



Pacific Institute *for the*
Mathematical Sciences

PIMS Public Lecture and French Scholars Lecture Series

Set Theory: The Last 50 Years

7 July, 2014

5:00 PM

Evening Reception at 6pm

University of British Columbia, Vancouver

Earth Sciences Building Rm 1012

Patrick Dehornoy

(Laboratoire de Mathématiques Nicolas Oresme, Université de Caen)

At the interface of Mathematics, Computer Science, and Philosophy, Set Theory is both a fascinating subject and the victim of several misunderstandings: after the great successes in the first half of the 20th century, Set Theory was (mistakenly) thought to be a universal dogma, resulting in well-known educational damages, and to have come to an end, with a few mysterious questions due to remain open forever.

The aim of the lecture will be to present a more accurate view of what Set Theory is, namely a theory of infinity, and what it is not. Starting from a historical approach and putting the emphasis on Cantor's celebrated Continuum Problem, we shall explain what is the meaning of the remarkable results established by Goedel and by Cohen. But, then, and mainly, we shall present a few results of modern Set Theory as it developed after Cohen, a most ignored topic in spite of wonderful achievements. In particular, we shall explain how some new axioms by and by acquired a status of mathematical truths, inviting everyone to develop his own reflection about truth and infinity in mathematics

BIO:

PATRICK DEHORNOY is known worldwide for his research in such diverse areas as set theory, topology, algebra and cryptography. His mathematical interests have evolved from the foundations of set theory to fundamental contributions to our understanding of the famous braid groups which connect algebra and topology, and to other basic discoveries in algebra and group theory.

A Senior Member of the Institut Universitaire de France, Dehornoy was awarded the Langevin Prize by the Académie des sciences, Paris, in 2005, among other honors. He recently has served as Scientific Deputy Director of the Mathematical Institute of the CNRS.

REGISTRATION is free but RSVP required. Please visit: <http://www.pims.math.ca/scientific-event/140707-pplfslspd>

