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ANNALES POLONICI MATHEMATICI

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STANISŁAW ŁOJASIEWICZ, JÓZEF SICIAK

KOMITET REDAKCYJNY

A. BIELECKI, B. BOJARSKI, Z. CHARZYŃSKI, K. GĘBA,
P. JAKÓBCZAK (SEKRETARZ), J. KRZYŻ, A. LASOTA,
K. MAURIN, W. MŁAK, C. OLECH, W. PLEŚNIAK,
A. PLIŚ, B. SZAFIRSKI

LV

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INSTITUT DES MATHÉMATIQUES
ACADÉMIE POLONAISE DES SCIENCES
Śniadeckich 8, B.P. 137, 00-950 Warszawa, Pologne, telex 816112 panim pl

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FOREWORD

The Tenth Conference on Analytic Functions was held in Szczyrk from April 22 to April 27, 1990.

Organizing Committee: C. Andreian Cazacu (Bucharest), Z. Charzyński (Łódź), P. Dolbeault (Paris), F. W. Gehring (Ann Arbor), A. A. Gonchar (Moscow), L. Iliev (Sofia), Z. J. Jakubowski (Łódź), M. Jarnicki (Kraków; Vice-Chairman), C. O. Kiselman (Uppsala), J. Krzyż (Lublin), O. Lehto (Helsinki), J. Leiterer (Berlin), P. Lelong (Paris), J. Ławrynowicz (Łódź), S. Łojasiewicz (Kraków), P. Pflug (Vechta), W. Pleśniak (Kraków), K. Rusek (Kraków; Secretary), J. Siciak (Kraków; Chairman), W. Tutschke (Halle), V. S. Vladimirov (Moscow), T. Winiarski (Kraków).

The main topics were: geometric function theory of one complex variable, quasiconformal mappings, complex analysis in several variables and potential theory in \mathbb{C}^n .

140 mathematicians from 20 countries participated in the Conference. They delivered 28 one-hour lectures and 87 short communications.

The organizer of the Conference was the Institute of Mathematics of the Jagiellonian University.

The Conference was sponsored by the Institute of Mathematics of the Polish Academy of Sciences as well as by the Universities of Łódź and Lublin and by the Technical University of Rzeszów.

The Organizing Committee expresses its gratitude to all these institutions and to all people who helped the organizers in their efforts.

*

The Proceedings consist of the list of participants, the list of all lectures and communications and of 36 papers submitted to this volume. Most of the papers contain original results announced during the Conference; only a few of them are of survey character.

Kamil Rusek

Secretary

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DIMIEV, Stancho
DIMKOV, Georgi M.
HRISTOV, Valentin Z.
KIRYAKOVA, Virginia S.
KOVACHEVA, Ralitza
RUSEV, Peter

CANADA

BOIVIN, André
GILLIGAN, Bruce
SRIVASTAVA, Hari M.

CHILE

CÓRDOVA, Antonio

CHINESE PEOPLE'S REPUBLIC

XING, Yang

CZECHOSLOVAKIA

FUKA, Jaroslav

DDR

ACHILLES, Rüdiger
PETERS, Klaus
SCHMALZ, Gerd
TUTSCHKE, Wolfgang
WEGERT, Elias

FINLAND

NAEKKI, Raimo

FRANCE

BONNEAU, Pierre
DLOUSSKY, Georges
DOLBEAULT, Pierre

GREAT BRITAIN

CHISHOLM, John S. R.

ITALY

GENTILI, Graziano
MARCHIAFAVA, Stefano

ROMANI, Giuliano

SUCCI, Francesco

JAPAN

KOSHI, Shozo
MORIMOTO, Mitsuo

MEXICO

RAMIREZ DE ARELLANO, Enrique

NETHERLANDS

KOREVAAR, Jacob
WIEGERINCK, Jan

POLAND

BARAN, Mirosław
BŁOCKI, Zbigniew
CHMIEŁOWSKI, Jan
CYGAN, Ewa
CYNK, Sławomir
CZYŻ, Janusz
DĄBROWSKA, Anna
DOWNAROWICZ, Małgorzata
DRONKA, Janusz
DRUŻKOWSKI, Ludwik
DWILEWICZ, Roman
FRONTCZAK, Maria
GODULA, Janusz
HYB, Wojciech
JAKÓBCZAK, Piotr
JAKUBOWSKI, Zbigniew J.
JANIK, Adam
JARNICKI, Marek
JELONEK, Zbigniew
JĘDRZEJOWSKI, Mieczysław
JONDRO, Halina
KACZMAREK, Ludwika
KOŁODZIEJ, Sławomir
KOPIECKI, Ryszard

