

Publicité pour le programme ARCUS Rhône-Alpes -- Brésil
Région Rhône-Alpes et Ministère des affaires étrangères et européennes

- Impression de la page d'accueil et de la page "Activités scientifiques" du site du sous-projet "Mathématiques" (pp. 2 -- 5)
- Poster de l'école d'été de mathématiques (Institut Fourier, Université Joseph Fourier) des années 2008, 2009 et 2010 (pp. 6 -- 8)
- Information sur les ateliers "Dynamique des fluides" (Campinas, Janvier 2010 et Lyon, Juillet 2010) (p. 9)
- Affiche de l'évènement "Géométries" de l'Année de la France au Brésil, 2009 (p. 10)
- Affiche et impression de la page d'accueil de l'atelier "Analyse géométrique", 2010 (pp. 11 -- 12)
- Affiche et impression de la page d'accueil de l'atelier "Géométrie algébrique", 2010 (pp. 13 -- 14)
- Notice des notes de cours données à Fortaleza, "Ecole de géométrie différentielle", 2008 (p. 15)

ARCUS Programme

Subproject Mathematics

Région Rhône Alpes - Brazil

2008-2010

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This cooperation programme (ARCUS Programme RRhA-BR for short) is focused on post-graduate schools and workshops and aims at developing collaborations between research teams from both sides, Brazil and France. It is supported by the French Ministry of European and Foreign Affairs ([MAEE-ARCUS](#)), by the Région Rhône Alpes ([RRhA](#)) and by the participating institutions. The programme is organized into three main topics:

- Mathematics
- Engineering
- Social sciences

More information on the "Mathematics sub-project" is available on the following pages. Documents relevant to the ARCUS programme are available on the page " Official documents ".

ARCUS Programme RRhA-BR - Mathematics

- [Scientific activities](#)
- [Reports and Presentations](#)
- [Related programmes](#)
- [Official documents](#)

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ARCUS Programme RRhA-BR 2008-2010

Rhône-Alpes — Brésil

Mathematics

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Supported by Région Rhône-Alpes and Ministère des affaires étrangères et européennes (France)

Mathematics programme coordinators: [Pierre Bérard](#) (UJF-Grenoble) et [Ricardo Sá Earp](#) (PUC-Rio)

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Scientific activities 2010

- Geometric Analysis, IMPA-Institut Fourier / ARCUS RRhA-BR and MATH-AmSud (16--26 November 2010)

Organizers: P. Bérard, G. Besson (UJF/CNRS), F. Codá Marques (IMPA). [Web page](#)

ARCUS Participants in Rio: Pierre Bérard, Laurent Bessières, Gérard Besson, Vincent Bour, Chi-Wei Chen, Alix Deruelle, Zindine Djadli, Thomas Richard (UJF). Support by ARCUS, ANR, IMPA, Math-AmSud.

- Algebraic Geometry Programme Grenoble/Lyon -- Rio de Janeiro/Belo Horizonte (18--29 October 2010)

Organizers: B. Rémy (UCBL), E. Peyre (UJF), C. Araújo (IMPA). [Web page](#)

ARCUS Participants in Rio: Stéphane Druel (CNRS/UJF), Emmanuel Peyre (UJF), Bertrand Rémy (UCBL), Amaury Thuillier (UCBL). Supported by ARCUS, IMPA, IUF.

- Mathematics Summer School - Institut Fourier:
Arithmetical geometry (Grenoble, June 14 -- July 2, 2010)

Organizer: E. Peyre (UJF).

[Institut Fourier](#) [Poster](#)

ARCUS Participants in Grenoble: Edilaine Ervilha Nobili (IMPA), Jefferson Nogueira (UFF), Douglas M. de Melo Santos (IMPA). Supported by ARCUS, CNRS, UJF.

