Information and Announcements

Pierre Deligne Wins Abel Prize 2013

The celebrated mathematician Pierre Deligne has been awarded the 2013 Abel Prize. The Abel Prize is analogous to the Nobel Prize – as the latter is not given to mathematicians – and is awarded by the Norwegian Academy of Science and Letters.

The Abel Prize acknowledges outstanding scientific work in the field of mathematics and comes with a monetary award of about one million U.S. dollars. The Prize will be given to Deligne by H.M. King Harald at an award ceremony in Oslo on May 21. Since 2003, the Abel Prize has been bestowed on 11 recipients.

Deligne, who is a Professor Emeritus at the Institute for Advanced Study was cited by the Abel Committee for his "seminal contributions to algebraic geometry and for their transformative impact on number theory, representation theory and related fields."

Deligne is indubitably one of the greatest mathematicians of the present era and his deep and inventive ideas impacted significantly many areas of mathematics. His work resulted in the resolution of long-standing problems like the Weil conjecture on the Riemann hypothesis of varieties over finite fields (from which Ramanujan's famous conjecture follows as a consequence) which won him the Fields Medal in 1978. The novel methods he introduced not only revolutionized algebraic geometry and number theory and led to their synthesis, they have continued to drive most of contemporary research in arithmetic and geometry. Many mathematical tools introduced by him have become so standard that current research problems and results cannot even be formulated without reference to his work.

Other seminal contributions due to Deligne include his proof of a generalization of Hilbert's 21st problem on the monodromy groups of differential equations, and the introduction of the concept of "weights" in Hodge theory. Apart from algebraic geometry and automorphic forms, his work significantly impacted several other areas also like representation theory, quantum field theory, string theory, trigonometrical sums, the theory or motives, the theory of moduli, tannakian categories, and configurations of hyperplanes.

Deligne has received many distinguished awards such as the Deruyts Prize (1974), the Poincaré Medal (1974), the De Leeuw-Damry-Bourlart Prize (1975), the Fields Medal (1978), the Crafoord Prize (1988, jointly with Grothendieck), the Balzan Prize (2004) and the Wolf Prize (2008, jointly with Griffiths and Mumford) and the Abel Prize (2013).

King Albert II of Belgium honoured Deligne in 2006 by making him a Viscount. A postage stamp was issued in honour of his achievements.

Some mathematical concepts named after him are the Deligne conjecture, Deligne–Mumford moduli space of curves, Deligne–Mumford stacks, and Deligne cohomology.

Among the 13 winners of the Abel Prize since 2003 is S R S Varadhan (Indian American) who made deep contributions to probability theory and, in particular, created a unified theory of large deviations (see *Resonance*, Vol.12, No.7, p.96, 2007).

B Sury
Indian Statistical Institute, Bangalore
Email: *surybang@gmail.com*