KRASIŃSKI, Tadeusz
 KROK, Anna
 KRÓLIKOWSKI, Wiesław
 KRZYŻ, Jan
 KURDYKA, Krzysztof
 KWIECIŃSKI, Michał
 LIGOCKA, Ewa
 LISIECKI, Wojciech
 ŁAWRYNOWICZ, Julian
 ŁOJASIEWICZ, Stanisław
 MACURA, Janina
 MAJCHRZAK, Wiesław
 MASZCZYK, Tomasz
 MAZUR, Tomasz
 MIODEK, Andrzej
 MYSZEWSKI, Jan
 PARTYKA, Dariusz
 PASTERNAK-WINIARSKI, Zbigniew
 PETHE, Karol
 PIERZCHAŁSKI, Antoni
 PŁOSKI, Arkadiusz
 REMBIELIŃSKI, Jakub
 RUSEK, Kamil
 RZĄDKOWSKI, Grzegorz
 SICIĄK, Józef
 SITARSKI, Ryszard
 SKALSKA, Krystyna
 SKIBIŃSKI, Przemysław
 SKWARCZYŃSKI, Maciej
 SOWA, Artur
 SPODZIEJA, Stanisław
 STANKIEWICZ, Jan
 STRZEBOŃSKI, Adam
 STRZELECKI, Paweł
 SZAPIEL, Wojciech
 SZEMBERG, Tomasz
 ŚLADKOWSKA-ZAHORSKA, Janina
 TOCHOWICZ, Kajetan
 TUTAJ, Halszka
 TWORZEWSKI, Piotr
 WANIURSKI, Józef
 WINIARSKI, Tadeusz
 WŁODARCZYK, Kazimierz
 WOJTASZCZYK, Przemysław
 WÓJCIK, Adam
 WRZESIEŃ, Andrzej
 ZAJĄC, Józef

ZWONEK, Włodzimierz
 ZYSKOWSKA, Krystyna

ROMANIA

ANDREIAN CAZACU, Cabiria
 CARAMAN, Petru
 GUSI, Gheorge
 MIHALACHE, N.
 PASCU, Eugen
 VIJITU, V.

SWEDEN

BACKLUND, Ulf
 FÄLSTRÖM, Anders
 PASSARE, Mikael

SWITZERLAND

KAUP, Burchard

USA

DUREN, Peter
 HILL, C. Denson
 MCNEAL, Jaffery

USSR

AIZENBERG, Lev I.
 CHIRKA, Evgeniĭ M.
 GRINSHPAN, Arkadiĭ Z.
 IVASHKOVICH, Sergeĭ M.
 KRASICHKOV-TERNOVSKIĭ, Igor F.
 KRUSHILIN, Nikolaĭ G.
 LIN, Vladimir Ya.
 MILIN, Izaak M.
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 ZÄIDENBERG, Mikhail G.

WEST GERMANY

BINGENER, Jürgen
 KAUP, Ludger
 KAUP, Wilhelm
 PFLUG, Peter
 RUSCHEWEYH, Stephan
 SPALLEK, Karlheinz

