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6th Conference on Formal Power Series  
and Algebraic Combinatorics

6<sup>ème</sup> Colloque Séries Formelles  
et Combinatoire Algébrique

FPSAC '94  
May 23-27, 1994

SFCA '94  
23-27 mai 1994

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CONFERENCE PROGRAM

PROGRAMME SCIENTIFIQUE

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MONDAY, May 23      LUNDI le 23 mai

Chair Rodica Simion

9:00-10:00      Christophe Reutenauer, *A survey of noncommutative rational series*  
Coffee break

Chair Laurent Habsieger

10:30-10:55      Felix Lazebnik\*, V.A. Ustimenko, and Andrew Woldar, *A new series of dense graphs of high girth*  
11:00-11:25      Serge Dulucq et Olivier Guibert\*, *Mots de piles, tableaux standard et permutations de Baxter*  
11:30-11:55      Isabelle Dutour\* et Jean-Philippe Dubernard, *Énumération de polyominos convexes dirigés*

Lunch break

Chair Doron Zeilberger

2:00-3:00      Sheila Sundaram, *Plethysm, the partition lattice and Euler numbers*  
Coffee break

Chair Lynne Butler

3:30-3:55      Takayuki Hibi, *Combinatorial applications of canonical modules of Cohen-Macaulay rings*

4:00-4:25      Francesco Brenti, *A combinatorial formula for Kazhdan-Lustig polynomials*

4:30-4:55      Sergey Fomin\* and Anatol N. Kirillov, *Grothendieck polynomials and the Yang-Baxter equation*

7:30-9:00      Poster Session (Holiday Inn, Cameo Room)

- Ivan Constantineau\* et Gilbert Labelle, *Une généralisation automorphe des nombres de Stirling*
- Alain Denise, *Énumération et génération aléatoire de chemins*
- Susanna Fishel, *Statistics for special Kostka polynomials*
- Pierre Lalonde, *A non-commutative analogue of Weyl denominator formula*
- Richard Ehrenborg and Margaret Readdy, *Juggling and applications to q-analogues*
- Joseph Hemmeter, V.A. Ustimenko, and Andrew Woldar\*,  
*Intersection numbers, eigenvalues and fusion in the orbital scheme  $B_{3,2}(q)$*

TUESDAY, May 24      MARDI le 24 mai

Chair Ira Gessel

9:00-10:00      David Jackson, *Algebraic and analytic approaches for the genus series for 2-cell embeddings on orientable and nonorientable surfaces*

Coffee break

Chair Robert Cori

10:30-10:55      Jennifer Galovich\* and Dennis White, *Generalizations of Denert's statistic*

11:00-11:25      Warren Johnson, *q-Bell numbers and polynomials*

11:30-11:55      Laurence Bessis, *Harvey-Wiman hypermaps*

12:00-12:25      Nantel Bergeron, *About Hochschild homology*

Lunch break

Chair Ian Goulden

2:00-3:00      Phil Hanlon, *Combinatorial problems connected to the homology of Lie algebras*  
Coffee break

Chair François Bergeron

3:30-3:55      Victor Reiner and Mark Shimozono\*, *Counting reduced words*

4:00-4:25      Henrik Eriksson\* and Kimmo Eriksson, *Chip-firing and Coxeter elements*

4:30-4:55      Patrick Headley, *On reduced words in affine Weyl groups*

7:30-9:00      Problem Session (Holiday Inn, Cameo Room)



**WEDNESDAY, May 25**      **MERCREDI le 25 mai**

Chair Richard Stanley

- 9:00-10:00 Gil Kalai, *The combinatorics of polytopes and the simplex algorithm*  
10:05-10:30 Tao Kai Lam,  *$B_n$  Stanley symmetric functions*  
Coffee break

Chair Gérard Duchamp

- 11:00-11:25 Thomas Sundquist, *Two variable Pfaffian identities and symmetric functions*  
11:30-11:55 Markus Fulmek\* and Christian Krattenthaler, *Lattice path proofs for determinantal formulas for symplectic and orthogonal characters*  
12:00-12:25 Jeffrey Sheats, *A symplectic jeu de taquin bijection between the tableaux of King and De Concini*  
12:30-12:55 Einar Steingrímsson, *A decomposition of 2-weak vertex-packing polytopes*

**THURSDAY, May 26**      **JEUDI le 26 mai**

Chair Louis Billera

- 9:00-10:00 Ruth Charney, *Metric geometry: connections with combinatorics*  
Coffee break

Chair Volkmar Welker

- 10:30-10:55 Roger Howe and Rosa Huang\*, *Projective invariants of four subspaces*  
11:00-11:25 Tatiana Alekseyevskaya, *Combinatorial bases in systems of simplices and of chambers*  
11:30-11:55 Kequan Ding, *Rook placements and partition varieties  $P_\gamma \setminus M_\lambda$*   
Lunch break

Chair Curtis Greene

- 2:00-3:00 Anders Björner, *Shellability - a nonpurist view*  
Coffee break

Chair Jeff Kahn

- 3:30-3:55 Roland Häggkvist and Jeanette Janssen\*, *All-even latin squares*  
4:00-4:25 Svante Linusson, *Partitions with restricted block sizes, Möbius functions and the k-of-each problem*  
4:30-4:55 Ron Adin, *A new cubical h-vector*  
7:30-9:00 Poster Session (Holiday Inn, Cameo Room)  
- Kimmo Eriksson, *Reduced decompositions in affine Coxeter groups*  
- Svjetlan Feretić\* and Dragutin Svrtan, *Combinatorics of diagonally convex directed polyominoes*  
- Alberto Del Lungo, Maurice Nivat et Renzo Pinzani, *Polyominoes convexes définis par un couple de vecteurs*  
- Anne de Médicis, Victor Reiner\*, and Mark Shimozono, *Characters and inversions in the symmetric group*  
- Eric Sopena, *Computing chromatic polynomials of oriented graphs*  
- Julian West, *Generating trees and forbidden subsequences*

**FRIDAY, May 27**      **VENDREDI le 27 mai**

Chair Andrew Odlyzko

- 9:00-10:00 Sergei Kerov, *Asymptotics of large random Young diagrams*  
10:05-10:30 Alexandru Nica, *An identity related to the enumeration of crossings of partitions*  
Coffee break

Chair Dominique Gouyou-Beauchamps

- 11:00-11:25 Vesselin Gasharov, *Incomparability graphs of  $(3+1)$ -free posets are s-positive*  
11:30-11:55 James Propp, *Domino tilings with barriers*  
12:00-12:25 Gilbert Labelle et Pierre Leroux\*, *Dénombrément des arbres plans (uni- ou bicolores) selon leur distributions de degrés*  
Lunch break

Chair Pavol Hell

- 2:00-3:00 Maylis Delest, *Langages algébriques: une visite à la frontière entre informatique et mathématiques*  
Coffee break

Chair Daniel Kroh

- 3:30-3:55 Ömer Eğecioğlu\* and Teofilo Gonzalez, *A computationally intractable problem on simplicial complexes*  
4:00-4:25 Marc van Leeuwen, *Tableau algorithms defined naturally for pictures*