



The Phi Beta Kappa Visiting Scholar Program Presents

Andrew Odlyzko



The Phi Beta Kappa chapter of the University of South Carolina is pleased to present Dr. Andrew Odlyzko as the 2010 Visiting Scholar. Dr. Odlyzko will present two main talks, both in Amoco Hall of the Swearingen Center on the USC campus:

3:30 pm, Thursday, 25 February 2010

Technology manias: From railroads to the Internet and beyond

A comparison of the Internet bubble with the British Railway Mania of the 1840s, the greatest technology mania in history, provides many tantalizing similarities as well as contrasts. Especially interesting is the presence in both cases of clear quantitative measures showing a priori that these manias were bound to fail financially, measures that were not considered by investors in their pursuit of “effortless riches.” In contrast to the Internet case, the Railway Mania had many vocal and influential skeptics, yet even then, these skeptics were deluded into issuing warnings that were often counterproductive in that they inflated the bubble further.

The role of such imperfect information dissemination in these two manias leads to speculative projections on how future technology bubbles will develop.

2:30 pm, Friday, 26 February 2010

How to live and prosper with insecure cyberinfrastructure

Mathematics has contributed immensely to the development of secure cryptosystems and protocols. Yet our networks are terribly insecure, and we are constantly threatened with the prospect of imminent doom. Furthermore, even though such warnings have been common for the last two decades, the situation has not gotten any better. On the other hand, there have not been any great disasters either. To understand this paradox, we need to consider not just the technology, but also the economics, sociology, and psychology of security. Any technology that requires care from millions of people, most very unsophisticated in technical issues, will be limited in its effectiveness by what those people are willing and able to do. This imposes strong limits on what formal mathematical methods can accomplish, and suggests that we will have to put up with the equivalent of baling wire and chewing gum, and to live on the edge of intolerable frustration.



Andrew Odlyzko is a professor in the School of Mathematics at the University of Minnesota, where he was been at various time the founding director of the interdisciplinary Digital Technology Center, interim director of the Minnesota Supercomputing Institute, assistant vice president for research, and the ADC Telecommunications Chair Professor. Before moving to Minneapolis in 2001, he did research at Bell Labs and AT&T Labs. His work ranges from pure mathematics to communications, computer science, security, electronic commerce, growth of the Internet, and technology manias.

ΦBK

“Love of learning is the guide of life.”