PROGRAM

I. LECTURES (45 min.)

1. R. Achilles, Excess intersections in complex analytic geometry.
2. L. I. Aĭzenberg, On holomorphic continuation from a part of the boundary.
3. J. Bingener, Infinite-dimensional superanalysis.
4. P. Caraman, New cases of equality between p -module and p -capacity in \mathbb{R}^n .
5. E. M. Chirka, CR-foliations.
6. G. Dloussky, On filling holes in dimension two.
7. P. Dolbeault, On CR-analytic chains with given boundaries.
8. P. Duren, Univalent functions with range of prescribed capacity.
9. Z. J. Jakubowski, Extremal problems in some classes of analytic functions.
10. B. Kaup, Hyperbolic \mathbb{C}^* -actions on affine algebraic surfaces.
11. J. Korevaar, Fields of electrons on the sphere and quadrature problems.
12. J. Krzyż, Generalized Neumann–Poincaré operator and chord-arc curves.
13. J. Ławrynowicz (with K. Kędzia and O. Suzuki), Supercomplex structures, surface soliton equations, and quasiconformal mappings.
14. M. Morimoto, Analytic functionals on the complex light cone and their Fourier–Borel transformations.
15. I. M. Milin, Leningrad school of geometric theory of functions of one complex variable.
16. P. Pflug (with M. Jarnicki), Properties of invariant distances—a survey.
17. A. Płoski, On the irreducibility of polynomials in several variables.
18. L. I. Ronkin, Jensen’s theorems for holomorphic almost-periodic functions in several variables.
19. S. Ruscheweyh, Multipliers for convex harmonic mappings.
20. A. G. Sergeev, On pseudoconvexity of matrix domains.
21. K. Spallek, Transformation groups on spaces.
22. J. Stankiewicz (with Z. Stankiewicz), On classes of functions regular in a half-plane.
23. P. M. Tamrazov, Removable singularities of plurisubharmonic functions in topological vector spaces.
24. A. K. Tsikh, The method of principal residue in Leray’s theory.
25. W. Tutschke, The role of analyticity for solving Cauchy–Kovalevskaya problems.
26. T. Winiarski, Global and local criteria for algebraicity.
27. A. P. Yuzhakov, Calculation of the full sum of local residua with respect to a polynomial mapping.
28. M. G. Zaĭdenberg, Ramanujan surfaces and exotic algebraic structures on \mathbb{C}^n .

II. COMMUNICATIONS (20 min.)

1. C. Andreian Cazacu, On the disc theorem.
2. —, Some generalizations of the Zorich Theorem by M. Cristea.
3. M. Baran, Bernstein type theorems for compact sets in \mathbb{C}^n .
4. A. Boivin, Holomorphic approximation in the complex plane—generalization of the Vitushkin Theorem.
5. P. Bonneau, On $\bar{\partial}$ -equations on weakly pseudoconvex domains.
6. J. S. R. Chisholm, Clifford–Padé approximation.
7. J. Chmielowski, Quelques remarques sur les ensembles déterminants.
8. S. Cynk, Diagonal series of rational functions.
9. J. Czyż, Summation formula for the coefficients in the Hausdorff series.
10. S. Dimiev, Local non-holonomic complex analytic geometry.
11. G. Dimkov, On products of starlike functions.
12. M. Downarowicz, On exceptional cones for partial type.
13. J. Dronka, On the location of critical points of a polynomial.
14. L. Drużkowski, The Jacobian Conjecture—a few steps towards solution.
15. M. Frontczak, A new simple proof of the Weil Integral Formula.
16. J. Fuka (with Z. Jakubowski), On a class of univalent functions.
17. G. Gentili, Regular quaternionic maps and $\bar{\partial}$ -type operators.
18. B. Gilligan, Complex analysis on homogeneous manifolds.
19. A. Z. Grinshpan, Univalent functions with logarithmic restrictions.
20. C. D. Hill, Counterexamples to the Newlander–Nirenberg Theorem up to the boundary and positive results for complex supermanifolds.
21. V. Z. Hristov, Remarks on Carathéodory and Kobayashi distances.
22. S. M. Ivashkovich, Rational curves, shells and extension of holomorphic maps.
23. P. Jakóbczak, Division by a holomorphic matrix in strictly pseudoconvex domains.
24. A. Janik, On approximation of analytic functions and generalized orders.
25. Z. Jelonek, Sets determining polynomial automorphisms of \mathbb{C}^n .
26. M. Jędrzejowski, The homogeneous transfinite diameter for compact subsets of \mathbb{C}^n .
27. L. Kaczmarek, Bounds of univalent functions in terms of iterated extrema.
28. V. S. Kiryakova, Generalized fractional differintegrals and their use in univalent function theory.
29. S. Koshi, Extremal problems in H^1 -space.
30. R. Kovacheva, Regions of uniform convergence of rational Chebyshev approximants with an unbounded number of poles.
31. I. F. Krasichkov-Ternovskii, General description of closed ideals and submodules of the analytic functions of one variable.
32. T. Krasieński, Bifurcation points of polynomials and the Jacobian Conjecture in \mathbb{C}^2 .
33. —, Properness and the Jacobian Conjecture in \mathbb{C}^2 .
34. N. G. Kruzhilin, On hulls of two-dimensional spheres in \mathbb{C}^2 .
35. K. Kurdyka, A counterexample to subanalyticity of an arc-analytic function.
36. M. Kwieciński, Polynomial mappings and Gröbner bases—a criterion for isomorphism of varieties.
37. E. Ligocka, A characterization of ellipsoids and balls in \mathbb{C}^n .
38. V. Ya. Lin, On the Liouville property connected with amenable group actions.
39. —, On superposition problem for algebraic functions of several complex variables.

