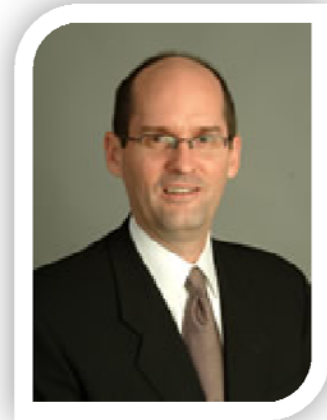




SEMINAR ANNOUNCEMENT

The art of puncturing an LDPC code: reliability and security

Prof. Steven W. McLaughlin
Vice Provost for International Initiatives
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Date : 30 April 2009 (Thursday)
Time : 3.30 pm – 4.30 pm
Venue: SPMS-Executive Classroom 1, MAS-03-06
School of Physical and Mathematical Sciences

In this talk, we show how a low density parity check code can be used for both reliability and (physical layer) security in a communication system. Careful use of puncturing shows that not only does an LDPC code have a universality property for reliability, but it can also be used as a very effective tool for hiding information against a passive eavesdropper. This tutorial talk will highlight both older and more recent work in LDPC codes.

Speaker Biography

Steven W. McLaughlin received the B.S.E. E. degree from Northwestern University, the M.S.E. degree from Princeton University, and the Ph.D. degree from the University of Michigan. He joined the School of Electrical and Computer Engineering at Georgia Institute of Technology in September 1996 where he is now a Ken Byers Professor and Vice Provost for International Initiatives. As Vice Provost, he is responsible for Georgia Tech's global engagement and is the contact person for international initiatives in research, education, and economic development. He has published more than 220 papers in journals and conferences and holds 27 US patents. He has served as the research and thesis advisor to more than 50 students at the bachelors, masters, doctoral and post-doctoral levels. He was President of the IEEE Information Theory Society in 2005.

Host: Prof. Frederique Oggier, Division of Mathematical Sciences, School of Physical and Mathematical Sciences

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