

# Pierre Leroux

## 1942-2008

---

Some photos and some words in memory of a good friend and colleague,  
presented by Volker Strehl at the  
60th session of the Séminaire Lotharingien de Combinatoire  
at Strobl (Austria) on March 31, 2008.

Our dear friend and colleague Pierre Leroux has passed away unexpectedly on March 9, 2008, caused by a malignant disease -- only a few months after having retired from his official duties, but still very active in research. In the past Pierre has frequently participated in the meetings of the Séminaire Lotharingien, and he was supposed to take part again in this session. He also was supposed to co-organize a workshop at the Newton Institut in Cambridge and to take part in a workshop at the Schrödinger Institute in Vienna.... We deeply deplore the tragic loss of a colleague and friend.

In 2006 Pierre's colleagues from the UQAM organized a conference in his honour, the *Journées Pierre Leroux*, where some of the pictures presented here have been taken. In particular, the first and the last pictures reproduce posters that have been produced for this event.



LES 8 - 9 SEPTEMBRE 2006

# JOURNÉES PIERRE LEROUX

## CONFÉRENCIERS INVITÉS

DOMINIQUE FOATA  
UNIVERSITÉ LOUIS-PASTEUR

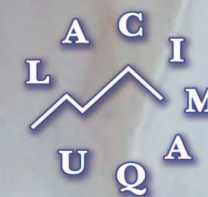
DOMINIQUE GOUYOU-BEAUCHAMPS  
UNIVERSITÉ PARIS-SUD

ANDRÉ JOYAL, UQAM

GILBERT LABELLE, UQAM

VOLKER STREHL  
FRIEDRICH-ALEXANDER-UNIVERSITÄT

XAVIER G. VIENNOT  
UNIVERSITÉ BORDEAUX I



## ORGANISATEURS

François Bergeron  
Srecko Brlek  
Christophe Reutenauer

Informations : <http://jpl06.lacim.uqam.ca>

Département de mathématiques - UQAM  
201 Avenue Président-Kennedy

**UQAM**  
Université du Québec à Montréal

Faculté des sciences  
Département d'informatique  
Département de mathématiques



## Pierre - the mathematician

Pierre received his mathematical education and training at the Université de Montréal, where he obtained a M.Sc. in 1966 and a Ph.D. in 1970. At that time his main interest was in category theory. In 1971 he joined the recently founded Université du Québec à Montréal (UQAM) as a professor. He remained there until his retirement in September 2007. His research interest turned to combinatorics, he became one of the leading figures of the Montreal school of combinatorics, species theory, founded on and working out a categorial view of enumeration, being the main research theme. Pierre published about 50 research articles, mostly in first-rate journals, he had many collaborators and co-authors over the years. A culmination point of these activities was the publication (in 1998) of the definitive book on species theory: *Combinatorial Species and Tree-like Structures*, which he co-authored together with his colleagues François Bergeron and Gilbert Labelle. An important part of his work as a mathematician was his role as an advisor: his records show that he (co-)supervised about 40 Masters and Ph.D. theses, something that he took very serious - and he was popular for that.

One may characterise Pierre a „québécois pure-laine“, but despite the fact that he remained at the same university for all of his career, he travelled a lot, gave many talks at conferences worldwide, he had numerous invitations for shorter or longer research visits in many countries, established fruitful connections with many colleagues abroad. He remained an active researcher, and with his recent work on combinatorial identities and statistical mechanics he attracted much interest of physicists, a direction of research that he would have loved to continue to explore after retirement had given him more time for doing so.