- Summer school on partial differential equations and fluid dynamics, II (Lyon, July 2010)

Organizers: M. Lopes (UNICAMP) and D. Iftimie (UCBL). [Information](#)

ARCUS Participants in Lyon: Anne Bronzi (Univ. Estadual Campinas), Cecilia Mondaini (UFRJ), Eleonora Pinto de Moura (UNICAMP), Adilson Presoto (Univ. Estadual Campinas), Fabio Ramos (UFRJ), Max Souza (UFF), Luiz Alberto Viana (Univ. Estadual Campinas), Humberto Viglioni (USP). Support by ARCUS and Institut Camille Jordan.

- Summer school on partial differential equations and fluid dynamics, I (Campinas, January 2010)

Organizers: M. Lopes (UNICAMP) and D. Iftimie (UCBL). [Information](#)

ARCUS Participants in Campinas: C. Audiard (UCBL), M. Bonnard (Univ. Savoie), L. Brandolese (UCBL), T. Gallay (UJF), R. Fares (Univ. Saint Etienne). Support by ARCUS, CNPq, FAPESP, UNICAMP.

Other activities:

- Clay Mathematics Institute 2010 Summer School: Probability and Statistical Physics in Two and more Dimensions.

Búzios (Brazil), July 11 - August 7, 2010

Organizers: V. Sidoravicius (IMPA) and W. Werner (Orsay)

[School home page](#)

ARCUS Participants in Brazil: Nicky Sonigo (ENSL). Support by ARCUS and the Summer school.

- Doctoral training at IMPA, UNICAMP and UFRGS, January-April 2010.

ARCUS Participants in Brazil: Augusto Gerolin (ENSL). Partially supported by ARCUS and by the host institutions.

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2009 activities supported by / related to ARCUS

- "[Géométries - Geometrias](#)" (Année de la France au Brésil 2009 -- Ano da França no Brasil 2009) Mini-courses and Conferences at IMPA & PUC-Rio (Rio de Janeiro, 13 - 17/04/2009) & Research activities at Institut Fourier (Grenoble, June - November, 2009)
Organizer: Pierre Bérard (UJF). ([Web page](#))

ARCUS Participants in Rio: Pierre Bérard (UJF, Partially supported by CNPq and Région Rhône-Alpes, MIRA 2008), Gérard Besson (CNRS Grenoble, Supported by ARCUS and IMPA), Hervé Pajot (UJF, Supported by ARCUS and IMPA).

ARCUS Participants in Grenoble: D. Jane (IMPA), L. Fusaro (UFMG), O. Santana (UNICAMP), M. Telichnevsky (UFRGS). Support by ARCUS (research visit in Grenoble on the occasion of the Mathematics Summer School).

- International conference on differential geometry (Grenoble, 01 - 05/06/2009, 2009)
Organizer: G. Besson (CNRS, Institut Fourier) ([Institut Fourier](#))

ARCUS Participants in Grenoble: M. do Carmo, F. Coda (IMPA), R. Sá Earp (PUC-Rio), W. Santos (UFRJ). Support by the conference.

- Mathematics Summer School - Institut Fourier, Grenoble and UMPA, Lyon :
Optimal transportation: theory and applications (Grenoble, 15/06/2009 - 03/07/2009)
Organizers: H. Pajot (UJF) and Y. Ollivier, C. Villani (ENSL). ([Programme](#)) ([Poster](#)) ([Fellowships](#))

ARCUS Participants in Grenoble: A. Bazan (UFRJ), M. Cavalcante (UFAL), F. Elbert (UFRJ), E. Gonçalves (UNICAMP), W. Neves (UFRJ). Support by ARCUS and Mathematics Summer School.

- Workshop on non-linear analysis (Rio de Janeiro, 03-07/08/2009)
Organizers: W. Santos (UFRJ) ([Matemática - UFRJ](#)) ([Support](#))

ARCUS Participants in Rio: Pierre Bérard (UJF, Partially supported by FAPERJ and Région Rhône-Alpes, MIRA 2008).

