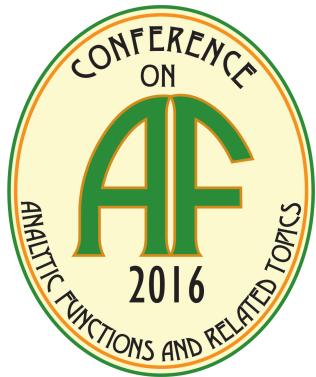


**XVIIIth Conference
on Analytic Functions and Related Topics**



Chełm

June 26-29, 2016

Organizing Committee:

Dariusz Partyka, Józef Zajac, Beata Falda, Jarosław Kapeluszny

Scientific Committee:

Fahreddin G. Abdullayev (Turkey), Anatoly Golberg (Israel), Aimo Hinkkanen (USA), Stanisława Kanas (Poland), Yuriy Kharkevich (Ukraine), Andriy Kondratyuk (Ukraine), Piotr Liczbierski (Poland), Julian Ławrynowicz (Poland), Dariusz Partyka (Poland), Lino F. Resndis (Mexico), David Shoikhet (Israel), Ken-ichi Sakan (Japan), Toshiyuki Sugawa (Japan), Luis Manuel Tovar (Mexico), Matti Vuorinen (Finland), Andriy Zagorodnyuk (Ukraine)

The booklet has been printed without editorial changes using texts submitted
by the authors in the printable form.

ORGANIZERS

The State School of Higher Education in Chelm
Institute of Mathematics and Computer Science (Poland)



Vasyl Stefanyk Precarpathian National University (Ukraine)



University of Rzeszow
Faculty of Mathematics and Natural Sciences (Poland)



Łódź University of Technology
Institute of Mathematics (Poland)



HISTORY OF CONFERENCE

1954 – 2016

I Conference on Analytic Functions	<i>Lódź 1954,</i>
II Conference on Analytic Functions	<i>Lublin 1958,</i>
III Conference on Analytic Functions	<i>Kraków 1962,</i>
IV Conference on Analytic Functions	<i>Lódź 1966,</i>
V Conference on Analytic Functions	<i>Lublin 1970,</i>
VI Conference on Analytic Functions	<i>Kraków 1974,</i>
VII Conference on Analytic Functions	<i>Kozubnik 1979,</i>
VIII Conference on Analytic Functions	<i>Błażejewko 1982,</i>
IX Conference on Analytic Functions	<i>Lublin 1986,</i>
X Conference on Analytic Functions	<i>Szczyrk 1990,</i>
XI Conference on Analytic Functions	<i>Warszawa and Rynia 1994,</i>
XII Conference on Analytic Functions	<i>Lublin 1998,</i>
XIII Conference on Analytic Functions	<i>Będlewo 2002,</i>
XIV Conference on Analytic Functions	<i>Chełm 2007,</i>
XV Conference on Analytic Functions and Related Topics	<i>Chełm 2009,</i>
XVI Conference on Analytic Functions and Related Topics	<i>Chełm 2011.</i>
XVII Conference on Analytic Functions and Related Topics	<i>Chełm 2014.</i>
XVIII Conference on Analytic Functions and Related Topics	<i>Chełm 2016.</i>

CONFERENCE PROGRAM

Sunday, June 26th, 2016

Since	10.00	Registration of conference participants (Hotel "Kamena" – Armii Krajowej 50, Chełm)
11.30	– 12.30	Lunch (Hotel "Kamena" – Armii Krajowej 50, Chełm)
13.00	– 13.15	Opening of the conference (Chełm Public Library – Partyzantów 40, Chełm)
13.15	– 15.15	Plenary session dedicated to the 120th Birthday Anniversary of Professor Kazimierz Kuratowski
15.15	– 15.30	Coffee break
16.00	– 18.30	The Jubilee Concert XVth Anniversary of the State School of Higher Education in Chełm (Chełm House of Culture – Pl. Tysiąclecia 1, Chełm)
19.00	– 21.00	Dinner (Hotel Kamena – Armii Krajowej 50, Chełm)

Monday, June 27th, 2016

7.00	– 8.30	Breakfast (Hotel "Kamena" – Armii Krajowej 50, Chełm)
9.00	– 10.50	Plenary lectures (Wojsławicka 8B, Chełm)
10.50	– 11.20	Coffee break
11.20	– 13.15	Section talks
13.20	– 14.00	Lunch (Wojsławicka 8B, Chełm)
14.00	– 14.50	Plenary lecture
15.00	– 16.05	Section talks
18.00	– 22.00	Dinner "Polish Tastes" with pottery workshops (The Academic Center of International Cooperation – Depułtycze Nowe)

Tuesday, June 28th, 2016

7.00 – 8.30 Breakfast
(Hotel ”Kamena” – Armii Krajowej 50, Chełm)
9.00 – 10.50 Plenary lectures
10.50 – 11.20 Coffee break
11.20 – 13.15 Section talks
13.20 – 14.00 Lunch
(Wojsławicka 8B, Chełm)
14.00 – 14.50 Plenary lecture
15.00 – 16.05 Section talks
18.00 – 22.00 Reception in the House of Art ”Old Mill” with a special concert
of Tania Shoikhet
(Uher 33)