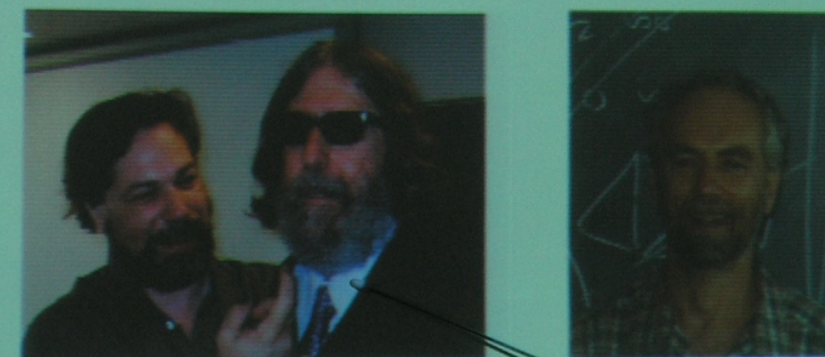




Discrete Applied Mathematics 34 (1991) 49-66  
North-Holland

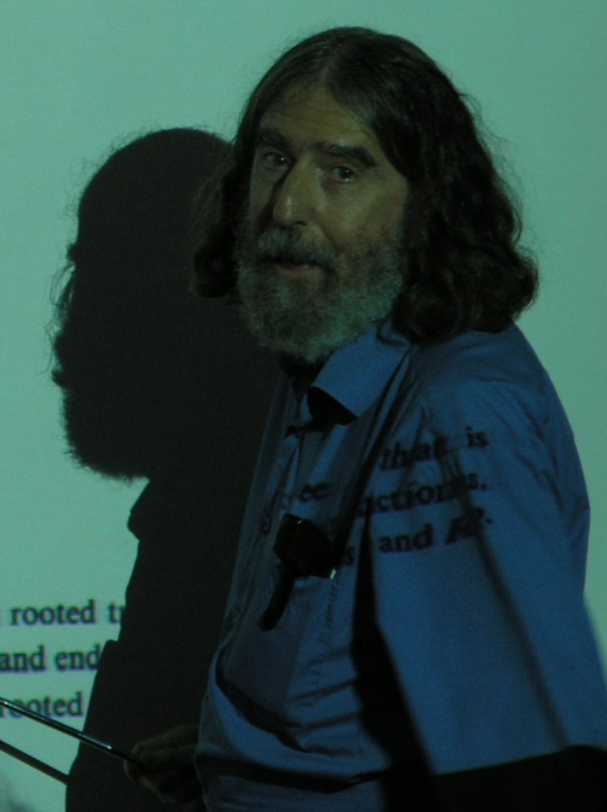
# Computation of the expected number of leaves in a tree having a given automorphism, and related topics

F. Bergeron, G. Labelle and P. Leroux



**Abstract**

We derive explicit formulas for the expected number of leaves in a random rooted tree fixed by a given permutation of the nodes, and similarly for (unrooted) trees and endomorphisms. The main tool is the cycle index series of a permutation. Symmetric rooted trees and symmetric rooted enriched trees and symmetric trees are also considered.



Pierre and some of his collaborators:  
 Dominique Foata and Xavier Viennot (top left)  
 Gilbert Labelle and Francois Bergeron (top right)  
 Pierre and his first graduate student, M. Content (left)



## Pierre - the organizer of science

Throughout his career, Pierre enjoyed an enormous reputation, for his skills as an organizer and administrator of science. With longsightedness, perseverance and care for detail he managed many important projects: he initiated the PhD-program in mathematics at the UQAM, he was the real driving force and organiser behind the creation of the Lacim, and, serving as its director for many years, he helped to create a research institution for combinatorics of worldwide recognition. He served as the head of the steering committee of the annual SFCA/FPSAC conference for many years and helped in an essential way to establish this conference on an international top level.

