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IEEE COMMUNICATIONS SOCIETY
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2002 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS

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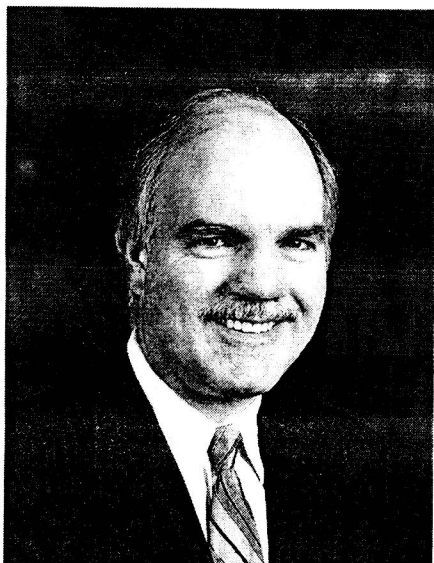
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MESSAGE FROM THE GENERAL CHAIR



On behalf of the ICC2002 Organizing Committee, I am pleased to welcome you to New York City for this IEEE International Conference on Communications (ICC2002). We worked hard and put together an exciting Program that we hope you will find interesting and enjoyable.

As a graduate student beginning my research, the very first technical conference that I attended was ICC'82 in Philadelphia. It is a great honor, 20 years later, to now serve as the General Chair of ICC2002. It is even

more special since we are celebrating the 50th anniversary of the Communications Society (ComSoc) this year, as reflected in our conference theme: "50 Years of Advancement in Communications." In recognition of this golden anniversary, we have scheduled a number of events, including a special retrospective 50th Anniversary Panel chaired by Bob Lucky. In addition, with your full or limited registration you will receive a DVD set that contains 50 years of papers that have been published in ComSoc magazines and journals and the last few years of conference proceedings! It is a library of more than 28,000 technical research/industry papers from more than 23,000 authors.

For the first time, ICC consists entirely of thematic Symposia. We selected 11 hot topics that encompass a broad range of interests. Even without a "General Conference," 1568 papers were submitted for review: a new record for ICC/GLOBECOM conferences! A tremendous thanks is due Malathi Veeraraghavan and her Technical Program Committee for handling this incredible number of submissions under difficult circumstances between September and November 2001.

In addition to this collection of peer-reviewed technical papers, we also have scheduled 11 exciting Panel and Business Application Sessions, 16 Tutorials, 3 Workshops, and Plenary presentations by Dr. Ravi Sethi, Mark Wegleitner and Dr. Michael Hluchyj.

We are glad that you were able to join us for ICC2002 in New York City, as it recovers from the terrible September 11 tragedy. I am sure you will enjoy your stay as you meet with your colleagues from around the world, celebrate ComSoc's "Fifty-Year Foundation for the Future," and perhaps help launch your own new career as I did 20 years ago. While you are visiting, of course take some time to enjoy the many attractions and entertainment of New York.

The ICC2002 Organizing Committee looks forward to making your visit a success in every way!

Mark J. Karol
General Chair, ICC2002

MESSAGE FROM THE TECHNICAL PROGRAM CHAIR



The International Conference on Communications, ICC, is being held this year under somewhat unique circumstances. First, we are experiencing a significant slow-down in the telecommunications marketplace. Following the boom of the nineties when large sums of money were invested in telecommunications companies, we are now experiencing a period of relative drought. Startups are struggling to find customers, layoffs are rampant in big companies, and stock prices of major telecommunications companies are significantly lower than in their heyday. Second, ICC is being held in New York City, which is recovering from the terrible 9/11 tragedy of year 2001. Security has become of paramount importance both here in the USA and worldwide. As engineers in various communications fields, we are all keenly aware of the role we can play toward improving security without a loss of freedom.

ICC2002 is thus being largely influenced by these two factors. With major cost reductions in companies and the perceived risks of air travel, attendance at ICC2002 is likely to be impacted. We received a record number of papers, 1568, a number that may have been lower had our paper submission deadline been a mere

9 days later [our paper submission deadline was Sept. 3, 2001]. Authors of a few accepted papers have cited the above two reasons for withdrawing their papers from the conference before the publications deadline of this proceedings.

