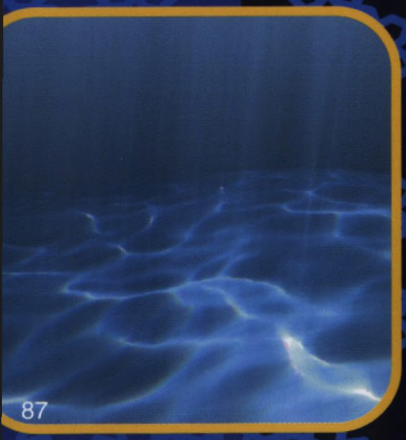

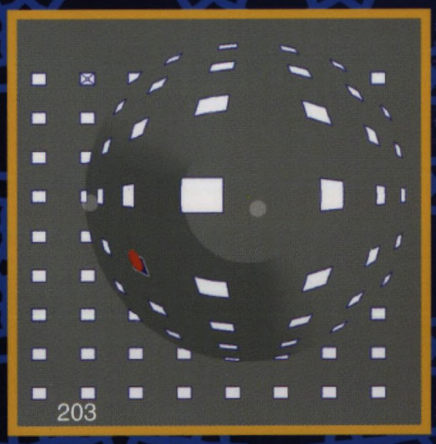

Proceedings

Graphics Interface 2005

9-11 May 2005
Victoria, British Columbia
Canadian Human-Computer Communications Society

Proceedings

Graphics **Interface** 2005

Kori Inkpen and Michiel van de Panne
Program Co-Chairs

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Preface

Kori Inkpen
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Department of Computer Science
The University of British Columbia

Welcome to Graphics Interface 2005. This annual conference, now in its 31^{st} year, is devoted to computer graphics, interactive systems, and human-computer interaction. Beginning in 1969 as the "Canadian Man-Computer Communications Seminar" (CMCCS), it is the oldest regularly-scheduled computer graphics and human-computer interaction conference. This year, Graphics Interface was held May 9–11, 2005 in Victoria, British Columbia.

A total of 104 submissions were received, up 20% from 2004, of which 30 papers were accepted. The final program is well balanced between HCI and computer graphics, with both tracks seeing similar acceptance rates: 14/51 for the HCI track, and 16/53 for the graphics track.

The program committee consisted of 20 international experts, 18 of which attended the program committee meeting held in mid February at UBC. The great majority of papers recieved 5 reviews, two of which were from program committee members, and 3 from external reviewers. The reviewing process was double-blind, with the exception of the primary reviewers, who knew the identity of the authors in order to be able to select conflict-free external reviewers. We thank the program committee for their expertise and time in selecting a very high quality set of papers for this year's conference. We also thank the many external reviewers for their help in this endaevor.

There are also many others whose efforts were indispensable in making Graphics Interface happen. Michael McCool, together with Graphics Services at the University of Waterloo, consistently does an amazing job at producing the proceedings each year and this year is no exception. The conference would also simply not happen each year were it not for the efforts of Kelly Booth, who orchestrated many important details behind the scenes and acted a liason between the AI, GI, and CRV trio of conferences. We thank Fred Peet, the treasurer of the Canadian Human-Computer Communication Society, for looking after all financial issues related to the conference. The electronic submission system and the online conference registration system was provided by Precision Conference Systems and we thank James Stewart for his prompt support whenever it was needed. Joseph MacInnes of Saint Mary's kindly volunteered as this year's posters chair. Karyn Moffatt was the student volunteer coordinator, yet another important role in making the conference run smoothly. Lastly, we thank this year's local organizers for their efforts. This list includes Margaret-Anne Storey, Davor Cubranic, Paul Lalonde, Alex Thomo, and Bill Wadge.

We would also like to extend our appreciation to this year's invited speakers, all of whom are outstanding leaders in their respective fields: Holly Rushmeier, Yale University; Bill Buxton, Buxton Design; and Ramesh Raskar, Mitsubishi Electric Research Labs. Their presentations provide unique insights that will help spark ideas to advance the fields of computer graphics and human-computer interaction during the coming years. We are also pleased to announce that Dr. Ronald M. Baecker has received the 2005 CHCCS Achievement Award for his significant research contributions in computer graphics and human-computer interaction over the past 40 years.