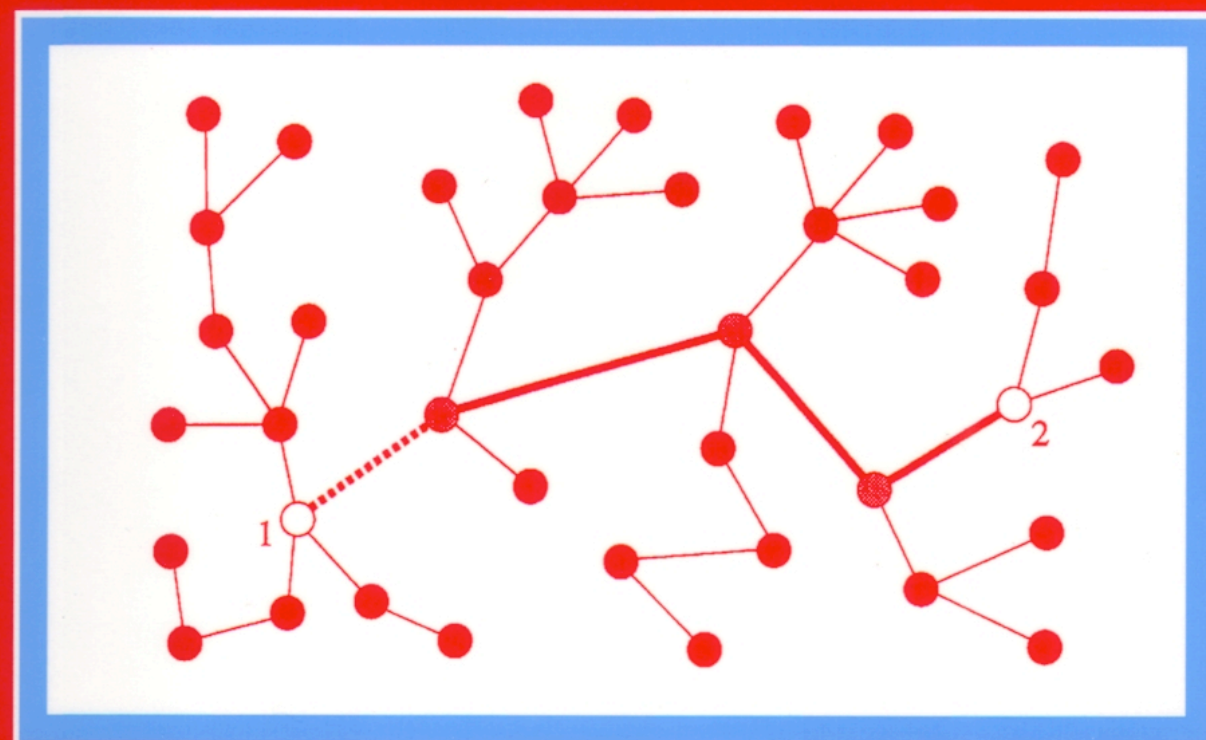
Besides, Pierre served in many mathematical organisations and committees, he was active in editing journals and organising conferences. With all this professional experience, it was quite natural that he was asked to take responsibilities on a higher level: from 2004 to 2007 he acted as the vice dean for research at the faculty of science of the UQAM.

We may well state that Pierre served the mathematical community, especially combinatorics, in many ways.



# COMBINATORIAL SPECIES AND TREE-LIKE STRUCTURES

F. BERGERON,  
G. LABELLE,  
P. LEROUX



LaCIM

Laboratoire de Combinatoire et d'Informatique Mathématique

## English

### Accueil

[Présentation](#)

[Coordonnées](#)

### Membres

[Chercheurs](#)

[Étudiants](#)

[Anciens  
postdocs](#)

[Anciens  
étudiants](#)

### Stages postdoctoraux

### Activités

[Séminaires](#)

[Café du LaCIM](#)

[Stages](#)

### Monographies

### Liens

[Sites amis](#)

[Ressources  
mathématiques](#)

[Paquetages &  
code source](#)