- Colóquio brasileiro de matemática - IMPA (Rio de Janeiro, July / August, 2009) ([IMPA](#))

ARCUS Participants in Rio: Pierre Bérard (UJF, Partially supported by FAPERJ and Région Rhône-Alpes, MIRA 2008).

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2008 activities supported by ARCUS

- Mathematics Summer School - Institut Fourier:
Geometric methods in representation theory (Grenoble, June 16 -July 4, 2008) [Institut Fourier](#)
[Poster](#)
ARCUS Participants: Aldo Peres (UFMG, Partially supported by ARCUS), Fábio Xavier Pena (IMPA, Partially supported by ARCUS)
 - XV Escola de geometria (Fortaleza, 14-18 July 2008)
ARCUS Participants: Pierre Bérard (UJF, Partially supported by ARCUS), Gérard Besson (CNRS Grenoble, Partially supported by ANR grant)
 - XII Escola Brasileira de probabilidade (Ouro Preto - MG, 3-9 August 2008)
ARCUS Participants: A. Fribergh (UCBL, Partially supported by ARCUS)
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SUMMER SCHOOL IN MATHEMATICS

GEOMETRIC METHODS IN REPRESENTATION THEORY

Institut Fourier
June 16th – July 4th, 2008

First week: Introductory courses

Quiver representations	M. Brion
Punctual Hilbert schemes	J. Bertin
McKay correspondence	G. Gonzalez-Sprinberg
Hall algebras	O. Schiffmann

Second week: Advanced courses

Crystal bases and Fock space	B. Leclerc
Haiman's work on the $n!$ theorem, and beyond	I. Gordon
Nakajima varieties	V. Ginzburg
Hamiltonian reduction	J.C. Jantzen
Canonical bases and moduli spaces	O. Schiffmann

Third week: Conference

A series of talks will be given by the following speakers:
P. Caldero, V. Ginzburg, L. Hille, V. Lakshmibai, R. Rouquier, C. Sorger, M. Van den Bergh, and others

For further information:

Web site: <http://www-fourier.ujf-grenoble.fr/Summer-school-2008.html>

Organizers: J.Bertin, M.Brion, O.Garotta
Secretary: Geraldine.Rahal@ujf-grenoble.fr

This school is supported by:
MENRT, CNRS, Université Joseph Fourier (Ecole doctorale MSTII, Collège des Ecoles Doctorales), Programme ARCUS, Programme ACCES, Ville de Grenoble, Région Rhône-Alpes, GDR 2249 and GDR 2432

SUMMER SCHOOL IN MATHEMATICS

OPTIMAL TRANSPORTATION
THEORY AND APPLICATIONSInstitut Fourier – Grenoble (France)
June 15th – July 3th, 2009

The aim is to present recent developments in optimal transportation and also its applications in biology, mathematical physics, information theory,...

First week: Basic courses

General theory of optimal transport
Models and applications of optimal transport in economics, traffic and urban planning
Lagrangian systems and their associated costs
Logarithmic Sobolev inequality for diffusions and curvature- dimension condition
Discrete Markov chains, functional inequalities and optimal transport

F. Santambrogio
A. Fathi
I. Gentil
Y. Ollivier

Second week: Advanced courses

Variational methods for incompressible Euler equations
Ricci flow
Gradient flows and optimal transport
Ricci curvature, entropy and optimal transport

A. Figalli
P. Topping
G. Savare
S. I. Ohta

Third week: Workshop

F. Bolley, Y. Brenier, V. Calvez, J. Delon, B. De Meyer, I. Ekeland, U. Frisch, N. Gozlan, R. Gray, A. Guillin, D. Jacobs, C. Jimenez, A. Joulin, R. Mc Cann, F. Maggi, B. Maury, Q. Mérigot, B. W. Schachermayer, E. Stepanov, K.T. Sturm, L. Wu.

