

PROGRAM

Data Compression Conference (DCC 2004)

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**Snowbird, Utah
March 23-25, 2004**

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SCHEDULE OVERVIEW:

Monday Evening, March 22:

Registration and Reception

Tuesday, March 23:

Morning: Technical Sessions
Mid-Day: Invited Presentation
Afternoon: Technical Sessions

Wednesday, March 24:

Morning: Technical Sessions
Mid-Day: Technical Sessions
Afternoon: Poster Session and Reception

Thursday, March 25:

Morning: Technical Sessions

MONDAY EVENING

Registration / Reception, 7:00-10:00pm (Golden Cliff Room)

TUESDAY MORNING

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**TUESDAY MID-DAY
INVITED PRESENTATION**

2:30pm - 3:30pm

**California Coding: Early LPC Speech
in Santa Barbara, Marina del Rey, and Silicon Valley, 1967–1982**

Robert M. Gray

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Information Systems Laboratory
Department of Electrical Engineering Stanford, CA 94305
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This talk aims to sketch the historical and technical threads of the California portion of the story of the development of linear predictive methods for speech coding along with joint and parallel work in Japan, New Jersey, Massachusetts and Texas. The focus is on the 1970s, but the story begins earlier and the narrative covers through the early 1980s. Personalities, institutions, and milestones are considered along with technical developments and interpretations. With the benefit of hindsight, a brief technical tour of the basics of linear predictive coding is provided to provide context for the history. The primary personalities considered are Glen J. Culler, John Parker Burg, John D. Markel, A.H. (Steen) Gray, Jr., and Danny Cohen. The institutions emphasized include UCSB, SCRL, ISI, Culler Harrison Inc., and Time and Space Processing. The focal events are the first real time LPC speech communication on the ARPAnet, the first hardware LPC speech boxes, the book "Linear Prediction of Speech" by Markel and Gray, and the appearance of TI's Speak & Spell toy. The technical threads involve several variations and interpretations of LPC and the encounters of early LPC research with the origins of the Internet and the precursors of wavelet analysis. Anecdotal stories of interactions among researchers in California and foreign (nonCalifornia) institutions such as NTT, Lincoln Lab, and TI are recounted. The talk is based on oral histories, the literature, email and conversations, and the author's memories as a peripheral participant.

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