Seventh Annual International

Phoenix CONFERENCE on COMPUTERS and COMMUNICATIONS

1988 CONFERENCE PROCEEDINGS

March 16-18, 1988
SunBurst Resort Hotel & Conference Center
Scottsdale, Arizona

Sponsored by:
Institute of Electrical and Electronics Engineers

In Conjunction with:
The Computer Society,
IEEE Communications Society,
Phoenix IEEE Section and
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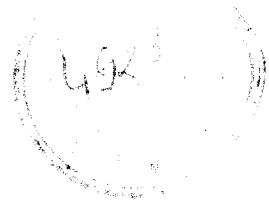

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Conference Chairman's Message

Welcome to PCCC '88

PCCC '88 is the seventh in a series of annual technical conferences focusing on computer and communication technologies.

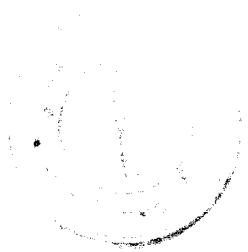
The conference provides a broad spectrum of technologies ranging from software development tools to computer architecture to signal identification. These technologies represent the spectrum of understanding required by those developing the systems operating in our complex world and demonstrate that computers and communications are an unseparable pair in the advancement of technology. To this end PCCC provides a forum to better understand these traditionally separate disciplines through mutual sharing of information, applications, technology, and expertise.

PCCC '88 like its predecessors has attracted a world wide audience, well known guest speakers, and an impressive source of technical papers.

Practical as well as theoretical basis for the technical sessions is provided to the attendees by the day long tutorial sessions preceding the two day technical program. This year 10 tutorials are to be presented and provide a unique educational opportunity to develop indepth understanding of a variety of current and emerging disciplines. These tutorials are followed by the two day technical sessions in which nearly 100 papers will be presented.

I urge you to look over this advance program and consider joining us in the Phoenix area in mid-March. This is a beautiful time of the year in Arizona in which you will be able to complement your technical activities with a wide variety of outdoor activities.

Dr. Carl Ryan
PCCC-88 Conference Chairman



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Program Chairman's Message

Building on the success of last year's conference, we again sought the assistance of a group of experts to form a Technical Program Committee, whose names are listed in the following page, did an excellent job of refereeing papers and of selecting the best papers for presentation. We received over 120 papers, from which 83 papers were accepted and are included herewith. Special thanks should go to 12 referees who helped the Program Committee evaluate the submitted papers. We should note, however, that the quality of the technical program depends primarily on the quality of the papers submitted for consideration.

In addition to the refereed papers, we have invited three exceptional and renowned individuals who will deliver the key talks of the conference. Prof. John McCarthy of Stanford University will present "Current and Future Applications of Artificial Intelligence". Lt. Gen. Emmett Paige, Jr. of USAISC, Ft. Huachuca, AZ will talk about "Experiences and Challenges in Global Communications". Finally E. Baird Smith of the IBM Corporate Technical Education Center will discuss "SOFTWORD . . . The World of 'Virtual Reality' where all experience is manufactured".

The Technical program is divided into five parallel tracks. On Thursday, they are computer technology, communications, software technology, networking and artificial intelligence. On Friday, four of the five tracks are continued; however, the track on communications is replaced by one on selected technologies which features panels on the application of AI to the design of large distributed systems and computer applications in the humanities.

We take this opportunity to thank everyone who has helped us in organizing this program. We recognize the hard work that has been dedicated to the development of this program, and hope that you also will be pleased with its quality.

Dr. Alex Brown, Jr.
PCCC-88 Program Chairman

1988 PCCC
Referees

Lex Akers

John Carson

Nigel Reynolds

Bob Hay

Gregory Hill

Mark Huth

J.J. McCarthy

Don Miller

Roger Peterson

Tony Pizarello

Kent Torell

Leonard Faltz

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Science Applications International

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University of Colorado

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Artificial Intelligence in Networking

(Session Chair: S. Debray, *University of Arizona*)

Image Processing and Analysis

(Session Chair: K. Mutch, *Arizona State University*)

*Not received in time for publication

Artificial Intelligence Techniques