SCHEDULE
Mathematics, Algorithms, Proofs 2010 – MAP 2010
Formal Proofs and Real Geometry
Logical, algebraic and numerical aspects

Logroño, Spain
November 8-12, 2010

Monday 8th		Room 005, Edificio Vives
09h30-10h00		**Registration**
10h00-10h15		**Welcome**
10h15-11h15	Invited talk	**Saugata Basu** (Purdue University) *"On the problem of computing Betti numbers of semi-algebraic sets - algorithms and complexity aspects"*
11h15-11h45	Break	
11h45-12h30	Talk	**Peter Schuster** (Universitat Munich) *"Induction in Algebra: First Steps"*
12h30-13h30	Tutorial	**Assia Mahboubi** (INRIA, Paris) *"Cylindrical Algebraic Decomposition in Coq (Part 1 of 4)"*
13h30	Lunch	
16h00-17h00	Tutorial	**Michel Coste** (Université de Rennes) *"O-minimal structures (Part 1 of 4)"*
17h00-17h30	Break	
17h30-18h15	Talk	**Joaquín Díaz Boils** (Universidad Valencia) *"Recursive function classes in cartesian categories"*

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Tuesday 9th		Room 005, Edificio Vives
09h30-10h30	Invited talk	**Graham Ellis** (National University Ireland) *"Persistent homology of spaces and groups"*
10h30-11h15	Talk	**Ana Romero** (Universidad de La Rioja) *"Effective homology and discrete Morse theory for the computation of homology of groups"*
11h15-11h45	Break	
11h45-12h30	Talk	**Mohamed Barakat** (University of Kaiserslautern) *"The cohomology of coherent sheaves"*
12h30-13h30	Tutorial	**Assia Mahboubi** (INRIA, Paris) *"Cylindrical Algebraic Decomposition in Coq (Part 2 of 4)"*
13h30	Lunch	
16h00-17h00	Tutorial	**Michel Coste** (Université de Rennes) *"O-minimal structures (Part 2 of 4)"*
17h00-17h30	Break	
17h30-18h15	Talk	**Salvador Lucas** (Universidad Politécnica de Valencia) *"Finding positive instances of parametric polynomials"*
18h15-19h00	Talk	**Antonio Montes** (Universidad Politécnica de Cataluña) *"Gröbner Cover: An algorithm for discussing polynomial systems with parameters"*

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Wednesday 10th		Room 005, Edificio Vives
09h00-09-45	Talk	**Bas Spitters** (Radboud University) *"Numerical Integration in Coq"*
09h45-10h30	Talk	**Jónathan Heras** (Universidad de La Rioja) *"Formal libraries for Algebraic Topology: status report"*
10h30-11h15	Talk	**Anders Mörtberg** (University of Gothenburg) *"Constructive algebra in functional programming"*
11h15-11h45	Break	
11h45-12h30	Talk	**Maxime Dénès** (INRIA) *"Experiments towards efficient computations in formalized linear algebra"*
12h30-13h15	Talk	**Georges Gonthier** (Microsoft Research Cambridge) *"Formalising the structure of extremal p-groups"*
13h30	Lunch	
16h00-20h00		*Social Events / ForMath Business Meeting*
20h30-¿?h¿?		*Conference Dinner*

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Thursday 11th		**Room 005, Edificio Vives**
09h45-10h30	Talk	**Francis Sergeraert** (Institut Fourier) *"Constructive Homology Classes and Constructive Triangulations"*
10h30-11h15	Talk	**Eduardo Sáenz de Cabezón** (Universidad de La Rioja) *"On the complexity of the Euler characteristic of abstract simplicial complexes. Algorithms to compute it"*
11h15-11h45	Break	
11h45-12h30	Talk	**Henri Lombardi** (Université de Franche-Comté) *"Revisiting Zariski Main Theorem from a constructive point of view"*
12h30-13h30	Tutorial	**Assia Mahboubi** (INRIA, Paris) *"Cylindrical Algebraic Decomposition in Coq (Part 3 of 4)"*
13h30	Lunch	
16h00-17h00	Tutorial	**Michel Coste** (Université de Rennes) *"O-minimal structures (Part 3 of 4)"*
17h00-17h30	Break	
17h30-18h15	Talk	**Francisco Castro** (Universidad de Sevilla) *"Computable objects in D-modules theory"*
18h15-19h00	Talk	**Luis Español** (Universidad de La Rioja) *"Chain calculus and Krull dimension in distributive lattices"*
19h00-20h00		*MAP Business Meeting*

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Friday 12th   **Room 005, Edificio Vives**

09h30-10h30	Tutorial	**Michel Coste** (Université de Rennes) *"O-minimal structures (Part 4 of 4)"*
10h30-11h15	Talk	**Bassel Mannaa** (University of Gothenburg) *"An implementation of Abhyankar's proof of Newton theorem in Haskell"*
11h15-11h45	Break	
11h45-12h30	Talk	**David Delahaye** (CNAM, Paris) *"Trusted Computer Mathematics within the Focalize Environment"*
12h30-13h30	Tutorial	**Assia Mahboubi** (INRIA, Paris) *"Cylindrical Algebraic Decomposition in Coq (Part 4 of 4)"*
13h30	Lunch	
16h00-19h00		*Open Session: Challenges in Formal Proofs and Mathematical Applications*
19h00-19h30		*Closing Session*