For further information about the conference series we invite you to visit the web site:

`http://www.graphicsinterface.org/`

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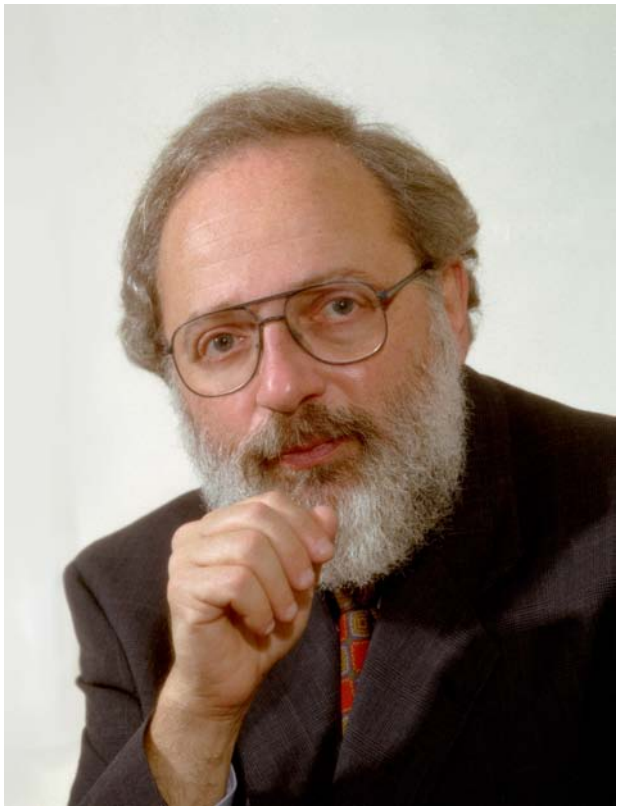
2005 CHCCS Achievement Award

Ronald M. Baecker

Ronald Baecker has played a pioneering role in almost every aspect of the community that comprises the Canadian Human-Computer Communications Society. He is internationally recognized for his insights on the importance of interactivity and careful attention to user-centred design. Often he has seen emerging issues well ahead of others and provided leadership by initiating research activity in new areas that have set the agenda for those who followed. The many accomplishments for which he is receiving the CHCCS Achievement Award include: establishing with his colleagues at the University of Toronto the Dynamic Graphics Project as the first (and many would say the foremost) Canadian university research group focused on computer graphics and human-computer interaction; producing in 1981 one of the first and perhaps the most famous animated algorithm visualizations, the computer-generated film Sorting Out Sorting; co-chairing and naming Graphics Interface '82, the event that transformed the former CMCCS conference to an annual conference with a wider constituency than just interactive computer graphics; co-founding in 1989 the CAVECAT research project and in 1992 the Ontario Telepresence Project, which were testbeds for many ideas that are now common practice in computer-supported cooperative work; and organizing the Network for Effective Collaboration Technologies through Advanced Research, a new Canadian research network.



Photograph by Louis Fabian Bachrach.

The opportunities created by these initiatives, and Dr. Baecker's vision of interactive technology as a key enabler, have been instrumental in establishing and maintaining Canada's position as a world leader in the fields of computer graphics, visualization, human-computer interaction, and computer-supported cooperative work. These and similar initiatives spanning more than four decades have provided inspiration for students, colleagues, and the international research community.

Dr. Baecker is Bell University Laboratories Professor of Human-Computer Interaction, Professor of Computer Science, and founder and Chief Scientist of the Knowledge Media Design Institute at the University of Toronto. He holds cross appointments in the Department of Electrical and Computer Engineering and the Faculty of Management. He received his B.Sc., M.Sc., and Ph.D. degrees from M.I.T. His Ph.D. topic led to the first comprehensive conceptual framework for computer animation and the first significant interactive computer animation system. Dr. Baecker joined the University of Toronto in 1972 after working at the National Institutes for Health in the United States.

A partial list of his many research contributions includes the Genesys picture-driven animation system described in his doctoral dissertation (1969), the Shazam interactive animation system developed with researchers at Xerox PARC, the Newswhole interactive newspaper layout system designed with David Tilbrook (1976), a multi-window interactive graphical debugger developed with

Sheila Crossey (1977), the See source code visualization project with Aaron Marcus (1983), the VANNA video annotation tools with Beverly Harrison (1992), research on collaborative writing with Ilona Posner and Alex Mitchell in the early 90s, the MAD movie authoring system for children with Alan Rosenthal, Eric Smith, and Ilona Posner in the mid-90s, and the ePresence open source interactive webcasting and archiving system with Peter Wolf, Gale Moore, and Kelly Rankin in the beginning years of this millenium.

Baecker is an active researcher, lecturer, and consultant on human-computer interaction and user interface design, user support, software visualization, multimedia, computer-supported cooperative work and learning, the Internet, entrepreneurship and strategic planning in the software industry, and the role of information technology in business. He has published over 100 papers and articles on topics in these areas, and is the author or co-author of two published videotapes and four books including three edited collections of readings in human-computer interaction and computer-supported cooperative work. He is co-holder of two patents and one patent pending.

Baecker was the founder, CEO, and Chairman of HCR Corporation, a Toronto-based UNIX contract R&D and technology development and marketing firm, sold in 1990 to the Santa Cruz Operation. He was also the founder of Expresto Software Corp, a firm specializing in structured visual communication explaining software and other complex technology. Expresto Software was sold in 2002 to Caseware International. He has been recognized by ACM SIGGRAPH as a “Graphics Pioneer” for his contributions to interactive computer graphics and he has been inducted into the ACM SIGCHI Academy for his contributions to the field of human-computer interaction.

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