

AMSI Mahler Lecture Tour 2013
hosted by the University of Wollongong

Title: How to stack oranges in three dimensions, 24 dimensions, and beyond

Speaker: Akshay Venkatesh (Stanford University)

Bio: Professor Akshay Venkatesh is an Australian mathematical prodigy who completed his undergraduate degree in mathematics with first-class honours at the University of WA at the age of 16. He has made profound contributions in a number of areas of mathematics, including number theory, automorphic forms, representation theory, locally symmetric spaces and ergodic theory. He has won numerous prizes and awards, including the 2008 SASTRA Ramanujan Prize, and is regarded by many as a likely candidate for a Fields medal.

Time and Date: 5:00PM Friday 11 October 2013

Location: 67.104

Abstract: How can we pack balls as tightly as possible? In other words: to squeeze as many balls as possible into a limited space, what's the best way of arranging the balls? Its not hard to guess what the answer should be but its very hard to be sure that it really is the answer! I'll tell the interesting story of this problem, going back to the astronomer Kepler, and ending almost four hundred years later with Thomas Hales. I will then talk about stacking 24-dimensional oranges: what this means, how it relates to the Voyager spacecraft, and the many things we dont know beyond this.