



Center for Scientific Computation And Mathematical Modeling

University of Maryland, College Park



A Program Announcement

“Oversampling and Coarse Quantization for Signals” CSCAMM Program - Spring 2005

April 11 – April 15, 2005

Organizers: John Benedetto, Ingrid Daubechies, Ron DeVore, Eitan Tadmor

Invited Participants

Bob Adams, Analog Devices
John Benedetto, University of Maryland
Ingrid Daubechies, Princeton University
Ron DeVore, University of Maryland
Sinan Gunturk, New York University
Dennis Healy, University of Maryland
Joe Jensen, HRL Laboratories LLC
Alex Powell, Princeton University
Mike Shub, University of Toronto
Martin Vetterli, Swiss Federal Institute of Technology
Yang Wang, Georgia Tech
Chai Wu, IBM
Özgür Yilmaz, University of British Columbia

SCIENTIFIC BACKGROUND

While high oversampling is a preferred technology in digital signal encoding, the advantages of redundancy are far from clearly understood. Single bit quantization schemes such as Sigma-Delta Modulation are intimately connected with number theory, dynamical systems, and stochastic processes. These methods are also used in other applications such as halftoning. The workshop will bring together selected experts, from a variety of scientific disciplines, whose work interfaces coarse quantization techniques. The focus of the workshop will be to explain the benefits of redundancy in this setting and to describe the compelling open problems.

The Center for Scientific Computation
And Mathematical Modeling (CSCAMM)
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University of Maryland, College Park

*CSCAMM is part of the College of Computer,
Mathematical and Physical Sciences*



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A limited number of openings are available.

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email: ocq05@cscamm.umd.edu

A limited amount of funding for participants is available, especially for researchers in the early stages of their career who want to attend the full program. Partial funding is provided by the University of South Carolina Industrial Mathematics Institute (IMI) and by the Office of Naval Research (ONR).