University of Florida, Mathematics Department
SIXTH RAMANUJAN* COLLOQUIUM

by
Professor Ken Ono **
Emory University
on
Adding and Counting

Date and Time: 4:05 - 4:55pm, Monday, March 12, 2012
Room: LIT 109
Refreshments: After Colloquium in the Atrium (LIT 339)

Abstract: One easily sees that

$$4 = 3+1 = 2+2 = 2+1+1 = 1+1+1+1,$$

and so we say there are five partitions of 4. What may come as a surprise is that this simple task leads to very subtle and difficult problems in mathematics. The nature of adding and counting has fascinated many of the world's leading mathematicians: Euler, Ramanujan, Hardy, Rademacher, Dyson, to name a few. And as is typical in number theory, some of the most fundamental (and simple to state) questions have remained open. In 2010, with the support of the American Institute for Mathematics and the National Science Foundation, the speaker assembled an international team of researchers to attack some of these problems.

Come hear about their findings: new theories which solve some of the famous old questions.

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* ABOUT RAMANUJAN: Srinivasa Ramanujan (1887-1920), a self-taught genius from South India, dazzled mathematicians at Cambridge University by communicating bewildering formulae in a series of letters. G. H. Hardy invited Ramanujan to work with him at Cambridge, convinced that Ramanujan was a "Newton of the East"! Ramanujan's work has had a profound and wide impact within and outside mathematics. He is considered one of the greatest mathematicians in history.

** ABOUT THE SPEAKER: Ken Ono is one of the top number theorists in the world and a leading authority in the theory of partitions, modular forms, and the work of the Indian genius Srinivasa Ramanujan. In the past decade he has made revolutionary contributions on partition congruences, and in unlocking the mystery of the connections between Ramanujan's mock theta functions and modular forms. For his outstanding contributions he has been recognized with a Sloan Fellowship, the Packard Fellowship and the Simon Guggenheim Fellowship. Since 2010 he has been an Asa Griggs Candler Professor of Mathematics and Computer Science at Emory. Prior to that he was on the faculty of Penn State University and as Manasse Professor and Hilldale Professor at the University of Wisconsin.

ABOUT THE SPONSOR: Evan Pugh Professor George Andrews of The Pennsylvania State University is the world's premier authority in the theory of partitions and work of the Indian mathematical genius Srinivasa Ramanujan combined. He is a Member of the National Academy of Sciences. He has close ties with the UF Mathematics Department which has one of the strongest programs on mathematics related to Ramanujan's work. He was a recipient of an Honorary Doctorate from UF in December 2002. Since 2005, he is a Distinguished Visiting Professor each year in the Spring term in the Mathematics Department. He has recently finished his term as President of the American Mathematical Society.

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