Asymptotic and computational aspects of complex differential equations

Workshop Program, February 13-17, 2017

Monday

9:45 – 10:45: *Registration*

10:45 – 11:00: *Opening*

11:00 – 12:00: R. Costin: *Weber equation as a normal form with applications.*

12:00 – 12:30: O. Minakov: *Modulated elliptic wave and a train of asymptotic solitons in a vicinity of the leading edge for MKdV.*

12:30 – 14:00: *Lunch*

14:00 – 15:00: A. Eremenko: *Real solutions of Painlevé VI.*

15:00 – 16:00: D. Masoero: *Rational solutions of Painlevé IV.*

16:00 – 16:30: C. Horrobin: *Stokes' phenomenon arising from colliding poles in the confluence from PVI to PV.*

16:00 – 16:50: *Coffee break*

16:50 – 17:50: F. Zullo: *Properties of the series solutions for Painlevé equations.*

17:50 – 18:20: J. Roussillon *Connection problem for Painlevé I isomonodromic tau function.*

Tuesday

9:00 – 10:00: M. Barkatou: *Symbolic methods for solving systems of linear ordinary differential equations* (lecture).

10:00 – 11:00: R. Schaefke: *Asymptotic expansion and theory of summability* (lecture).

11:00 – 11:30 : *Coffee break*

11:30 – 12:30 : M. Bertola: *TBA*

12:30 – 14:00 : *Lunch*

14:00 – 14:30 : G. Filipuk: *Meromorphic solutions of $P_{4,34}$ and their value distribution.*

14:30 - 15:00 : J. Jiménez-Garrido: *Extension to a sector of asymptotic expansions in a direction with strongly regular constraints.*

15:00 – 16:00 : G. Cotti *Monodromy of semisimple Frobenius coalescent structures*

16:00 – 16:30 : *Coffee break*

16:30 – 17:30 : O. Costin: *The quasi-solution method of global analysis of ODEs.*

17:30 – 18:00 : B. Podhajecka: *The Stokes phenomenon for certain partial differential equations.*

Wednesday

9:00 – 10:00: R. Schaefke: *Asymptotic expansion and theory of summability* (lecture).

10:00 – 11:00: M. Barkatou: *Symbolic methods for solving systems of linear ordinary differential equations* (lecture).

11:00 – 11:20 : *Coffee break*

11:20 – 12:20: O. Lisovyy: *Painlevé functions, Fredholm determinants and combinatorics.*

12:20 – 13:05: S. Abenda: *KP theory, total positivity and rational degenerations of M-curves*

13:05: *Lunch and free afternoon*

Thursday

9:00 – 10:00: M. Barkatou: *Symbolic methods for solving systems of linear ordinary differential equations* (lecture).

10:00 – 11:00: R. Schaefke: *Asymptotic expansion and theory of summability* (lecture).

11:00 – 11:30: *Coffee break*

11:30 – 12:30: Y. Haraoka: *Katz theory for KZ type equations and deformation.*

12:30 – 14:00: *Lunch*

14:00 – 15:00: Y. Takei: *Stokes geometry of higher order ODEs and middle convolution.*

15:00 – 16:00: D. Sauzin: *On resurgence, normal forms and mould calculus*

16:00 – 16:30: *Coffee break*

16:30 – 17:30: J. Sanz: *Injectivity and surjectivity of the asymptotic Borel map in classes with log-convex constraints.*

17:30 – 18:00: S. Carrillo: *Tauberian properties for monomial asymptotic expansions.*

Friday

 9:00 – 10:00: G. Lysik: *Mean values and heat type equations.*

10:00 – 11:00: R. Schaefke: *Asymptotic expansion and theory of summability* (lecture).

11:00 – 11:30: *Coffee break*

11:30 – 12:30: M. Barkatou: *Symbolic methods for solving systems of linear ordinary differential equations* (lecture).

12:30: *Closing and Lunch*