

# Formal and Analytic Solutions of Differential Equations

August 11-16, 2008.

## Conference Program

Monday, August 11

9.00–9.15 OPENING CEREMONY

**Chairman:** DONALD LUTZ

9.20–10.20 BOELE BRAAKSMA (University Groningen)  
**Resurgence of formal solutions of meromorphic ODEs**

10.20–10.50 Coffee break

10.50–11.30 KUNIO ICHINOBE (Kanagawa IT)  
**Characterization of irregularity for singular systems of ordinary differential equations in complex domain**  
(Joint work with M. MIYAKE)

11.45–12.45 JORGE MOZO-FERNÁNDEZ (University Valladolid)  
**Computing liouvillian solutions of linear ODEs**  
(Joint work with ALBERTO LLORENTE)

13.00 Lunch

**Chairman:** GERARD MISIOŁEK

15.00–16.00 MASATAKE MIYAKE (Nagoya University)  
**Newton polygon for a singular system of ordinary differential equations**

16.10–16.50 DIETER SCHMIDT (University of Duisburg-Essen)  
**On the global solutions of the confluent HEUN equation (CHE)**  
(Joint work with STEPHAN SCHULTZE)

16.50–17.20 Coffee break

**Chairman:** HIDETOSHI TAHARA

17.20–18.00 AKIRA SHIRAI (Sugiyama Jogakuen University)  
**Alternative proof for the convergence of formal solutions of singular first order nonlinear partial differential equations**

18.10–18.50 CLAUDIA RÖSCHEISEN (Ulm University)  
**On hypergeometric systems of differential equations**

19.00 Dinner

Tuesday, August 12

**Chairman:** TODOR GRAMCHEV

9.00–10.00 WERNER BALSER (University of Ulm)  
**Formal power series solutions**

10.00–10.30 Coffee break

10.30–11.30 HIDETOSHI TAHARA (Sophia University)  
**Coupling of two singular partial differential equations  
and its application**

11.45–12.45 GEERTRUI IMMINK (University of Groningen)  
**Accelero-summability of formal solutions of nonlinear,  
analytic difference equations**

13.00 Lunch

**Chairman:** ANNA DUVAL

15.00–15.40 STEPHANE MALEK (University of Lille)  
**On complex singularity analysis of  $q$ -differential difference  
equations**

15.50–16.50 GERARD MISIOŁEK (University of Notre Dame)  
**A new integrable equation on the Virasoro group**  
(Joint work with BORIS KHESIN and JONATAN LENELLS)

16.50–17.20 Coffee break

**Chairman:** ADALBERTO BERGAMASCO

17.20–18.00 GIOVANNI MORANDO (Università di Padova)  
**Subanalytic site and tempered holomorphic solutions  
of  $\mathcal{D}$ -modules on a complex curve**

18.10–18.50 LUCA PRELLI (Università di Padova)  
**Sheaves on subanalytic sites and  $D$ -modules**

19.15 Bonfire

Wednesday, August 13

**Chairman:** DIETER SCHMIDT

9.00–10.00 DONALD LUTZ (San Diego State University)  
**Some perspectives on the development of meromorphic  
differential equations**

10.00–10.30 Coffee break

10.30–11.30 YOSHISHIGE HARAOKA (Kumamoto University)  
**Prolongation of Fuchsian differential equations and  
computability of the monodromy**

11.45–12.45 MASAFUMI YOSHINO (Hiroshima University)  
 **$C^\omega$  Liouville-nonintegrable and  $C^\infty$  Liouville-integrable  
Hamiltonian systems**

13.00 Lunch

14.00–19.00 Excursion to Poznań

19.00 Dinner

Thursday, August 14

**Chairman:** MASAFUNI YOSHINO

9.00–10.00 ADALBERTO BERGAMASCO (Universidade de São Paulo)  
**Global solvability for a class of vector fields**

10.00–10.30 Coffee break

10.30–11.30 TODOR GRAMCHEV (University of Cagliari)  
**Solvability for singular partial differential equations  
in anisotropic spaces of analytic–Gevrey functions**

11.45–12.30 FERIDE TIGLAY (University of New Orleans)  
**Existence of some infinite energy solutions to Euler  
equations**  
(Joint work with R. SAXTON)

12.50 Conference picture

13.00 Lunch

**Chairman:** BOELE BRAAKSMA

15.00–15.40 JAN JANAS (Polish Academy of Sciences)  
**Asymptotic of generalized eigenvectors of unbounded  
Jacobi matrices**

15.50–16.30 HIDESHI YAMANE (Kwansei Gakuin University)  
**Logarithmic singularities of solutions to nonlinear  
partial differential equations**  
(Joint work with HIDETOSHI TAHARA)

16.30–17.00 Coffee break

17.00–19.00 Walk to the lake

19.00 Dinner

Friday, August 15

**Chairman:** GEERTRUI IMMINK

9.00–9.40 JAVIER SANZ (University Valladolid)  
**Summability in strong asymptotics**

9.50–10.20 EKATERINA KUTAFINA (University of Mining and Metallurgy)  
**Exact solutions of hyperbolic generalization of Burgers equation**

10.20–10.50 Coffee break

**Chairman:** MASATAKE MIYAKE

10.50–11.30 SŁAWOMIR MICHALIK (Cardinal Stefan Wyszyński University)  
**Summability of formal solutions of partial differential equations with constant coefficients**

11.40–12.20 GRZEGORZ ŁYSIK (Polish Academy of Sciences)  
**Formal and analytic solutions of the Burgers equation**

**12.30–13.00 Problem session and Closing**

13.00 Lunch

**15.00–19.00 Excursion to the Wielkopolski National Park**

19.00 Dinner

Saturday, August 16

**8.45 Departure**