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Presenter Biographies
Big Data: High Performance Computing in the Behavioral, Cognitive, and Sensory Sciences Special Seminar – June 5, 2013

John T. Cacioppo (Chair) is the Tiffany and Margaret Blake Distinguished Service Professor and Director of the Center for Cognitive and Social Neuroscience at the University of Chicago. Dr. Cacioppo earned his Ph.D. in Social Psychology from Ohio State University. He has written and/or coauthored 17 books and more than 400 chapters and articles. He is a member of the Society of Experimental Psychology; a past-president of the Association for Psychological Science; the Chair-Elect for the Psychology Section of the American Association for the Advancement of Science; the President of the Society for Social Neuroscience; a member of the Center for Scientific Review Advisory Council at the National Institutes of Health; and the recipient of various honors including the National Academy of Sciences Troland Research Award, the American Psychological Association Distinguished Scientific Contribution Award, the Society for Personality and Social Psychology Donald Campbell Award for Distinguished Scientific Contributions, the Society for Psychophysiological Research Award for Distinguished Scientific Contributions, and the Society for Personality and Social Psychology Theoretical Innovation Prize. Dr. Cacioppo's research concerns the behavioral and biological effects of social isolation, with an emphasis on underlying mechanisms.

Jennifer S. Cole is Professor of Linguistics, Computer Science, and Cognitive Science, at the University of Illinois (UIUC), and co-chair of the Biological Intelligence research theme at the UIUC Beckman Institute for Advanced Science and Technology. She was Instructor of Linguistics at Yale (1987-1989). She has degrees in Linguistics from the U of Michigan (B.A. 1982; M.A. 1983) and M.I.T. (Ph.D. 1987). Dr. Cole's research in the areas of phonology and phonetics focuses on the variability of speech forms and the mechanisms of speech processing and spoken language acquisition. Through the analysis of acoustic and behavioral data, using statistical and computational modeling, and formal grammar analysis, she examines phenomena related to speech prosody, coarticulation and phonological learning, and on the development of computer speech technologies based on phonological models of sound encoding. Her theoretical, experimental and computational work in phonology and phonetics spans over a dozen languages, including English, and she has a special interest in Indo-Aryan languages from Pakistan and India, and in the development of resources for computing and speech technologies for under-resourced languages. She has served on the executive or steering committees of the Association for Laboratory Phonology, the AAAS (Section Z: Language & Linguistics), the Linguistic Society of America and the American Institute for Pakistan Studies and as a member of the NSF Linguistics Advisory Panel. Dr. Cole's research has been supported with grants from the NSF, NIH, Dept. of Education, Natl. Security Education Program, NASA, and the University of Illinois. Dr. Cole has directed 17 Ph.D. theses in Linguistics at Illinois.

Hakizumwami Birali Runesha is the Director of Research Computing at the University of Chicago. He holds a Ph.D. in Civil Engineering from Old Dominion University and has more than 20 years of experience in High Performance Computing (HPC) and scientific software development. Prior to joining the University of Chicago,

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he served for 13 years as Director of Scientific Computing and Applications at the University of Minnesota Supercomputing Institute Before joining Minnesota, he was a Research Associate at the Hong Kong University of Science and Technology developing and implementing parallel computing algorithms for engineering applications, a research associate for the Multidisciplinary Parallel-Vector Computer Center at Old Dominion University and an assistant professor at the University of Kinshasa. Dr. Runesha's research interests are in parallel computing, sparse numerical libraries, finite element analysis and design optimization in engineering. With the advent of big data, he has been leading many initiatives for domain specific data management implementations and investigating running HPC applications in the cloud. He has written multiple parallel codes including solvers for civil, mechanical and aerospace engineering large-scale finite element applications. He has served as principal investigator on a number of research grants and is the author of a number of journal articles, proceedings and conference papers. He has given many invited talks, seminars, courses and workshops on various HPC related topics.

Richard M. Shiffrin is Distinguished Professor and Luther Dana Waterman Professor of Psychological and Brain Sciences at Indiana University. Dr. Shiffrin received a B.A. from Yale (mathematics) and a Ph.D. from Stanford (experimental and mathematical psychology). He joined IU in 1968, and became the Luther Dana Waterman Professor in 1980. In 1989, he founded and became the director of the Indiana University Cognitive Science Program. Dr. Shiffrin is an expert in the field of human cognition. He has developed and helped to establish a general theory of how we retrieve information from memory. He also has developed a theory of the interaction of automatic and attentive processes in cognition. His research interests include mathematical and computer modeling of, and empirical research in, learning, information processing and retrieval, forgetting, attention, the organization and structure of memory, perception, visual information processing and control processes in memory. Dr. Shiffrin was elected to the Society of Experimental Psychologists, has chaired the governing boards of the Psychonomic Society and the Society for Mathematical Psychology, and has edited the Journal of Experimental Psychology: Learning, Memory, and Cognition. Dr. Shiffrin was elected to the National Academy of Sciences in 1995. He previously served as a member of the NRC Division Committee for the Behavioral and Social Sciences and Education, as Co-Vice Chair of NRC Committee on Monitoring the Changing Needs for Biomedical and Behavioral Research Personnel, and as a member of the NRC Panel to Review the Scientific Evidence on the Polygraph, which resulted in the report, The Polygraph and Lie Detection (NAP, 2003).