Wednesday, June 29th, 2016

7.00 – 8.30 Breakfast
(Hotel ”Kamena” – Armii Krajowej 50, Chełm)
9.00 – 10.50 Plenary lectures
10.50 – 11.20 Coffee break
11.20 – 12.15 Section talks and poster session
12.20 – 12.50 Closing of the conference
13.00 – 13.50 Lunch
(Wojsławicka 8B, Chełm)

**The Conference is accompanied by an exhibition of photos and publications
of Professor Kazimierz Kuratowski**

SCIENTIFIC PROGRAM

The Conference program covers contemporary topics in complex analysis of one and several variables including:

- complex analysis and potential theory,
- elliptic partial differential equations,
- geometrical aspects of complex analysis,
- complex approximation theory,
- harmonic and quasiconformal mappings,
- generalized complex analysis,
- complex dynamical systems and fractals.

PROGRAM OF TALKS

Sunday, June 26th, 2016

Chełm Public Library – Partyzantów 40, Chełm

Plenary lectures

Chairman: Józef Zająć

- | | |
|---------------|---|
| 13.15 – 13.45 | Andrzej Schinzel: <i>Recollections about Professor Kazimierz Kuratowski</i> |
| 13.45 – 14.15 | Wiesław Żelazko: <i>Kazimierz Kuratowski – the Scientist, Teacher and Personality</i> |
| 14.15 – 14.45 | Feliks Przytycki: <i>TBA</i> |
| 14.45 – 15.15 | Stanisław Domoradzki: <i>Kazimierz Kuratowski (1896-1980). Notatki do biografii</i> |

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Monday, June 27th, 2016

The State School of Higher Education in Chełm, Wojsławicka 8B, Chełm

Plenary lectures – room 007

Chairman: Stanisława Kanas

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|---------------|--|
| 9.00 – 9.50 | Aimo Hinkkanen: <i>Complex dilatation and the Cartan-Kähler theory</i> |
| 10.00 – 10.50 | David Shoikhet: <i>Fixed Points, Semigroups and Rigidity of Holomorphic Mappings</i> |

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Section talks I – room 007

Chairman: Toshiyuki Sugawa

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|---------------|---|
| 11.20 – 11.45 | Dariusz Partyka, Ken-ichi Sakan and Jian-Feng Zhu: <i>Quasiconformal harmonic mappings with the convex holomorphic part</i> |
| 11.50 – 12.15 | Matti Vuorinen: <i>Hyperbolic type metrics and quasiconformal maps</i> |
| 12.20 – 12.45 | Parisa Hariri: <i>Some remarks on the Cassinian metric</i> |
| 12.50 – 13.15 | Dariusz Partyka, Józef Zająć: <i>Schwarz range domains for harmonic mappings of the unit disc with boundary normalization</i> |

Section talks II – room 002

Chairman: Lino F. Reséndis Ocampo

- | | | | |
|-------|---|-------|---|
| 11.20 | – | 11.45 | Klaus Schiefermayr: <i>The Bernstein-Walsh Inequality Revisited</i> |
| 11.50 | – | 12.15 | David Kalaj: <i>Deformations of Annuli on Riemann surfaces and the generalization of Nitsche conjecture</i> |
| 12.20 | – | 12.45 | Yaşar Polatoğlu and Asena Çetinkaya: <i>q-harmonic mappings for which analytic part q-convex functions of complex order</i> |
| 12.50 | – | 13.15 | Armen Grigoryan: <i>On Rouché's type theorem for continuous functions</i> |

Section talks III – room 105

Chairman: Jarosław Kapeluszny

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|-------|---|-------|--|
| 11.20 | – | 11.45 | Fahreddin G. Abdullayev, Gülnare A. Abdullayev: <i>On the interference conditions of the weight function and contour for orthogonal polynomials</i> |
| 11.50 | – | 12.15 | Fahreddin G. Abdullayev, Pelin Özkartape: <i>On the convergence of the some extremal polynomials in domains with exterior and interior zero angles</i> |

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Plenary lecture – room 007

Chairman: David Shoikhet

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|-------|---|-------|---|
| 14.00 | – | 14.50 | Stanisława Kanas: <i>Classes of harmonic functions with fixed analytic part</i> |
|-------|---|-------|---|

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Section talks I – room 007

Chairman: Matti Vuorinen

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|-------|---|-------|---|
| 15.00 | – | 15.25 | Toshiyuki Sugawa: <i>Successive coefficients of convex functions on the unit disk</i> |
| 15.30 | – | 15.45 | Ikkei Hotta: <i>Linearly accessibility by flows associated with Loewner's equations</i> |
| 15.50 | – | 16.05 | Sineenuch Suwannaphichat: <i>Extremal problems related to convexity</i> |

