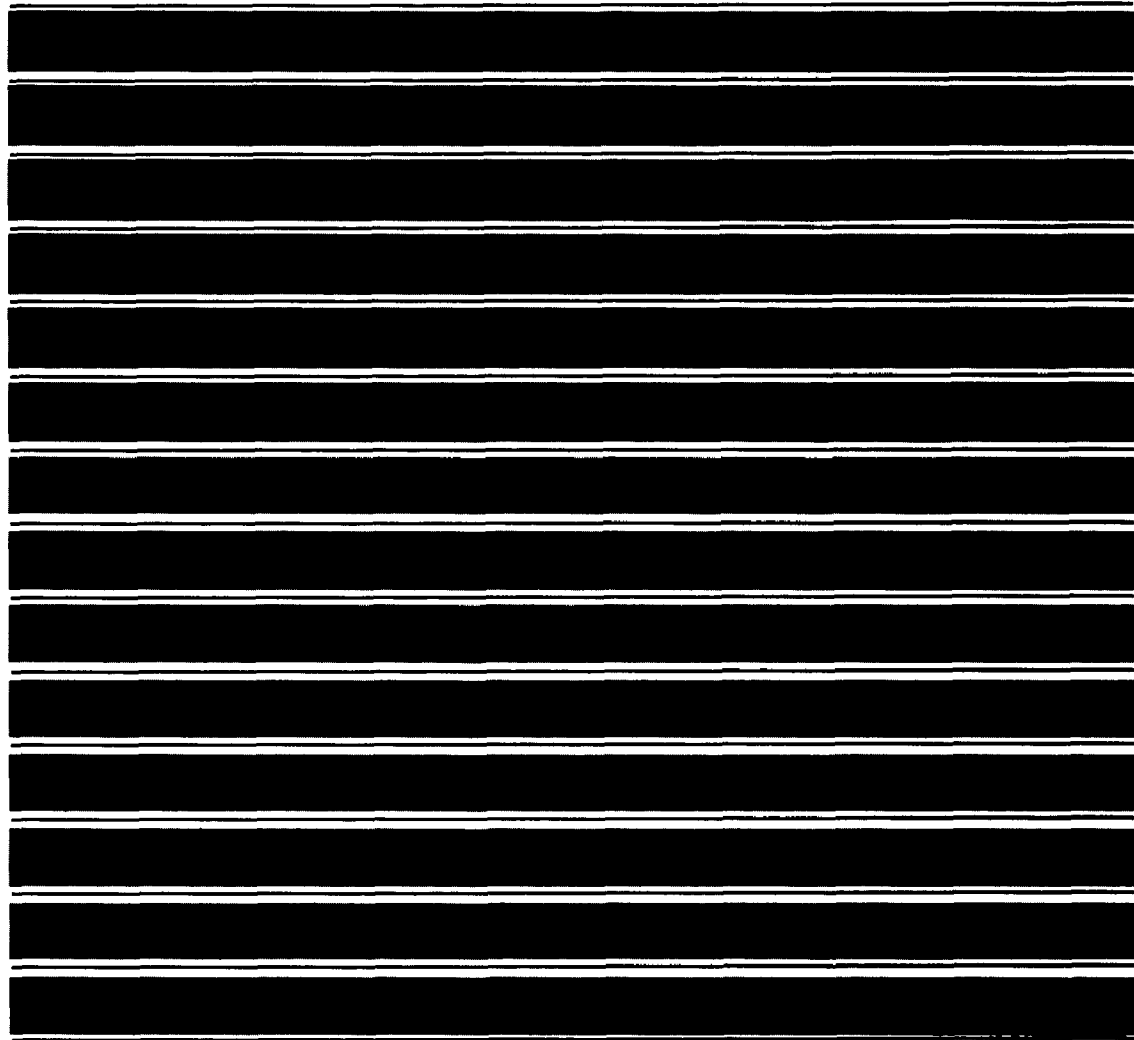


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## Foreword

**Supercomputing '88** is the first of a new series of technical meetings for all those connected with supercomputers: manufacturers, suppliers, and users from a wide variety of disciplines. Sponsored by the ACM SIGARCH and the IEEE Computer Society, with the cooperation of SIAM and a number of national laboratories and federal agencies, this conference is the result of the creative collaboration of everyone on the committees. Ideas came from everybody and, by working together, we have built something we believe all of you will like. Our goal is to make this conference series a real clearinghouse for state-of-the-art technical activities and research in supercomputing.

Since this is a new series, we are trying a lot of new things. The North American Computer Chess Championship matches will be held in conjunction with the event. We have arranged many things so that the attendees may have the opportunity for hands-on interactions with the hardware and for meeting with other participants. Certainly, there will be the usual sessions with speakers to listen to, but we don't expect things to stop there.

We're delighted that approximately thirty companies will show their products in the vendor exhibits area.. Some of the vendors plan to install high-speed communications links to their home facilities, thereby allowing live, full-scale demonstrations of their state-of-the-art capabilities, products, and services.

The poster sessions will include snacks and cash bar, giving you another opportunity to interact with your colleagues. Researchers from universities and government labs have agreed to transport portions of their equipment to the conference where they will demonstrate their work and, in some cases, let attendees try hands-on experiments.

Today, the use of supercomputers has transformed practically all the natural sciences and engineering disciplines. But, it's not all grind, grind. Interspersed with the serious work are flashes of neat insights, humor, and fun. We have arranged some activities that demonstrate some of these novel ideas. There will be a presentation about some of the great hacks from MIT and Cal Tech. In addition, we have arranged for the first winners of the "Great Parallel Computing Race" – the Bell Prize – to discuss, informally, high performance computing and competitions. We have some of the most articulate spokesmen from the Free Software Institute coming to discuss the question of how to distribute software without having to hire an army of lawyers. There is a session on some of the more unusual applications of supercomputing and, finally, the Visualization Theatre will show some exciting pictures produced by supercomputers.

During the conference, (real) users will discuss the calculations they wish/need to make. (Real) technologists will talk about what's possible. (Real) manufacturers will outline what they can build. All this activity is aimed at you, the (real) attendees. Our aim is to create an aura of excitement and exuberance, so that you'll want to join in the discussions.

The program committee received a number of excellent papers. We could accept only about 40% of the submissions, but it would be wrong to say the rest were rejected. Of course, some were, but so many were of good enough quality that the committee took the unprecedented step of recommending those papers to various professional journals. In addition, the committee invited papers to cover topics that were not covered adequately by the submitted papers.

We expect that you will find the invited keynote speakers to be very interesting. Our first one will be Seymour Cray of Cray Research. Our banquet speaker will be Carl Conti of IBM Enterprise Systems. And later in the week, our third speaker will be Carl Ledbetter of ETA Systems.

All in all, this conference looks like a whizz-bang; excellent technical material and time to consider it all! We have built it with you in mind; if you are involved in supercomputing, this is your conference.

Obviously, there may be some things we didn't get right this time. Please use the opinion questionnaires to tell us what was wrong and (perhaps) how to fix it. If you have a pet idea, or just want to volunteer to help at the next conference, please tell us that, too.

Finally, plans are already well under way for our 1989 conference. We invite you all to join us next year, and in future years, to share the latest progress in supercomputing with your peers.

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