40. J. Ławrynowicz (with J. Rembieliński), On Fueter-like equations for J^3 -triples and regularity.
41. J. Macura, On the second variation for univalent meromorphic functions.
42. T. Maszczyk, Noncommutative analyticity and instantons.
43. T. Mazur, On complex manifolds of Bergman type.
44. J. McNeal, Necessary conditions for Hölder estimates on solutions to $\bar{\partial}$ -equations.
45. N. Mihalache, Special neighbourhoods of analytic sets in Stein spaces.
46. A. Miodek (with J. Chądzyński and T. Krasiński), On radical complete intersections.
47. J. Myszewski, On the structure of the Lie algebra of the automorphism group of a circular domain in \mathbb{C}^n .
48. R. Naekki, One-sided quasidisks.
49. V. V. Napalkov, Some problems on convolution equations.
50. D. Partyka, A distortion theorem for quasiconformal automorphisms of the unit disk.
51. E. Pascu, On superanalytic algebras.
52. M. Passare, Polynomial interpolation and complex convexity.
53. Z. Pasternak-Winiarski, On dependence of the Bergman function on deformation of the Hartogs domain.
54. K. Peters, C^k -estimates for the $\bar{\partial}$ -equation of non-transversal intersections of strictly pseudoconvex domains.
55. K. Pethe, On a functional defined in the class of p -valued functions.
56. A. Pierzchalski, Quasiconformal deformations of manifolds with boundary.
57. V. Pokhilevich, On subclasses of regular univalent functions with a fixed coefficient.
58. E. Ramirez de Arellano (with W. Królikowski), An integral representation for Fueter–Hurwitz regular functions.
59. P. Rusev, Müntz type theorems for systems of degenerate hypergeometric functions.
60. G. Schmalz, Identification of pseudoconvex domains by the Bergman operator.
61. J. Siciak (with Nguyen Thanh Van), Doubly orthogonal systems of holomorphic functions and extremal plurisubharmonic functions.
62. R. Sitarski, On some L -analytic maps of two variables.
63. K. Skalska, On typically-real functions meromorphic in the unit disc.
64. P. Skibiński, Description of the set of critical points of a polynomial mapping in two variables.
65. M. Skwarczyński, Bergman function, alternating projections, L^2 -angles.
66. A. Sowa, Schwarz's derivative in high dimensions.
67. S. Spodzieja, A criterion of injectivity of holomorphic mappings.
68. H. M. Srivastava, Applications of certain linear operators in the theory of analytic functions.
69. J. Stankiewicz (with Z. Jakubowski), On classes of functions with non-classical normalization.
70. V. V. Starkov, Linear-invariant families with Stieltjes representation involving complex measures.
71. A. Strzeboński, Growth of regular functions on algebraic sets.
72. W. Szapiel (with W. Hengartner), On univalent functions omitting a given value.
73. T. Szemberg, Automorphisms of Riemann surfaces with two fixed points.
74. K. Tochowicz, The classes of univalent functions connected with homographies.
75. P. Tworzewski, Improper isolated intersections in complex analytic geometry.
76. V. Vijitit, A remark on Runge domains.

77. J. Waniurski, The Bloch constant for the Möbius transforms of convex mappings.
78. E. Wegert, On interpolation and approximation with families of holomorphic functions.
79. J. Wiegerinck, Representing measures for the disc algebra and for the ball algebra.
80. K. Włodarczyk, Angular derivative for holomorphic maps in complex Banach spaces.
81. P. Wojtaszczyk, Bases in the disc algebra.
82. A. Wójcik, Some remarks on Bernstein's Theorems.
83. A. Wrzesień, On some majorization of derivatives in the class $S^*(\gamma)$.
84. Xing Yang, A generalization of the Müntz–Szász Theorem.
85. M. G. Zaïdenberg, Normal mappings and growth estimates of Schottky–Landau type.
86. J. Zając, Distortion function and quasisymmetric mappings.
87. K. Zyskowska, On an estimate of some functional in the class of odd bounded univalent functions.