### Intranet

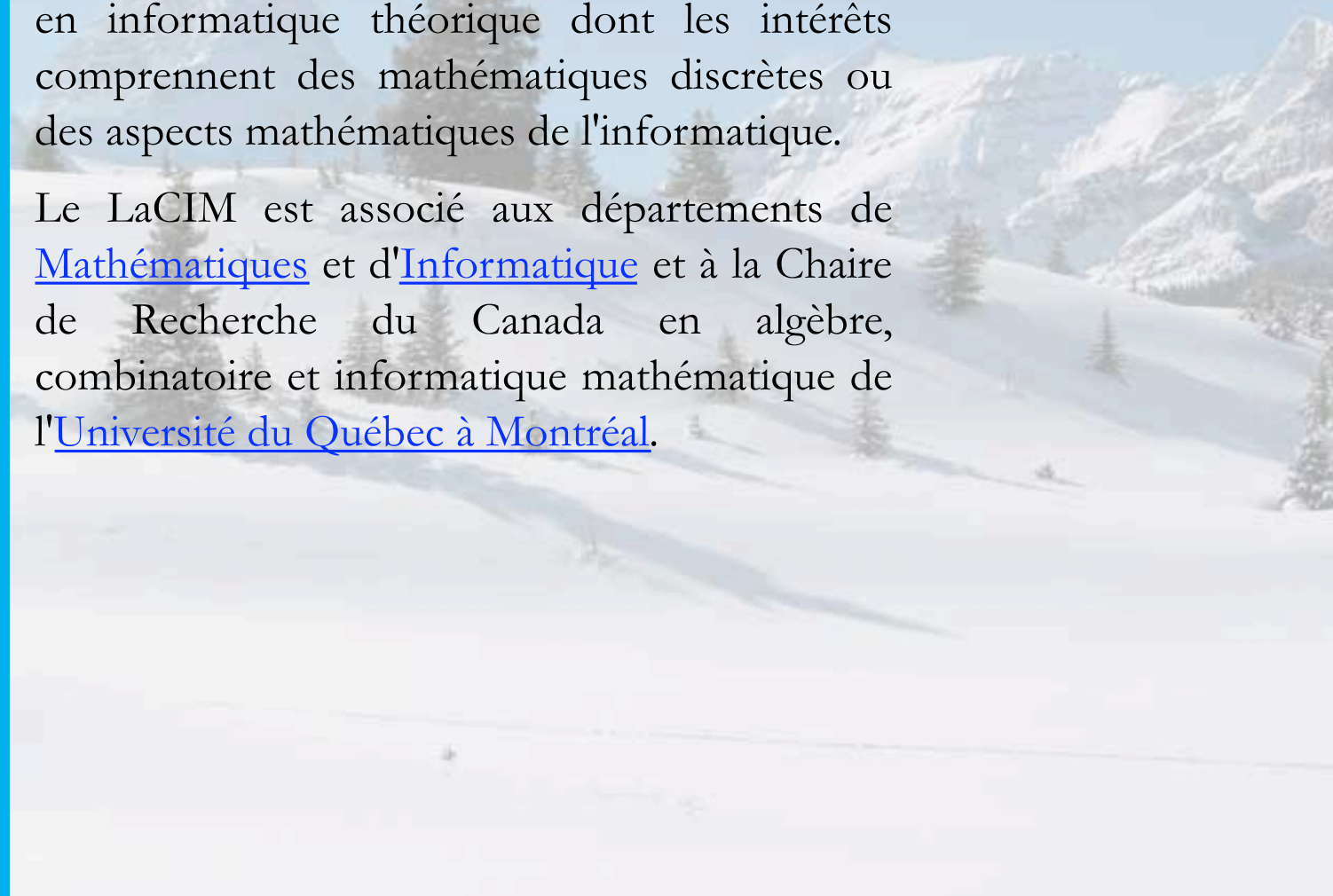
## Annonces

- [FPSAC 08, en mémoire de Pierre Leroux](#)  
Valparaiso Viña del Mar, Chili  
2008-06-23 au 2008-06-27
- [Combinatorial Identities and their Applications in Statistical Mechanics, en mémoire de Pierre Leroux](#)  
Isaac Newton Institute for Mathematical Sciences,  
Cambridge, UK  
2008-04-07 au 2008-04-11

## Bienvenue au LaCIM

Le **Laboratoire de combinatoire et d'informatique mathématique** (LaCIM) regroupe des chercheurs en mathématiques et en informatique théorique dont les intérêts comprennent des mathématiques discrètes ou des aspects mathématiques de l'informatique.

