

5. A. Proskurowski, On the generation of binary trees. *J. ACM* 27, 1-2 (1980).
6. D. Rotem and Y. L. Varol, Generation of binary trees from ballot sequences. *J. ACM* 25, 396-404 (1978).
7. F. Ruskey and T. C. Hu, Generating binary trees lexicographically. *SIAM J. Computing* 6, 745-758 (1977).
8. M. Solomon and R. A. Finkel, A note on enumerating binary trees. *J. ACM* 27, 3-5 (1980).
9. S. Zaks, Lexicographic generation of ordered trees. *Theor. Comput. Sci.* 10, 63-82 (1980).
10. D. Zerling, Generating binary trees using rotations. *J. ACM* 32, 694-701 (1985).

Announcement

9-13 JULY 1990

WCCE/90, Fifth World Conference on Computers in Education, Sydney, Australia

Conference Programme

Start planning now for the Fifth World Conference on Computers in Education. Such conferences are only held every five years. The conference will address **all** aspects of educational computing, ranging across primary, secondary, tertiary, industry as well as community education. It will provide an opportunity for people from many countries and backgrounds to meet and exchange ideas and experiences.

WCCE/90's six major streams

- (1) Informatics Education at the Secondary Level (WG 3.1), Stream Chairman: Peter Bollerslev, Denmark
- (2) Advanced Curriculum Projects in Information Processing (WG 3.2), Stream Chairman: Professor William Atchison, USA
- (3) Research on Educational Applications of Information Technologies (WG 3.3), Stream Chairman: Professor Robert Lewis, UK
- (4) Vocational Education and Training (WG 3.4), Stream Chairman: Dr Ben Sion Barta, Israel
- (5) Informatics in Elementary Education (WG 3.5), Stream Chairman: Frank Lovis, UK
- (6) Distance Learning (WG 3.6), Stream Chairman: Gyoza Kovacs, Hungary

Other activities at WCCE/90

Panel and Poster Sessions, Workshops and Meetings

Opportunities will be provided during WCCE/90 for the presentation and discussion of ideas and experiences in informal panel discussions and poster sessions. The weekend prior to the conference will be the time for some practical computer education workshops, including some run by keynote and invited speakers. During the conference there will be scheduled public meetings to form new, and rejuvenate old, interest groups.

The Galah Sessions

The Galah, a member of the Cockatoo family, is an Australian bird well known for its habit of gathering in large, noisy flocks. Our early morning and late afternoon 'Galah sessions' will provide you with the opportunity of meeting people from around the world who share your special interests in computer education.

The Exhibition

An international commercial exhibition will also be part of WCCE/90.

Mini-conferences during WCCE/90

In addition to six major streams, WCCE/90 will provide a venue for mini-conferences, including:

Teleteaching 90

Programme Chairman: Gordon Davies, UK

Teleteaching 90 is the second in a series of international conferences addressing the topic of educational technology for distance learning. Teleteaching 86 in Budapest was the first in the series. Teleteaching 90 will include papers, invited speakers, discussion panels and demonstrations.

CBT/90

Programme Chairman: Rod Sims, Australia

Hosted by the Australian Society for Computers in Learning in Tertiary Education, CBT/90 will provide an opportunity for training and education professionals to share their experiences in the design, development and delivery of computer-based instructional resources. CBT/90 will include presentations on the latest courseware applications in business, industry and government, as well as on the latest authoring tools and presentation technologies.

Kids and Classrooms 90

Programme Chairman: Pam Gibbons, Australia

An exciting programme involving children and computers is being planned by the New South Wales Computer Education Group. Included as part of WCCE/90, it will provide an opportunity for delegates to visit 'Fly on the Wall Classrooms' at the conference, where local teachers will conduct lessons with local students. For student delegates to the conference there will be 'All hands-on' sessions, where they will have the opportunity to work with computers alongside leading local teachers. This is certain to be an attraction for those overseas delegates incorporating the conference into a family vacation. Both overseas and local students are invited to contribute to the 'Kids and Classrooms Corner', where (K-12) students will present their work with computers in their schools.

'Be our guest'

WCCE/90 will offer two special schemes for overseas delegates. For those on tight budgets,

there will be 'Australian Home Hospitality', providing free accommodation in Australian homes during the conference. The Education Visits Scheme will enable overseas delegates to visit schools, colleges and universities in Sydney and elsewhere before and after the conference. Because our main school holidays are in January, not July, many schools will be open at the time of your visit to Australia.

The Pacific focus of WCCE/90: New Zealand and Japan

A Pre-Conference in New Zealand and a Post-Conference in Japan will provide international delegates with the chance to obtain maximum value from international airfares, with visits to other Pacific Rim destinations.

Computers in Education: National Perspectives (New Zealand)

Programme Chairman: Ian Mitchell, New Zealand

The New Zealand event, hosted by the New Zealand Computer Society, will be held on 4-6 July. Selected papers will form the basis of workshops, the objective of which will be the production of a 'Working Document' of conclusions and recommendations on national policies for computers in education. Particular emphasis will be given to educational philosophies and structures that harmonise high technology with the culture of minority indigenous peoples.

The workshops will be held within the traditional procedures and protocols of the Maori people with their emphasis on consensus and harmony and of living and eating together during the conference.

Advanced Research on Computers in Education (Japan)

Programme Chairman: Professor Setsuko Otsuki, Japan

Hosted by the Information Processing Society of Japan and to be held on 18-20 July, the aim of this post-WCCE/90 mini conference is to explore the application of the latest developments in information processing to the field of education.

For Further Information

If you are interested in finding out more about WCCE/90, please write to us. You will be placed on our mailing list for the free WCCE/90 Newsletter and will be sent the conference registration forms in late 1989.

All communications regarding WCCE/90 should be addressed to:

WCCE/90, PO Box 319, Darlinghurst, NSW 2010, Australia. Tel: (+612) 211-5855. Fax (+612) 281-1208.