Mathematical Colloquium Series

Department of Mathematics
Faculty of Science and Technology

Numbers and Games, Symmetry and Groups: My Life in Mathematics

Speaker: Prof. John CONWAY

Date:	19 April 2017 (Wednesday)
Time:	10:30a.m. – 11:30a.m.
Venue:	E11 – G015

ALL ARE WELCOME

Abstract

Prof. John Horton Conway, FRS, Von Neumann Professor of Mathematics Emeritus at Princeton University, will describe the challenges of inventing and analyzing games, and of tackling such related problems as packing the maximum number of spheres into 24 dimensions. Prof. Conway has invented numerous games, including the renowned "Game of Life," now a cult classic. He is also one of the inventors of sprouts, as well as philosopher's football (phutball). He developed detailed analyses of many other games and puzzles, such as the Soma cube, peg solitaire, and Conway's soldiers. He came up with the angel problem, involving a game of chess between an angel and a devil played on an infinite chessboard, which was solved in 2006. His mathematical theory of partisan games, a major contribution to combinatorial game theory, is developed in the co-authored book Winning Ways for your Mathematical Plays (1982). He also wrote the book On Numbers and Games (ONAG) (1976), which lays out the mathematical foundations of combinatorial game theory.

Biography

Prof. Conway, the author of eleven books and numerous papers, is a versatile mathematician who combines a deep combinatorial insight with algebraic virtuosity, particularly in the construction and manipulation of "off-beat" algebraic structures which illuminate a wide variety of problems in completely unexpected ways. He has made distinguished contributions to the theory of finite groups, to the theory of knots, to mathematical logic (both set theory and automata theory) and to the theory of games (as also to its practice). He is also a talented amateur magician.