



Hamilton Institute

Actuated Sensor Networks

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Abstract

In many scientific and industrial applications, sensor nodes must be carefully deployed, calibrated, maintained, and relocated over their service lifetimes. In other situations, the some of the sensors may be neither small nor low cost, or the phenomenon of interest highly variable, so that it will be impractical to randomly overdeploy large numbers of sensors. In both situations, the targeted use of mobility and other more limited forms of actuation can greatly improve the utility of the network while meeting goals of low overall system cost. Some of the challenges in designing actuated research networks are described, along with examples of deployments in support of basic ecological research.

Biography

Gregory J. Pottie was born in Wilmington DE and raised in Ottawa, Canada. He received his B.Sc. in Engineering Physics from Queen's University, Kingston, Ontario in 1984, and his M.Eng. and Ph.D. in Electrical Engineering from McMaster University, Hamilton, Ontario, in 1985 and 1988 respectively. From 1989 to 1991 he worked in the transmission research department of Motorola/Codex in Canton MA, with projects related to voice band modems and digital subscriber lines. Since 1991 he has been a faculty member of the UCLA Electrical Engineering Department, serving in vice-chair roles from 1999-2003. Since 2003 he has also served as Associate Dean for Research and Physical Resources of the Henry Samueli School of Engineering and Applied Science. His research interests include reliable communications, wireless communication systems, and wireless sensor networks. His current focus is on the information theory of sensor networks. From 1997 to 1999 he was secretary to the board of governors for the IEEE Information Theory Society. In 1998 he received the Allied Signal Award for outstanding faculty research for UCLA engineering. In 2005 he became a Fellow of the IEEE for contributions to the modeling and applications of sensor networks. Dr. Pottie is the deputy director of the NSF-sponsored science and technology Center for Embedded Networked Sensing, a member of the Bruin Master's Swim Club (butterfly), the St. Alban's Choir (2nd bass), and is a co-founder of Sensoria Corporation.

Venue: Seminar Room, Hamilton Institute, Rye Hall,
NUI Maynooth

Time: 1.00 - 2.00pm (followed by tea/coffee)

Travel directions are available at www.hamilton.ie



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