Le LaCIM est associé aux départements de [Mathématiques](#) et d'[Informatique](#) et à la Chaire de Recherche du Canada en algèbre, combinatoire et informatique mathématique de l'[Université du Québec à Montréal](#).





## Pierre - the naturalist

It is impossible to speak on Pierre and not to think of his passion for nature and outdoor life. He was a passionate canoe-camper and hiker in summer and cross-country skier in winter. (He even dared to traverse Montréal by bicycle in summer and winter.) Pierre spent many weeks with friends in exploring the rivers and lakes of Québec and the „Grand North“ -- the care he took in planning expeditions in the true wilderness and the prudence he exercised in his professional projects were indeed characteristics of his personality. He not only enjoyed the wilderness for himself, he initiated the publication of guides and, quite logically, founded the Québec association for canoe-camping. What not many know, Pierre also was a real mushroom expert.

Pierre also liked to travel abroad to see and experience mountains, deserts, forests and many more. Visitors to Montréal very likely were initiated by him to canoeing or cross-country skiing, happy to share with him his enthusiasm for nature.







## Pierre - the family man

Pierre has had a very happy family life, and he enjoyed it very much. He has been together with his wife Madeleine („Mado“) for 44 years. They have two daughters, Marie-Claude and Sophie, and three beloved grandchildren. Despite his professional obligations Pierre regularly spent time with them, introducing them to outdoor activities or giving them private lessons in mathematics. He had always photos of them in his pocket, he liked to show them and proudly telling about his recent experiences with them.





Mado with Marcia Pig Lagos and  
Sylvie Hamel (top)

Pierre with Marie-Claude and Sophie  
(January 2008, right)





## Pierre - the friend

Much could be said from a personal perspective. Instead, I will close by citing his family, who describes Pierre's main characteristics as

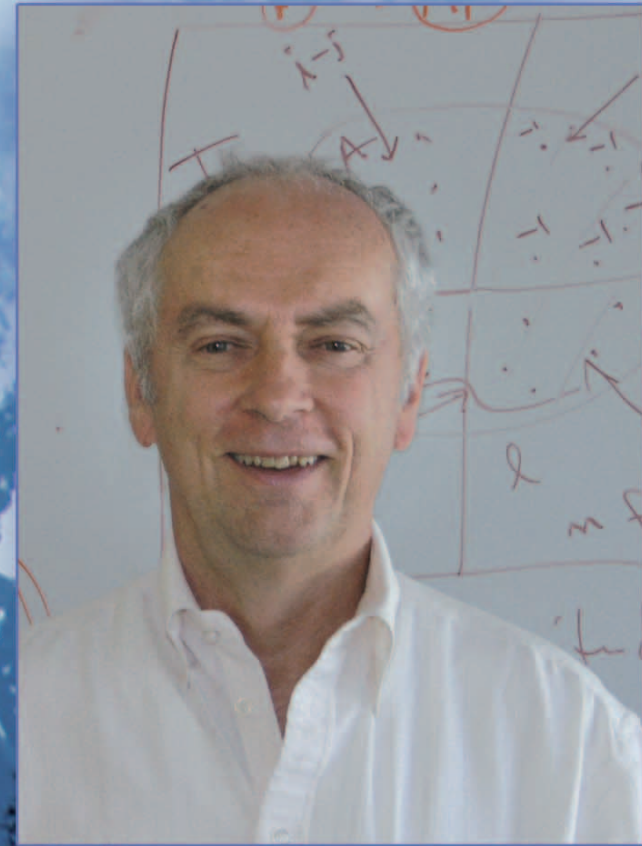
- kind-heartedness
- humour
- perseverance
- professionalism

Those who have known him, will certainly agree, and that explains, at least partially, why many of his colleagues became his friends. To give one more reason, let me add a word by one of his colleagues for many years: „Pierre never spoke in bad terms about a colleague.“

We not only lost a colleague, we lost a good friend.



LES 8 - 9 SEPTEMBRE 2006



# JOURNÉES PIERRE LEROUX