



## **Shivkumar (“Shiv”) Kalyanaraman**

Shivkumar Kalyanaraman (“Shiv”) is the Program Director, Special Initiatives, IBM Research – India. He was recently the Chief Scientist of IBM Research – Australia responsible for the scientific agenda of the lab. Previously he was Co-Director of the UBD | IBM Centre in Brunei & Senior Manager of the Next Gen Systems & Smarter Planet Solutions Department at IBM Research - India, Bangalore. Before to joining IBM, Shiv had a successful academic career. He was a tenured, Full Professor at the Department of Electrical, Computer and Systems Engineering at Rensselaer Polytechnic Institute in Troy, NY, USA, with joint appointment in the Department of Computer Science. He received a B.Tech degree in Computer Science from the Indian Institute of Technology, Madras, India in July 1993, followed by M.S. and Ph.D. degrees at the Ohio State University in 1994 and 1997 respectively. He also holds an Executive M.B.A. (EMBA) degree from Rensselaer Polytechnic Institute (2005). Shiv holds honors of being an IEEE Fellow, and ACM Distinguished Scientist.

After joining IBM Research – India in early 2008, Shiv established and led world-class research teams on smarter planet technologies, (especially smarter energy & natural resources), networking and wireless topics. His team conducts interdisciplinary research in big data analytics, deep modeling, emerging wireless technologies, IBM analytics & cloud computing with applications to large-scale, real-world smarter planet problems (smarter energy, mining, oil & natural gas, transportation, weather, flood modeling, & agriculture). His smarter energy teams have completed R&D projects with several clients worldwide, including a first-of-a-kind Centre in Brunei. He is an SME on IT applied to Renewable Energy/Storage, Transportation, Oil/Natural Gas and Mining.

Shiv was the principal leader of the 2010 IBM Global technology outlook (GTO) on the Convergence of IT and Wireless Infrastructure, an study that was instrumental in shaping IBM's R&D investments in wireless technologies. Since 2010, he has served as part of the global leadership team in the IT/Wireless Convergence initiative at IBM Research.

Shiv was part of the founding leadership team that established the joint research Centre between Universiti Brunei Darussalam and IBM (UBD | IBM Centre) in Brunei (supported by HM Sultan of Brunei) at the intersection of Smarter Planet (esp Energy & Natural Resources) and High Performance Computing, including important objectives of joint research and human capacity development for Bruneians. As Co-Director, Shiv led the worldwide IBM Research technical team and was responsible for the delivery for the UBD | IBM Centre for IBM.

Shiv has 195+ refereed publications in top journals and conferences, with 6500+ citations; and over 35 patents filed. He was honored by MIT's Technology Review Magazine in 1999 as one of the top 100 young innovators for the new millenium. Shiv served in leadership roles in several top conferences, such as Co-Chair of ACM e-Energy 2015, TPC Co-chair of IEEE INFOCOM 2008, and General co-chair of ACM SIGCOMM 2010. He also served on the editorial board of IEEE/ACM Transactions of Networking.