



BELGISCH WISKUNDIG GENOOTSCHAP

SOCIETE MATHEMATIQUE DE BELGIQUE

Comité National de Mathématique CNM

C W M
N

NCW Nationaal Comité voor Wiskunde

**BMS-NCM NEWS: the newsletter of the
Belgian Mathematical Society and the
National Committee for Mathematics**

CAMPUS PLAINE c.p. 218/01,
BOULEVARD DU TRIOMPHE,
B-1050 BRUSSELS.
BELGIUM

Tel. (32)(2) 650.58.54

Fax (32)(2) 650.58.67

E-mail leroy@ulb.ac.be

Website <http://www.ulb.ac.be/assoc/bms>

BMS-NCM NEWS

—
No 29, September 15, 2000

WOG/SRN Symposium: First Announcement

New Trends in Mathematical Modeling and Numerical Methods

November 16-17, 2000

Leuven, Belgium

Organised by the Scientific Research Network **Advanced Numerical Methods for Mathematical Modelling** financed by the FWO, Fund for Scientific Research (Flanders).

The aim of this 2-day symposium is to give an overview of important new trends in mathematical modeling and numerical methods in the following areas:

- nonlinear dynamical systems
- stochastic differential equations and applications in finance
- computational biology and bio-informatics
- computational fluid dynamics for blood flows
- automatic differentiation

Program: Thursday November 16th, 2000

10h00: Welcome

10h15: **J. Guckenheimer** (Cornell University): *Numerical methods for dynamical systems*

11h15: Coffee

11h40: **P. Embrechts** (ETH Zuerich): *The mathematics of integrated risk management*

12h35: Lunch

14h00: **T. Mitsui** (Nagoya University): *Numerical Solution of Stochastic Differential Equations*14h55: **S. Wodak** (European Bioinformatics Institute, Cambridge, UK and ULB, Bruxelles):

15h50: Coffee

16h10: **J. Stark** (Universty College London): *Modelling Complex Systems in Life Sciences: Mathematical Elegance v. Biological Relevance*17h05: **J. De Keyser** (Belgian Inst. for Space Aeronomy): *Numerical simulation of the propagation of plasma waves near the Earth's magnetopause*

17h35: End

Program: Friday November 17th, 200009h15: **C. Bischof** (Aachen): *Developments in Computational Differentiation*

10h10: Coffee

10h35: **H. Wozniakowski** (Columbia University (NY) and University of Warsaw): *Complexity of Stochastic and Lebesgue Integration*

11h30: to be announced

12h00: Lunch

13h30: **P. Baldi** (UC Irvine, USA): *Protein Structure Prediction: the Machine Learning Approach*14h25: **Y. Moreau**: *Mining Microarray Data*

14h55: Coffee

15h20: **J. Vierendeels** (Univ. Ghent): *Fluid-Structure interaction: blood flow in the heart during filling*

16h15: End

The symposium will be held in the **University Hall** in the centre of Leuven.

More information, incl. abstracts, can be found at

<http://www.cs.kuleuven.ac.be/~ade/.WWW/WOG/conf.html>

Séminaire interuniversitaire de logique mathématique

Le Séminaire de Logique Mathématique reprendra ses activités le jeudi 28 septembre à 14h30 au **local 2NO906 du bâtiment NO**, Campus de la Plaine de l'ULB.

La première séance débutera par une réunion d'organisation du séminaire et du cours du DEA interuniversitaire en science mathématique.

Elle sera suivie par un exposé de **Arnaud Maes** (UMH) intitulé

Preuve par Chilakamarri, Hamburger et Pippert d'une conjecture de Grünbaum à propos des diagrammes de Venn.

Résumé: En 1992, Grünbaum a conjecturé que tout diagramme de Venn formé de n courbes peut être étendu en un diagramme de $n + 1$ courbes par l'adjonction d'une courbe simple. Nous présentons quelques aspects de la preuve apportée par Chilakamarri, Hamburger et Pippert en 1996.

Pour rappel le sujet du cours de DEA est les théories des modèles des corps séparablement clos et des corps différentiellement clos, et théorie de Galois différentielle.

Pour plus d'information, consulter le site web du séminaire:

<http://sun1.umh.ac.be/~boffa/seminars.htm>

News from the U. Lg

Institut de Mathématique - Functional Analysis Center

The Center is very happy to invite you to the following three talks that will take place on **September 25, 2000**, in the class room 0/39 of the Institut de Mathématique de l'Université de Liège:

14.30: **Professor Susanne DIEROLF** Universität Trier (Allemagne) *Morphisms in the category of locally convex operator spaces*

15.30: **Professor Klaus Dieter BIERSTEDT** Universität Paderborn (Allemagne) *Operator representation for spaces of vector-valued holomorphic functions*

16.30: Coffee

17.00: **Professor José BONET** Universidad Politecnica Valencia (Espagne) *Rearrangements of convergent series*

The talks of Professors S. Dierolf et K. D. Bierstedt are organized with the help of the FNRS. The talk of Professor J. Bonet is organized under the auspices of the Société Royale des Sciences de Liège.

Welcome to all interested,

J. Schmets

News from the V. U. B.

Prof. **Lars Kadison** (Chalmers University, Goteborg) will visit the VUB from September 21 until October 5. On September 27, at 3.00 pm he will deliver a lecture entitled

Hopf algebra action of centralizers on separable extensions

location: VUB, room 6G307C. Coffee will be available.

Abstract: W. Szymanski put out a preprint in 1992 showing that a finite index (II_1) irreducible subfactor of depth two has a Jones tower with relative commutants possessing Hopf algebra structure: the tower itself is built up by successive crossed (or smash) products with these. It was proposed privately at this time by Cuntz, Montgomery and others that the analytic proof was really algebraic in nature. Nikshych and I can now give an algebraic proof starting with split separable Frobenius extension of algebras over a field with trivial centralizer and a depth two condition. We have also found ways to avoid trace and the tunnel construction in the proofs. By recalling Hopf-Galois extensions, we formulate all this as a non-commutative analogue of the Steinitz theorem that a finite degree field extension is Galois iff it is separable and normal.

academic homepage:

<http://www.math.ntnu.no/~kadison>