For further information and registration:

Web site: <http://www-fourier.ujf-grenoble.fr/-2009-.html>

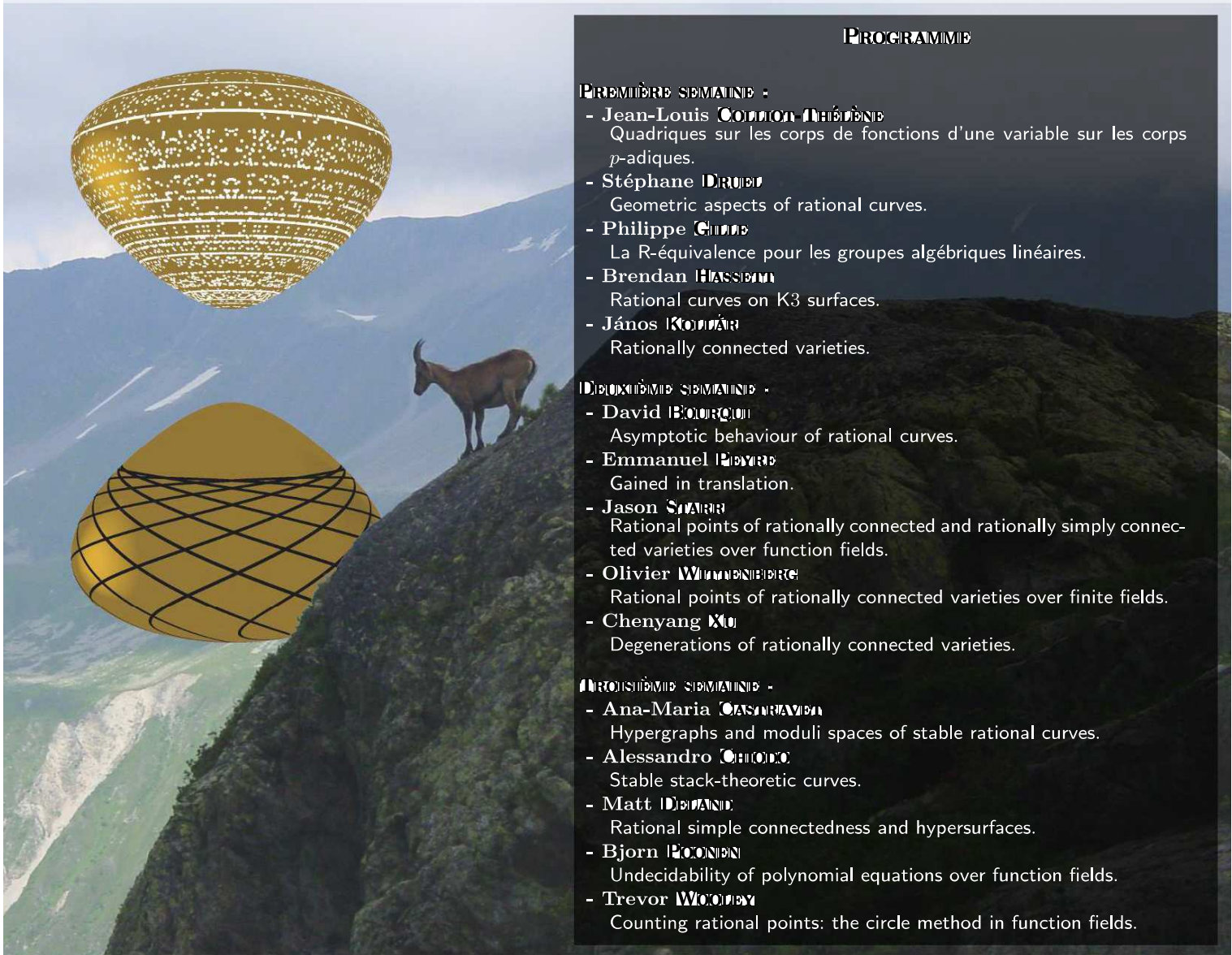
Organizers: Y. Ollivier, H. Pajot, C. Villani
Secretary: Geraldine.Rahal@ujf-grenoble.fr

