# ­­The Gates Cambridge Alumni Association Presents:

# The Changing Nature of Invention in Computing

***WHAT:* Computer scientist, puzzle columnist and author Dennis Shasha presents on invention**

***WHEN:* Thursday, November 6th from 7-9 pm**

***WHERE:* Cooley LLP, 1114 Avenue of the Americas (entrance on 42nd Street), 46th floor**

***WHO:* Gates, Fulbright, Rhodes, Marshall and Oxbridge alums, and guests – RSVP required**

 **Topic –** What drives inventions in computing? Necessity seems to play only a minor role. Anger at the way things are is much more powerful, because it leads to easier ways to work (the invention of new computer languages). A general dissatisfaction with the practical or theoretical structure of the world can open up whole new approaches to problems (complexity theory and cryptography).Genuine collaboration between people and machines can then lead to an entirely new kind of engineering for devices that will travel to far-off planets or to hostile environments.

 The talk will discuss the work of several inventors in computing and engineering, their inventions, how they came up with them and how they plan to come up with more in the future. The ensuing discussion will address the fundamental nature of invention in a world partly populated by intelligent machines.

**Presenter – Dennis Shasha** is a professor of computer science at the Courant Institute of New York University and an Associate Director of NYU Wireless. He works with biologists on pattern discovery for network inference; with computational chemists on algorithms for protein design; with physicists and financial people on algorithms for time series; on clocked computation for DNA computing; and on computational reproducibility.

                Other areas of interest include database tuning as well as tree and graph matching. Because he likes to type, he has written six books of puzzles about a mathematical detective named Dr. Ecco, a biography about great computer scientists, and a book about the future of computing. He has also written five technical books about database tuning, biological pattern recognition, time series, DNA computing, resampling statistics, and causal inference in molecular networks. He has co-authored over seventy journal papers, seventy conference papers, and twenty patents. He has written the puzzle column for various publications including *Scientific American*.

**Moderator –** **Ariana Green** is an associate in Cooley's Emerging Companies practice group. She specializes in corporate and securities law with an emphasis on the representation of high-growth technology companies in a variety of transactions throughout their lifecycles, from formation to IPO. A former journalist, Ariana was a Fulbright Scholar in London and a Gates Scholar at Cambridge. She received her JD from the University of California, Berkeley School of Law and her BA from Brown University. **Contact Ariana** at: agreen@cooley.com.

**About the Host:**

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