

Algebraic versus Analytic Geometry

November 19 - December 13, 2011

Scientific Committee: Herwig Hauser, János Kollár, Josef Schicho, Duco van Straten

- **Week 2: Local Analytic Geometry**
November 28 - December 5, 2011

Organizer: Eleonore Faber

Monday, November 28, 2011

09:00 – 10:30: Luis Narváez

Local systems and logarithmic integrable connections with respect to the cusp

10:30 – 11:00: coffee break

11:00 – 12:30: Francisco Castro

Modules over the Weyl algebra and Bernstein-Sato polynomials

16:00 – 17:30: Problem session with speakers

Tuesday, November 29, 2011

10:00 – 11:30: Michel Granger

Bernstein Polynomials. A survey

11:30 – 13:00: Alexander Aleksandrov

Computations of Bernstein polynomials

15:00 - 16:30: Helmut Hamm

Integrability

Wednesday, November 30, 2011

09:00 – 10:30: Luis Narváez

Integrable logarithmic connections with respect to free divisors

10:30 – 11:00: coffee break

11:00 – 12:30: Francisco Castro

Effective computation of Bernstein-Sato polynomials

16:00 – 17:30: Problem session with speakers

Thursday, December 1, 2011

10:00 – 11:00: Alexandru Dimca

On the partial derivatives of a homogeneous polynomial

11:30 – 12:30: David Mond

Saito's criterion for freeness and its use in producing families of examples of free divisors in singularity theory

15:00 – 16:30: Mathias Schulze

Free divisors: properties, examples, questions

16:30 – 18:00: Jiro Sekiguchi

Holonomic systems with singularities along free divisors

Friday, December 2, 2011

09:00 – 10:30: Luis Narváez

Logarithmic-meromorphic comparison for free divisors

10:30 – 11:00: coffee break

11:00 – 12:30: Francisco Castro

Properties of the module of logarithmic derivations

15:00 – 16:00: Eleonore Faber

Free divisors, singularities and normal crossings

16:15 – 17:00: Nero Budur

Some applications of b -functions

17:15 – 17:50: Uli Walther

Computations of b -functions

Saturday, December 3, 2011

11:00 – 12:00: Sergey Yuzvinsky

Hyperplane arrangements

12:30 – 13:30: Alexander Aleksandrov

Logarithmic and torsion differential forms in the theory of singularities

Sunday, December 4, 2011

09:00 – 10:30: Luis Narváez

Problems and questions

10:30 – 11:00: coffee break

11:00 – 12:30: Francisco Castro

Presentations of the A_n -module of meromorphic functions with poles along a hypersurface

16:00 – 17:30: Problem session with speakers

Monday, December 5, 2011

09:00 – 10:30: Luis Narváez

Divisors of linear Jacobian type. The logarithmic Bernstein construction

10:30 – 11:00: coffee break

11:00 – 12:30: Francisco Castro

Computation of b -functions

All lectures take place in the ESI Schrödinger Lecture Hall (except for Tuesday and Wednesday in Boltzmann Lecture Hall)