



ALGEBRA SEMINAR TALK



WITH

LILA KARI

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The University of Western Ontario

FRIDAY, NOVEMBER 25, 2011

2:30 P.M. – Middlesex College Room 107

“DNA Computing: Implications for Theoretical Computer Science”

Abstract: We are now witnessing exciting interactions between computer science and mathematics on one side, and the natural sciences on the other. While the natural sciences are rapidly absorbing notions, techniques and methodologies intrinsic to computer science and mathematics, theoretical computer science is adapting and extending its traditional notion of computation and computational techniques, to account for computation taking part in nature around us.

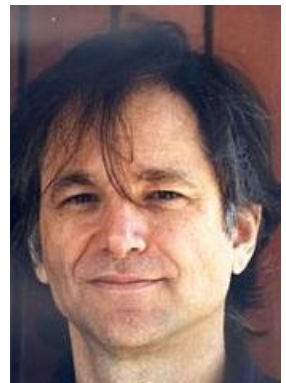
This talk will outline several of the fruitful directions of theoretical computer science research that originated from the study of DNA. I will describe comma-free codes inspired by the studies into the genetic code, splicing systems, optimal encodings for DNA Computing, sticker systems, Watson-Crick automata, combinatorics on DNA words, cellular computing, and computing by DNA self-assembly.



L. Kari



J. D. Watson and F. Crick



L. M. Adleman

What can be more exciting than reaching out to the secret of life to reveal the secret of computing in nature, to try to understand it, to improve it, to be impressed by its power, elegance and wisdom? Here in Middlesex College, in our ‘palace of mathematics’ is also the well-known residence of a well-known, ingenious contributor and expert expositor in this exciting area where mathematics, nature, and life itself meet. What a great way to wrap up a week of work, to come and listen to Lila Kari speak. Become inspired, awed and amazed before the weekend arrives.