It was with shock and deep sadness that we learned of the premature death of Jim Anderson, who passed away suddenly on May 3, 2009. Jim spent his entire professional career at Lincoln Laboratory, a period spanning 32 years. Without a doubt, there will never again be a staff member in the Embedded Digital Systems Group or Lincoln Laboratory, for that matter, with Jim's special qualities—he embodied an inimitable mixture of warmth and humor, coupled with an encyclopedic knowledge of processor technology and a seemingly inexhaustible repertoire of anecdotes about luminaries throughout the computer industry.

In memoriam:
Jim's accomplishments while at Lincoln Laboratory were many and varied, from technical adviser, to program manager, to technologist, to workshop committee member. In the last role, he has been for many years an integral and valuable member of the High Performance Embedded Computing (HPEC) Workshop core committee. Jim's personableness and energy secured many fine speakers for us. His discussion panel, which was always a masterful blend of entertainment and informative technical commentary, has become a perennial highlight of the workshop.

Many of us who follow the trends and directions of the computer industry recognize that Jim has been a visionary in this area for a number of years. Jeremy Kepner shared with us the time Jim came to his office and declared that Moore's Law, the trend that was fueling the exponential improvements in the IC industry, was going to hit a wall in the next five years. Jim showed Jeremy the plot he had compiled, and said that clock speed would be leveling off and other ways to improve processors would have to be found. Only a handful of computer architects across the nation at that time would have taken Jim's prediction seriously; and yet, that is precisely where we are today—stuck at around 5 GHz, just as Jim predicted. One aspect of Jim's professional life that impresses itself most immediately upon even a casual observer is that Jim always seemed to love his work. His enthusiasm and talent charmingly combined the technological depth of an MIT PhD graduate with the sensibility and flair of a multitalented musician. Jim was a truly unique and talented man and will be profoundly missed.
We were saddened to learn that Prof. Dennis Healy passed away on 3 September 2009. As a DARPA Program manager Prof. Healy was a long-time sponsor of HPEC, having sponsored the workshop since 2006.

Prof. Healy held two positions at DARPA. He headed the Applied and Computational Mathematics program in DARPA’s Defense Sciences Office (DSO). Most recently he was a Program Manager for the Microsystems Technology Office (MTO), starting in 2003. Some of the recent programs he managed were Analog-to-Information (A-to-I), Multiple Optical Non-redundant Aperture Generalized Sensors (MONTAGE), Non-Linear Mathematics for Mixed Signal Microsystems (NLMMSM), Space Time Adaptive Processing (STAP-Boy), Intelligent RF Front-Ends (IRFFFE), Advanced Digital Receiver (ADR), Chemical Engineering at Molecular Scale (CHEMS), and Cognitively Augmented Design for Quantum Technology (CAD-qt).

Prof. Healy also was Professor of Mathematics at University of Maryland, College Park. Previously, he was an associate professor in the Computer Science and Mathematics Departments at Dartmouth College and was Summer Faculty Fellow at the Naval Ocean Systems Center (now SPAWAR).

Prof. Healy authored over 90 publications on the subjects of mathematical physics, statistics, optical sciences, electrical engineering, biomedical engineering, magnetic resonance, signal and image processing, mathematics, applied mathematics, and theoretical computer science. He was a member of the editorial board for the *Journal of Fourier Analysis and Applications* and the IEEE press series on Biomedical Engineering.

His students, friends, and family remember Prof. Healy for his love of teaching, his passion for research, and his kind spirit. “Everything was interesting to him,” said Katherine Healy, his wife of 24 years. “He did not understand how anyone could ever be bored, because he thought everything was so interesting, and that’s how he approached life. There was no boundary between his life and his work.”

His friendship as well as his contributions to and support for the HPEC community will be dearly missed.
HPEC 2009 Acknowledgments

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• Lunch and refreshments are provided

• Unclassified Proceedings will be available on the web and provided on CD

• Provide any necessary updates on the Contact Information form that is provided in your Attendee Package and leave it at the Registration Desk

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Focus Sessions in S2-180
# Agenda Highlights

## Day 1
**Tuesday**
22 September

**Mission Keynote Address** – Dr. Robert H. Latiff / Major General, USAF (Ret.)

**Session 1:** *HPC Landscape*

**Focus 1:** Space Technology  
**Poster / Demo A:** Advanced Algorithms and Hardware

**Session 2:** *Multicore Architecture*

**Focus 2:** Multicore Applications

*Reception and Banquet (Burlington Marriott)*

**Banquet Presentation** – Dr. Sigrid Close / Los Alamos National Laboratory  
**Title:** From Dust to Asteroids: Impacts on Earth

## Day 2
**Wednesday**
23 September

**Technology Keynote Address** – Dr. Richard Linderman / AFRL

**Session 3:** *GPU*

**Focus 3:** Multicore Programming  
**Poster / Demo B:** FPGA Technologies and Applications

**Session 4:** Awards Session

**Panel:** Survivor: Computer Architecture
Banquet Speaker

Dr. Sigrid Close
Title: From Dust to Asteroids: Impacts on Earth

Place: Burlington Marriott

Date: Tuesday, 22 Sept 2009

Time: 1745 – Reception
      1830 – Speaker
      1900 – Banquet