

**Todd Moon**  
**Professor**

**Education**

Ph.D.	Electrical Engineering	University of Utah	1991
M.S.	Electrical Engineering	Brigham Young University	1988
B.S.	Electrical Engineering	Brigham Young University	1988

**USU Employment History**

1991-1996	Assistant Professor of Electrical Engineering
1996-2002	Associate Professor of Electrical Engineering
2002	Professor of Electrical Engineering

**Other Related Experience**

1995	NASA JPL Summer Faculty Fellow
2001-2002	Sabbatical leave at Institute for Defense Analysis, Center for Communications Research, Princeton, New Jersey.
2003	SCAMP Summer Research, Princeton, NJ
2004	SCAMP Summer Research, Princeton, NJ

**Consulting/Patents**

Campbell Scientific (1998) B signal processing consulting  
Megahertz/3com (1997) B statistical consulting

**Professional Registration**

None

**Principal Publications of the Last Five Years**

*Books*

Todd K. Moon and Wynn C. Stirling, *Mathematical Methods and Algorithms for Signal Processing*, Prentice-Hall, 2000. (937 pp. + CD-ROM)  
Todd K. Moon, *Solutions Manual for Mathematical Methods and Algorithms for Signal Processing*, Prentice-Hall, 2000. (268 pp.)

*Books in Progress*

Todd K. Moon, *Error Control Coding: Mathematical Methods and Algorithms*(under contract with Wiley).

*Journal Papers Submitted and/or Published*

T.K. Moon and J.H. Gunther, "On the equivalence of two Welch-Berlekamp key equations and their error evaluators," accepted by IEEE Trans. On Info Theory, June, 2004.  
T.K. Moon, "On General Linear Block Code Decoding Using the Sum-Product Iterative Decoder," accepted by *IEEE Communication Letters*, January 2004.  
T.K. Moon, "Bit-level erasure decoding of Reed-Solomon codes over GF ( $2^m$ )" submitted to *IEICE*, November 2003.  
T.K. Moon and J.H. Gunther, "Contravariant adaptation on structured matrix spaces," *Signal Processing*, v. 82, pp. 1389-1410, 2002.  
Todd K. Moon, "Maximum likelihood binary shift-register synthesis from noisy observations," *IEEE Trans. Info. Th.*, July 2002, pp. 2096-2104.

Chet Lo and Todd Moon, "Bandwidth efficient digital communication with wavelet approximations," *J. Comm and Networks*, June 2002, pp. 97-101.

Todd K. Moon, "Exact reconstruction of a signal from samples of its integral," *Electronics Letters*, June 8, 2000, pp.1079-1081.

Todd K. Moon and Shriharsha Veeramachaneni, "Linear Feedback Shift Registers as Vector Quantization Codebooks," *Electronics Letters*, Oct., 1999, v35, No. 22, pp. 1919-1920.

### **Scientific and Professional Society Membership**

Member IEEE signal processing and information theory societies.

Member Sigma XI, Tau Beta Pi

### **Honors and Awards**

1998-1999 Electrical and Computer Engineering Department

1997 ADow Outstanding New Faculty Award,@ presented by the Rocky Mountain Section of the ASEE,

1997 Valedictorian Escort

1996 College of Engineering ATeaching Excellence@

1995-1996 ECE Department AOutstanding Teacher of the Year@

1996 ARobins Award Finalist@ for teacher of the year

1995 Valedictorian Escort

1993-1994 AHonors Professor@ designation

### **Institutional and Professional Service in the Last Five Years**

Vice Chair, Utah Section of Signal Processing/Communication Society

Chair, Utah Section of Signal Processing/Communication Society

Treasurer, Utah Section of Signal Processing/Communication Society

Vice Chair for Finance, International Conference on Acoustics, Speech, and Signal Processing, Salt Lake City.

Finance Chair, DSP Workshop, 1998

### **Professional Development Activities in the Last Five Years**

Sabbatical, June 2001 B August 2002, Center for Communication Research, Princeton, NJ