However, in spite of these negative circumstances, I am personally optimistic on the prospects of telecommunications in the coming years. Two technologies, optical communications/switching, and CDMA for next-generation wireless networks, inspired the start-up of several companies in the nineties. We need to deliver on the promises of these two technologies. For wired networks, I do not see an alternative to this promised transition to optical networks. The current situation is that we have a bandwidth glut. However, this "glut" does not exist end-to-end. If it were available end-to-end, as a simple example, I would not be struggling with my current effort to teach a class synchronously at two of our campuses. Virtual reality, high-quality video-conferencing, work collaborations across distances (which, if done effectively, could have a significant impact on our current urban-based societal structures), etc., become truly possible only with large amounts of bandwidth. Moving to optical fiber from our current copper based infrastructure is a necessary to achieve this goal. A complement to optical networks is a high-bandwidth outdoor wireless network. Just because anywhere-anytime high-bandwidth communications is not possible with today's limitations does not mean it is something we should not strive toward. Wireless communication is clearly needed to achieve the "anywhere" part. Be it through satellites, terrestrial deployments or stratospheric communications, we need high-bandwidth wireless links. A killer application for wireless communications will be sensor networks. The placement of communication-capable sensors in common items like light bulb switches, refrigerators, microwaves, along roads, and other currently-inconceivable places will dramatically change our everyday lives.

Given this tremendous upside to the value of our work as communications engineers, I think conferences such as ICC are most important to provide researchers a forum in which to exchange ideas and results, an fuel new thinking and joint efforts to achieve these ambitious goals. For this ICC, we have selected 655 papers with the hard work of a technical program committee of 21 Symposia Chairs/Vice-Chairs, 250 TPC members, and Debora Kingston, IEEE Communications Society. I hope you find this collection of papers useful toward making the big advances we need in achieving the next level of data communications. Happy reading!

Malathi Veeraraghavan
ICC 2002 Technical Program Chair

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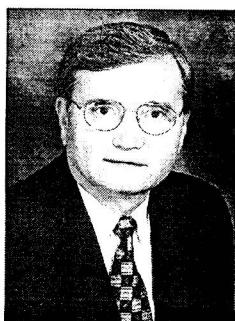
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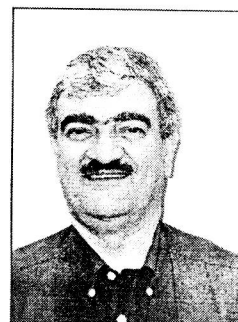
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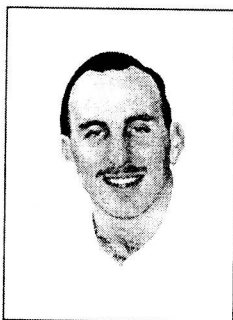
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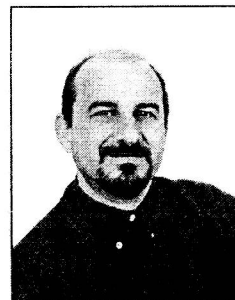
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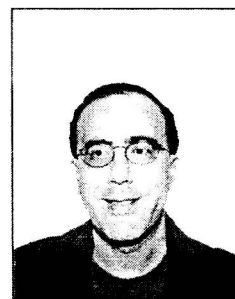
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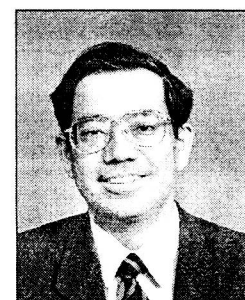
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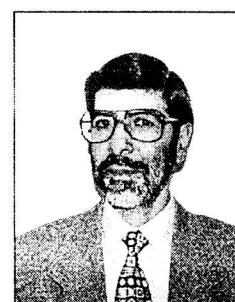
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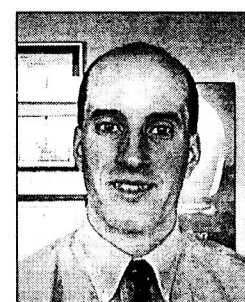
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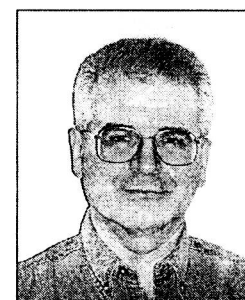
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