

# **Functional Equations in LIMoges 2015**

**Monday, March 23, 2015 - Wednesday, March 25, 2015**

**XLIM, University of Limoges, Faculty of Sciences and Techniques**

## **Scientific Program**

<div style="text-align: center;">  
**Session Chairs**</div>

***Monday, March 23***

Morning session: Alexander Prokopenya

Afternoon session: Évelyne Hubert

***Tuesday, March 24***

Morning session: Sergei Abramov

Afternoon session: Eckhard Pfluegel

***Wednesday, March 25***

Morning session: Georg Regensburger

Afternoon session: Alban Quadrat

<div style="text-align: center;">  
**Program**</div>

**Monday, March 23**

**9h00 - 9h15**

Welcome

**9h15 - 10h15**

Werner Seiler: Geometric Singularities of Algebraic Differential Equations

**10h15 - 10h45**

Coffee break, Discussions

**10h45 - 11h15**

Jorge Mozo Fernández: Polynomial asymptotics and summability

## **11h15 - 11h45**

Eckhard Pfluegel: Pseudo-Linear Matrix Transformation Techniques and Applications to Cryptography

## **11h45 - 12h15**

Jean-Claude Yakoubsohn: A numerical study for the Newton method in the singular case

## **12h15 - 14h00**

Lunch break

## **14h00 - 15h00**

Peter Olver: Algebras of Differential Invariants

## **15h00 - 15h30**

Coffee break, Discussions

## **15h30 - 16h00**

Loïc Teysier: Computing Dessins d'Enfants

## **16h00 - 16h30**

Juan Viu Sos: On the geometry of line arrangements and polynomial vector fields

## **16h30 - 17h00**

Yacine Bouzidi: Algebraic techniques for testing the structural stability of multidimensional systems

## **Tuesday, March 24**

## **9h00 - 10h00**

Frédéric Chyzak: Hypergeometric generating series for small-step walks in the quarter plane

## **10h00 - 10h30**

Coffee break, Discussions

## **10h30 - 11h00**

Marko Petkovšek: On d'Alembertian and Liouvillian Sequences

## **11h00 - 11h30**

Charlotte Hulek: On the analytic reduction of singularly perturbed differential equations

## **11h30 - 12h00**

Maximilian Jaroschek: Formal Reduction of a Class of Pfaffian Systems in Several Variables

## **12h00 - 14h00**

Lunch break

## **14h00 - 15h00**

Georg Regensburger: Positive steady states and solutions of polynomial systems with real exponents

## **15h00 - 15h30**

Coffee break, Discussions

## **15h30 - 16h00**

Frédéric Pierret: Modeling and Scale dynamics

## **16h00 - 16h30**

Alban Quadrat: A constructive algebraic analysis approach to Artstein's reductions

## **20h00 -**

Dinner

## **Wednesday, March 25**

### **9h00 - 10h00**

Camilo Sanabria: Classifying Standard Equations

### **10h00 - 10h30**

Coffee break, Discussions

### **10h30 - 11h00**

Thomas Dreyfus: Isomonodromic deformation for Fuchsian  $q$ -difference equations and confluence.

### **11h00 - 11h30**

Thierry Combot: Fast computation of Liouvillian solutions of difference equations

### **11h30 - 12h00**

Roman N. Lee: Factoring out parameter dependence in linear differential systems

### **12h00 - 14h00**

Lunch break

### **14h00 - 14h30**

Islam Boussaada : Tracking the algebraic multiplicity of crossing imaginary roots for time-delay systems: A functional confluent Vandermonde-based framework

### **14h30 - 15h00**

Sergei Abramov: The EG-family of algorithms and procedures for solving linear differential and difference higher-order systems

## **15h00 - 15h30**

Alexander Prokopenya: Quantum Algorithm for Phase Estimation: Simulation with Wolfram Mathematica

## **15h30 -**

Coffee break, Discussions