

Program of the 9th edition of the conference

Functional Equations in LIMoges

FELIM 2016

March 29-31, 2016

Organised by

Moulay Barkatou, Thomas Cluzeau, Carole El Bacha,
Suzy Maddah, and Jacques-Arthur Weil

Salle de Conférences XLIM 3

Sponsored by

XLIM & Département Mathématiques et Informatique
& Région Limousin



FELIM 2016, Functional Equations in LIMoges

Tuesday, March 29

8:45-9:00 Welcome

Chair : F. Chyzak

9:00-9:50 **George Labahn:** *Rational Invariants of Finite Abelian Groups and their applications*

10:00-10:30 Coffee break, Discussions

10:30-10:55 **Alban Quadrat:** *An algebraic analysis approach to linear systems of differential time-varying delay equations*

11:00-11:25 **Islam Boussaada:** *Multiplicity and stable manifolds of Time-delay systems: A missing Link*

11:30-11:55 **Yacine Bouzidi:** *Computer algebra methods for the stability analysis of differential systems with commensurate time-delays*

12:00-14:30 Lunch break

Chair : G. Chèze

14:30-14:55 **Philippe Dumas:** *Fast computation of the Nth term of an algebraic series in positive characteristic*

15:00-15:25 **Tristan Vaccon:** *On p-adic differential equations with separation of variables*

15:30-16:00 Coffee break, Discussions

Chair : C. Mitschi

16:00-16:25 **Thierry Combet:** *Integrability of the one dimensional Schroedinger equation*

16:30-16:55 **Thomas Dreyfus:** *Towards an algorithm to compute the differential Galois group*

17:00-17:25 **Thomas Cluzeau:** *Computing the Lie algebra of the differential Galois group of a linear differential system*

FELIM 2016, Functional Equations in LIMoges

Wednesday, March 30

Chair : M. Barakat

9:00-9:50 **Vladimir Bavula:** *The algebras of polynomial integro-differential operators, their ideals and automorphisms*

10:00-10:30 Coffee break, Discussions

10:30-10:55 **Clemens Raab:** *A tensor approach to operator algebras*

11:00-11:25 **Jamal Hossein Poor:** *Tensor representation of the algebra of integro-differential operators with linear substitutions*

11:30-11:55 **Anton Panferov:** *Linear differential-algebraic systems with selected unknowns*

12:00-14:30 Lunch break

14:30-16:00 **Excursion:** *visit of the Museum of Fine Arts*

16:00-16:30 Coffee break, Discussions

Chair : D. Robertz

16:30-16:55 **Frédéric Chyzak:** *Computing solutions of linear Mahler equations*

17:00-17:25 **Louis Dumont:** *Efficient Algorithms for Mixed Creative Telescoping*

17:30-17:55 **Georg Grasegger:** *Rational General Solutions of First-Order Algebraic ODEs - Existence and Computation*

20:00- **Dinner**

FELIM 2016, Functional Equations in LIMoges

Thursday, March 31

Chair : A. Quadrat

9:00-9:50 **Mohamed Barakat:** *Programming abstract mathematics*

10:00-10:30 Coffee break, Discussions

10:30-10:55 **François Ollivier:** *Matrices extatiques et calcul de sorties linéarisantes rationnelles*

11:00-11:25 **Jordy Palafox:** *Isochronous center and correction of vector fields*

11:30-11:55 **Sergei Abramov:** *On the unimodularity testing for operator matrices*

12:00-14:30 Lunch break

Chair : S. Abramov

14:30-14:55 **Michel Petitot:** *Stochastic Petri nets and computer algebra*

15:00-15:25 **Sergey Paramonov:** *On some algorithmically undecidable problems connected with partial differential equations*

15:30-16:00 **Changgui Zhang:** *An analytic viewpoint on mock theta functions of Ramanujan*

16:00- Coffee break, Discussions