This school is supported by:

MENRT, CNRS, Université Joseph Fourier (Ecole doctorale MSTII, Collège des Ecoles Doctorales), Ville de Grenoble, Région Rhône-Alpes, GDR 2753, ANR FOG, ANR CANNON, ANR KAMFAIBLE, ANR EVOL

Aspects arithmétiques des courbes rationnelles

du 14 juin au 2 juillet 2010
Institut Fourier – Grenoble (France)



PROGRAMME

PREMIÈRE SEMAINE -

- Jean-Louis COGNON-THÉODÈRE
Quadriques sur les corps de fonctions d'une variable sur les corps p -adiques.
- Stéphane DRUBI
Geometric aspects of rational curves.
- Philippe CHANG
La R -équivalence pour les groupes algébriques linéaires.
- Brendan HASSLER
Rational curves on K3 surfaces.
- János KONTÁR
Rationally connected varieties.

DEUXIÈME SEMAINE -

- David BOURQUI
Asymptotic behaviour of rational curves.
- Emmanuel PEYRE
Gained in translation.
- Jason SURR
Rational points of rationally connected and rationally simply connected varieties over function fields.
- Olivier WINDENBERG
Rational points of rationally connected varieties over finite fields.
- Chenyang XU
Degenerations of rationally connected varieties.

TROISIÈME SEMAINE -

- Ana-Maria CĂȘTĂLĂN
Hypergraphs and moduli spaces of stable rational curves.
- Alessandro CHIODO
Stable stack-theoretic curves.
- Matt DEBAND
Rational simple connectedness and hypersurfaces.
- Bjorn POONEN
Undecidability of polynomial equations over function fields.
- Trevor WOODS
Counting rational points: the circle method in function fields.

ARCUS Rhône-Alpes -- Brésil

**Franco-Brazilian Fluids Summer Schools
January (Campinas) & July (Lyon) 2010**

Mini-courses and conferences

Supported by:

**Agence nationale de la recherche; Centre national de la
recherche scientifique, Région Rhône-Alpes, Ministère des
affaires étrangères et européennes (France).**

CNPq, FAPESP, UNICAMP (Brésil).

Geometrias

Géométries

IMPA/PUC-Rio, Rio de Janeiro
13 a 17 de Abril de 2009

O evento "Geometrias" se dirige a matemáticos, pesquisadores, alunos de doutorado e alunos avançados de mestrado interessados em Geometria sob diversos pontos de vista. As atividades estão inseridas na programação do Ano da França no Brasil; algumas serão transmitidas em tempo real pela Internet e algumas estarão disponíveis em vídeo no site do IMPA.

A primeira fase, em abril de 2009, constará de três mini-cursos no IMPA e de conferências gerais no IMPA e na PUC-Rio, ministrados por matemáticos da Universidade Joseph Fourier, Grenoble. Apoio financeiro para a estadia será oferecido a pesquisadores e alunos visitantes que queiram participar desta fase.

Na segunda fase serão oferecidas bolsas para a participação de jovens matemáticos brasileiros em atividades de pesquisa em Grenoble. São 3 bolsas com duração de até três meses entre junho e novembro de 2009, e 5 bolsas para participação na Escola de Verão "Optimal transportation, theory and applications", de 15 junho a 3 julho de 2009. As candidaturas deverão ser submetidas até 15 de Abril de 2009.

