



THE CHINESE UNIVERSITY OF HONG KONG
Institute of Network Coding
and
Department of Information Engineering
Seminar



**Challenges and Opportunities for Innovations
in IT Based Services**

by

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and Chief Technologist for IBM India/South Asia

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Time : 4:00 - 5:00 pm

**Venue : Room 833, Ho Sin Hang Engineering Building
The Chinese University of Hong Kong**

Abstract

IT based Services are sometimes viewed as mundane, less challenging than IT product development. In this talk, we describe enormous opportunities for innovation in delivering information technology based services. We start by describing the tremendous inefficiencies, estimated to be about \$15 Trillion, in how the world operates today (e.g. in industries like transportation and healthcare), some of which can be eliminated by infusing more instrumentation and intelligence into these systems. We then describe some unique challenges faced in emerging economies, and present an example of developing a solution built from the ground up with those unique requirements in mind. The specific example we present is Spoken Web, our attempt to create a new world wide web, accessible over the (mobile) phone network, for the masses in countries like India and most parts of Africa. Finally, we describe several opportunities for improving efficiency, quality and value from delivering various kinds of services globally, and the interesting computer science and multidisciplinary problems that arise in the context of pursuing those opportunities.

Biography

Manish Gupta is the Director of IBM Research - India and Chief Technologist for IBM India/South Asia. He leads a team developing breakthrough technologies underlying innovation in Services, Software and Systems, and is leading the IBM Research activities across the world in the Mobile Web area. Previously, he has held senior leadership positions at IBM Research - India, IBM India Systems and Technology Lab, and the T. J. Watson Research Center, where he led research on software for the IBM Blue Gene supercomputer. IBM was awarded the 2008 National Medal of Technology and Innovation for the invention of the Blue Gene supercomputer by US President Barack Obama in October 2009. Manish received a B.Tech. in Computer Science from IIT Delhi in 1987 and a Ph.D. from the University of Illinois at Urbana-Champaign in 1992. He has co-authored over 70 papers, with more than 3000 citations in Google Scholar, in the areas of high performance compilers, parallel computing, and Java Virtual Machine optimizations, and has filed eighteen patents. Manish has received an Outstanding Innovation Award, two Outstanding Technical Achievement Awards and the Gerstner Team Award for Client Excellence at IBM, and has been invited to give keynotes at several international conferences and workshops. He is an ACM Distinguished Scientist and a member of the IBM Academy of Technology.