Section talks II – room 002

Chairman: Andriy Zagorodnyuk

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|---------------|---|
| 15.00 – 15.25 | Lino F. Reséndis Ocampo: <i>Quasi-Möbius invariant quaternionic spaces $F(p, q, s)$</i> |
| 15.30 – 15.45 | Yaşar Polatoğlu, Oya Mert: <i>q-harmonic mappings for which analytic part is q-starlike functions</i> |
| 15.50 – 16.05 | Anna Makarewicz: <i>New properties of determinants of rectangular matrices and their geometric interpretation</i> |

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Tuesday, June 28th, 2016

The State School of Higher Education in Chełm, Wojsławicka 8B, Chełm

Plenary lectures – room 007

Chairman: Aimo Hinkkanen

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|---------------|---|
| 9.00 – 9.50 | Hiroaki Aikawa: <i>Boundary Harnack principle and smoothness of the domain</i> |
| 10.00 – 10.50 | Antoni Pierzchalski: <i>Cauchy-Riemann-Tachibana operators: ellipticity at the boundary</i> |

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Section talks I – room 007

Chairman: Hiroaki Aikawa

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|---------------|---|
| 11.20 – 11.45 | Hiroshige Shiga: <i>Holomorphic motion over Riemann surface and monodromy</i> |
| 11.50 – 12.15 | Tadeusz Krasiński: <i>Milnor numbers in deformations of singularities</i> |
| 12.20 – 12.45 | Mark Elin: <i>Analyticity of semigroups on the right half-plane</i> |
| 12.50 – 13.15 | Andriy Zagorodnyuk: <i>On unbounded symmetric analytic functions on ℓ_1</i> |

Section talks II – room 002

Chairman: Antoni Pierzchalski

- 11.20 – 11.45 Grzegorz Łysik: *A characterization of real analytic functions*
11.50 – 12.15 Vasylyna Khoroshchak, Andriy Kondratyuk: *Some steps to nonlinear analysis*
12.20 – 12.45 Timothy O. Opoolla: *On some properties of the class of Spiral-like functions*
12.50 – 13.15 Andrzej Michalski: *Generalisations of the Clunie and Sheil-Small theorem*

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Plenary lecture – room 007

Chairman: Mark Elin

- 14.00 – 14.50 Anatoly Golberg: *Mappings with upper bounds for p -moduli*

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Section talks I – room 007

Chairman: Dariusz Partyka

- 15.00 – 15.25 Julian Ławrynowicz: *Complex-analytical and harmonic aspects of supersonic gas dynamics in relation to quickly moving metallic surfaces*
15.30 – 15.45 Małgorzata Nowak-Kępczyk: *Special ternary and quaternary nanostructures in relations to quickly moving alloy surfaces*
15.50 – 16.05 Oliwia Chojnacka, Adam Lecko: *Differential subordination of harmonic mean*

Section talks II – room 002

Chairman: Tadeusz Krasiński

- 15.00 – 15.25 Ewa Ciechanowicz: *Value distribution and growth of meromorphic solutions of the equation P_{34}*
15.30 – 15.45 Joanna Kowalczyk, Edyta Trybucka: *The Fekete-Szegő problem for certain subclass of close-to-convex functions*
15.50 – 16.05 Małgorzata Michalska: *Commutators of composition operators with adjoints of composition operators on some spaces of holomorphic functions*

Wednesday, June 29th, 2016

Plenary lectures – room 007

Chairman: Anatoly Golberg

- 9.00 – 9.50 Yuri B. Zelinskii: *Tangent shadow problem*
10.00 – 10.50 Renata Długosz, Piotr Liczberski: *Embedding theorems for locally biholomorphic mappings in \mathbb{C}^n*

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Section talks I – room 007

Chairman: Yuri B. Zelinskii

- 11.20 – 11.35 Yuri Kharkevych, Inna Kalchuk: *Approximation of functions from the classes $W_\beta^r H^\alpha$ by the biharmonic Poisson integrals*
11.40 – 11.55 Mariana Mostova, Mykola Zabolotskyj: *Logarithmic derivative of entire functions with zeros lying on a finite system of rays*
12.00 – 12.15 Paweł Zaprawa: *Third Hankel determinants for subclasses of univalent functions*

Section talks II – room 002

Chairman: Piotr Liczberski

- 11.20 – 11.35 Richard Bonner: *Reproducing kernels and convolution equations*
11.40 – 11.55 Agnieszka Sibelska: *On some class of holomorphic functions of several complex variables of the Bavrin type*

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- 11.20 – 12.15 Poster session

- Jacek Dziok *Classes of harmonic functions defined by subordination*
Agnieszka Szumera *Calculating procedure of the probabilistic regression functions*
Józef Zająć,
Mykola Korenkov,
Yurii Kharkevych *Asymptotic of logarithmic derivatives of Jacobi Theta-function*

The poster session will be held at Hall (Wojsławicka 8B).