Institute of Mathematics, Polish Academy of Sciences
Cardinal Stefan Wyszyński University

Conference

COMPLEX DIFFERENTIAL AND DIFFERENCE EQUATIONS II

August 27 – September 2, 2023

Mathematical Research and Conference Center, Będlewo

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Yoshitsugu Takei (Doshisha University, Japan).

Program of the Conference
Monday, August 28

8.15   Breakfast

9.00–9.10   OPENING CEREMONY

Morning Session

9.10–10.10   YOSHISHIGE HARAOKA (Josai University, JAPAN)
Shift operators and Riemann's problem

10.20–11.20   TOSHIYUKI MANO (University of the Ryukyus, JAPAN)
On a geometric notion associated with linear differential equations of Okubo normal form

11.20–11.40   Coffee break

11.40–12.40   TSVETANA STOYANOVA (Sofia University, BULGARIA)
Non-integrability of the Sasano system of type $D_5^{(1)}$

13.00   Lunch

Afternoon Session I

15.00–15.40   SHUNYA ADACHI (Chiba University, JAPAN)
Unitary monodromies of second order linear ordinary differential equations

15.50–16.30   HARU NEGAMI (Chiba University, JAPAN)
Multiplicative middle convolution for KZ-type equations and construction of representations of braid groups

16.30–17.00   Coffee break

Afternoon Session II

17.00–17.40   HIDEHITO NAGAO (Akashi College, JAPAN)
A multivariable generalization of the additive difference Painlevé equation with affine Weyl group symmetry type $D_4^{(1)}$

17.50–18.30   HUAN DAI (University of Lille, FRANCE)
Analytical and asymptotic properties of solutions of a non-homogeneous functional differential equation

18.30   Dinner

19.10–19.50   ZINELAABIDINE LATREUCH
(National Higher School of Mathematics, ALGERIA)
On the periodicity of entire functions and their differential polynomials

Tuesday, August 29

8.15 Breakfast

Morning Session

9.00–10.00 Yoshitsugu Takei (Doshisha University, JAPAN)
On the exact WKB analysis for difference equations

10.10–11.10 Sampei Hirose (Shibaura Institute of Technology, JAPAN)
On WKB solutions for a differential system satisfied by an oscillatory integral

11.10–11.40 Coffee break

11.40–12.40 Shofu Uchida (Kindai University, JAPAN)
An elementary approach of the connection formula for WKB solutions to the Pearcey system with a large parameter

13.00 Lunch

Afternoon Session I

15.00–15.40 Takahiro Shigaki (Kwansei Gakuin University, JAPAN)
Exact WKB analysis of nonlinear eigenvalue problems for a certain first order equation

15.50–16.30 Yumiko Takei (National Institute of Technology, Ibaraki College, JAPAN)
Voros coefficients and the topological recursion for the hypergeometric differential equations

16.30–17.00 Coffee break

Afternoon Session II

17.00–17.40 Paweł Wójcicki (Warsaw University of Technology, POLAND)
Reproducing kernel Hilbert spaces generated by some elliptic operators

17.50–18.30 Hubert Grzebuła (Cardinal Stefan Wyszyński University, POLAND)
Spherical polyharmonics

18.30 Conference Dinner

Wednesday, August 30

8.15 Breakfast

Morning Session

9.00–10.00 Ilpo Laine (University of Eastern Finland, FINLAND)
Meromorphic solutions of delay-differential equations

10.10–11.10 Yasunori Okada (Chiba University, JAPAN)
Differential operator representations of continuous homomorphisms in mixed cases for entire functions

11.10–11.40 Coffee break

11.40–12.40 Toshio Oshima (Josai University, JAPAN)
Integral transformations of hypergeometric functions with several variables

13.00 Lunch

14.00–18.30 Excursion

18.30 Dinner

Thursday, August 31

8.15 Breakfast

Morning Session

9.00–10.00 Sławomr Michalik (Cardinal Stefan Wyszyński University, POLAND)
On sequences preserving summability

10.10–11.10 Alberto Lastra (University of Alcalá, SPAIN)
Entire solutions of linear systems of moment differential equations and related asymptotic growth at infinity

11.10–11.40 Coffee break

11.40–12.40 Javier Sanz (University of Valladolid, SPAIN)
Optimal flat funtions and local right inverses for the asymptotic Borel map in ultraholomorphic classes

13.00 Lunch

Afternoon Session I

15.00–15.40 Ignacio Miguel-Cantero (University of Valladolid, SPAIN)
Stability properties for ultraholomorphic classes defined in unbounded sectors

15.50–16.30 Javier Jiménez-Garrido (University of Cantabria, SPAIN)
On generalized definitions of ultradifferentiable and ultraholomorphic classes

16.30–17.00 Coffee break

Afternoon Session II

17.00–17.40 Maria Suwińska (Cardinal Stefan Wyszyński University, POLAND)
On Gevrey regularity of solutions for inhomogeneous nonlinear moment partial differential equations

17.50–18.30 Hiroshi Ogawara (Josai University, JAPAN)
Differential transcendence of solutions for second order linear q-difference equations

18.30 BBQ/Bonfire

Friday, September 1

8.15 Breakfast

Morning Session

9.00–10.00 STEPHANE MALEK (University of Lille, FRANCE)
Gevrey asymptotics for logarithmic type solutions to singularly perturbed problems with nonlocal nonlinearities

10.10–11.10 MASAFUMI YOSHINO (Hiroshima University, JAPAN)
Summability and global property of transseries solution of Hamiltonian system

11.10–11.40 Coffee break

11.40–12.40 GRZEGORZ ŁYSIK (Jan Kochanowski University in Kielce, POLAND)
Smoothness of the Dunkl analytic functions

13.00 Lunch

15.00 Walk to the lake

18.30 Dinner