SRINIVASA RAMANUJAN

Srinivasa Ramanujan was born in 1887 in Erode, Tamil Nadu, India. He grew up in poverty and hardship. Ramanujan was unable to pass his school examinations, and could only obtain a clerk's position in the city of Madras. However, he was a genius in pure mathematics and essentially self-taught from a single text book that was available to him. He continued to pursue his own mathematics, and sent letters to three mathematicians in England, containing some of his results. While two of the three returned the letters unopened, G.H. Hardy recognized Ramanujan's intrinsic mathematical ability and arranged for him to go to Cambridge. Hardy was thus responsible for making Ramanujan's work known to the world during the latter's own lifetime.

Ramanujan made spectacular contributions to elliptic functions, continued fractions, infinite series, and analytical theory of numbers.

Ramanujan's health deteriorated rapidly while in England. He was sent home to recuperate in 1919, but died the next year at the age of 32.

RAMANUJAN PRIZE SCULPTURE

The Ramanujan Prize sculpture is an exact miniature replica of the statue of Srinivasa Ramanujan that is kept in the ICTP Marie Curie Library. The bronze bust of Ramanujan was donated to ICTP by the SASTRA University in India, where the original bust is kept.

A CELEBRATION OF MATHEMATICS

2015 RAMANUJAN PRIZE AWARD CEREMONY

ICTP
3 September 2015

The Abdus Salam International Centre for Theoretical Physics

International Mathematical Union (IMU)

Department of Science and Technology of the Government of India

2015 RAMANUJAN PRIZE CITATION

This year's Ramanujan Prize is awarded to Dr. Amalendu Krishna in recognition of his outstanding contributions in the area of algebraic K-theory, algebraic cycles and the theory of motives. In his work, Krishna has shown an impressive command of a very technical subject, applying the modern theories of algebraic K-theory and Voevodsky's theory of motives to study concrete problems. His results on 0-cycles on algebraic varieties with isolated singularities effectively reduces their study to the corresponding study on the desingularization, together with information about multiples of the exceptional divisors. This allows the complete calculation of the Chow group of 0-cycles on an algebraic variety in many cases, like the case of rational varieties or cones.

Working initially with Levine, and later with Park, Krishna built up the original constructions of Bloch-Esnault on additive Chow groups into a full theory. This includes proving fundamental properties, such as the contravariant functoriality and a projective bundle formula, as well as constructing an action of the usual higher Chow groups on the additive ones.

The 2015 Ramanujan Prize Selection Committee included Maryam Mirzakhani, Ngaiming Mok, Duong H. Phong, Madabusi S. Raghunathan, and Fernando Rodriguez Villegas (Chair).

RAMANUJAN PRIZE

In 2005 the Abdus Salam International Centre for Theoretical Physics (ICTP) established the Srinivasa Ramanujan Prize for Young Mathematicians from Developing Countries, named after the mathematics genius from India. This Prize is awarded annually to a mathematician under 45. Since the mandate of ICTP is to strengthen science in developing countries, the Ramanujan Prize has been created for mathematicians from developing countries. Since Ramanujan is the quintessential symbol of the best in mathematics from the developing world, naming the Prize after him seemed entirely appropriate.

The Prize is funded jointly by the Department of Science and Technology of the Government of India in collaboration with ICTP and the participation of the International Mathematical Union.

A CELEBRATION OF MATHEMATICS

2015 RAMANUJAN PRIZE AWARD CEREMONY

3 September 2015

Budinich Lecture Hall, Leonardo Building

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Programme

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16:00 Prize Ceremony

Introduction of Amalendu Krishna, recipient of the 2015 Ramanujan Prize, by Fernando Villegas, ICTP

Presentation of award by Amit Verma, First Secretary, Information & Culture, Embassy of India in Rome

Ramanujan Lecture: Algebraic cycles and cohomology theories

The aim of this talk is to show how algebraic cycles can be used to describe other known cohomology theories of smooth schemes. The talk will focus mostly on crystalline cohomology in positive characteristic which is classically defined as a sheaf cohomology. We shall show that this cohomology of smooth schemes can be completely defined using algebraic cycles. This provides a new way of understanding crystalline cohomology.

A reception will be held after the ceremony.