUNCTIONS	381

Anbhu Swaminathan, Lateef Ahmad Wani	
A SURVEY OF MA-MINDA TYPE FUNCTION FAMILIES	397
Barbara Śmiarowska	
THE THIRD-ORDER HERMITIAN TOEPLITZ DETERMINANT FOR SOME CLASSES OF ANALYTIC FUNCTIONS	425
Part III: COMPUTER SCIENCE	433
Bożena Staruch, Bogdan Staruch	
AN ALGORITHM FOR RARE EVENTS PREDICTION BASED ON POINT CLASSIFIERS	435
Part IV: DIDACTICS OF MATHEMATICS	447
Agnieszka Bojarska-Sokołowska, Anna Dobosz	
MATHEMATICAL EDUCATION IN STEAM-PROJECTS DIRECTED TO CHILDREN AND ADOLESCENTS	449