Mini-cursos - IMPA

vídeos disponíveis no site do IMPA

Spectral problems on Riemannian manifolds
por Pierre Bérard, 13 a 15 de abril, 10h30-12h

Rigidity theorems and applications - From Mostow's theorem to the growth of groups
por Gérard Besson, 13 a 15 de abril, 13h30-15h

Quasiconformal geometry and Mostow rigidity
por Hervé Pajot, 13 a 15 de abril, 15h30-17h

Conferências no IMPA

transmitidas de Grenoble pela Internet, 16 Abril, 9h30-14h30

Entire curves and algebraic differential equations, *por Jean-Pierre Demailly*
Uniformization in several complex variables, *por Philippe Eyssidieux*
Arithmetics under influence, *por Emmanuel Peyre*

Conferências na PUC-Rio

17 Abril, 9h30-12h30

The differentiable sphere theorem (after Brendle-Schoen & Boehm-Wilking), *por Gérard Besson*
Quasi-conformal geometry and hyperbolic groups -The Cannon conjecture, *por Hervé Pajot*

mais informações: DAC - IMPA

fax 21 2529 5019 geometrias@impa.br

http://www.impa.br/opencms/pt/eventos/store/evento_0906

Apoio financeiro

ARCUS Rhône-Alpes - Brésil

CNRS

Ministère des affaires
étrangères et européennes

Région Rhône-Alpes

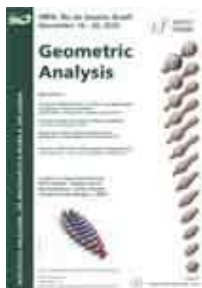
Université Joseph Fourier



O Ano da França no Brasil - 21 de abril a 15 de novembro de 2009 é organizado:

- Na França, pelo Comissariado Geral Francês, o Ministério das Relações Exteriores e Europeias, o Ministério da Cultura e da Comunicação e por Culturesfrance.
- No Brasil, pelo Comissariado Geral Brasileiro, o Ministério da Cultura e o Ministério das Relações Exteriores.

UNIVERSITÉ JOSEPH FOURIER, GRENOBLE &
IMPA - INSTITUTO NACIONAL DE MATEMÁTICA PURA E APLICADA



Workshop "Geometric Analysis", em parceria com o Institut Fourier (Grenoble)

IMPA, Rio de Janeiro, de 16/11 até 26/11

The purpose of this workshop is to bring together specialists from Brazil and from France, and their PhD students, to report on recent developments in geometric analysis and in particular in the domains of Ricci Flow and Conformal deformations and their applications to geometry. The workshop will take place at IMPA, and aims at developing the scientific interactions between Institut Fourier (Université de Grenoble) and the Brazilian community. It will consist of four mini-courses and some invited lectures. Ample time will be left for interactions and discussions. We hope to be able to provide financial support to some Ph.D. students.

Scientific and Organizing Committee

Minicourses

Speakers

Program **NEW**

Certificates **NEW**

Registration

Video

List of all registered participants

Contact

Accommodation

Videos

The "Workshop on Geometric Analysis" will be supported by IMPA and by the collaborative research programmes ARCUS Rhône-Alpes-Brésil and Math-AmSud.

[Voltar](#)

Geometric Analysis

Minicourses

Conformal deformations of metrics and applications to rigidity of closed manifolds,
Zindine Djadli - Université de Grenoble, Institut Fourier

Curvature flows and scalar curvature problems,
Fernando Codá Marques - IMPA

Geometry of Ricci solitons for Ricci flows,
Detang Zhou - Universidade Federal Fluminense - UFF

Variants of Ricci flow with surgery and applications,
Laurent Bessières - Université de Grenoble, Institut Fourier

Scientific and Organizing Committee
Pierre Bérard - Institut Fourier
Gérard Besson - Institut Fourier
Fernando Codá Marques - IMPA



design: seigo e var

Partial financial support available for selected Ph.D. students

further information:
dac@impa.br or
http://www.impa.br/opencms/pt/eventos/store/evento_1003



support



Brazil-France School and Workshop on Algebraic Geometry

IMPA, Rio de Janeiro, de 18/10 até 29/10

Scientific and organizing committee

Announcement

Mini-courses

Titles and Abstracts

Program

Registration

Registered Participants

Certificates **NEW**

Accommodation

Visa Information

Local Information

Contact

The "Brazil-France School and Workshop on Algebraic Geometry" will be partially supported by the French ARCUS Programme RRhA-BR 2008-2010 and IMPA.

[Voltar](#)

Mini-courses

Frobenius splitting
Stéphane Druel - Grenoble

Geometric invariant theory
Eduardo Esteves - IMPA

Introduction to algebraic groups
Bertrand Rémy - Lyon

Introduction to Berkovich geometry
Amaury Thuillier - Lyon

Rational curves on algebraic varieties
Carolina Araujo - IMPA

Rational points and rational curves
Emmanuel Peyre - Grenoble

Scientific & Organizing Committee

Carolina Araujo - IMPA, Brazil
Eduardo Esteves - IMPA, Brazil
Nivaldo Medeiros - UFF, Brazil
Marco Pacini - UFF, Brazil
Emmanuel Peyre - UJF, Grenoble, France
Bertrand Rémy - UCBL, Lyon, France

Brazil-France School and Workshop on Algebraic Geometry

Speakers

Stéphane Druel - Grenoble
Arnaldo Garcia - IMPA
Abramo Hefez - UFF
Amílcar Pacheco - UFRJ
Mihai Paun - Nancy *
Emmanuel Peyre - Grenoble
Bertrand Rémy - Lyon
Aron Simis - UFPE
Amaury Thuillier - Lyon
Israel Vainsencher - UFMG
Jean-Yves Welschinger - Lyon *

* Video-conference

IMPA/UFF, Rio de Janeiro, Brazil
October 18th to 29th, 2010



support
ARCUS RRhA-BR 2008-2010

Partial financial support available for selected Ph.D. students
and young researchers.

For further information and application:
bfag2010@impa.br or
http://www.impa.br/eventos/store/evento_1010

An elementary introduction to eigenvalue problems with an application to catenoids in \mathbb{R}^3

Bérard P.

XV Escola de geometria diferencial (Ed.) (2008) 52 - <http://hal.archives-ouvertes.fr/hal-00357710/fr/>Domaine : **Mathématiques/Géométrie différentielle**Titre : **An elementary introduction to eigenvalue problems with an application to catenoids in \mathbb{R}^3** Auteur(s) : Pierre Bérard ([✉](mailto:pierre.berard@ujf-grenoble.fr), [🌐](#))¹

Laboratoire : 1 : Institut Fourier (IF)

<http://www-fourier.ujf-grenoble.fr/>

CNRS : UMR5582 – Université Joseph Fourier - Grenoble I

France

Résumé : **These notes are intended for geometry students and they aim at giving an elementary introduction to eigenvalue problems based on variational methods (min-max principle). The Sturm-Liouville Dirichlet eigenvalue problem over a compact interval is treated, with an application to the stability of domains on the catenoid in the euclidean space.**

Langue du texte **Anglais**

intégral :

Date de production : **04/2008**

écriture :

Type de publication : **Ouvrages scientifiques**Éditeur commercial : **IMPA - Instituto nacional de matematica pura e aplicada, Rio de Janeiro (Brasil)**Date de publication : **07/2008**Nombre de pages : **52**Éditeur scientifique : **XV Escola de geometria diferencial**Mots Clés : **Eigenvalue problems – Sturm-Liouville problem – Stability**Classification : **34L ; 53C40**Commentaire : **XV Escola de geometria diferencial, Em homenagem aos 80 anos de Manfredo do Carmo, Fortaleza, Ceara (Brasil), 14 a 18 de julho de 2008**Contrat, financement : **ARCUS Rhône-Alpes – Brésil (Région Rhône-Alpes et Ministère des affaires étrangères et européennes)**

hal-00357710, version 1

<http://hal.archives-ouvertes.fr/hal-00357710/fr/>

oai:hal.archives-ouvertes.fr:hal-00357710

Contributeur : Pierre Bérard <pierre.berard@ujf-grenoble.fr>

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