

SIGGRAPH '88

SYNTHETIC ACTORS: THE IMPACT OF ARTIFICIAL INTELLIGENCE AND ROBOTICS ON ANIMATION

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Course #4

From the film RENDEZ-VOUS A MONTREAL

directors: N.Magnenat-Thalmann and D.Thalmann



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Synthetic Actors: the Impact of A.I. and Robotics on Animation

LECTURERS

Nadia Magnenat-Thalmann and **Daniel Thalmann** are full professors of computer science at the University of Montreal. Their research interests include 3D computer animation, image synthesis, and knowledge-based graphical systems. They have written and edited several books and research papers in various application areas of computer science, and were producers and codirectors of the computer-generated films *Dream Flight*, *Eglantine*, and *Rendez-vous à Montréal*.

They both served as chairpersons of the Graphics Interface 85 conference and the CG International 88 conference.

Nadia Magnenat-Thalmann and Daniel Thalmann directed a 3 years research project on A.I. and computer animation. The research team MIRALab, at the University of Montreal, is supported by National research Foundations and companies like Bell Canada and Northern Telecom.

Nadia Magnenat-Thalmann received a BS in psychology, an MS in biochemistry, and a Ph.D in quantum chemistry and computer graphics at the University of Geneva. A member of the Council of Science and Technology of the Government of Quebec and of the Council of Science and Technology of the Canadian Broadcasting Corporation, she also serves as a director of the Computer Graphics Society in Canada. She has received several awards, including the 1985 Communications Award from the Government of Quebec. In May 1987 she was nominated woman of the year in sciences by the Montreal community.

Daniel Thalmann received his diploma in nuclear physics and Ph.D in computer science from the University of Geneva. He is also member of the editorial board of the Visual Computer and cochairs the EUROGRAPHICS Working Group on Computer Simulation and Animation. He was director of the Canadian Man-Machine Communications Society and is a member of the Computer Society of the IEEE, ACM, SIGGRAPH, and EUROGRAPHICS.

Brian Wyvill received his Ph.D from the University of Bradford in 1975 and continued his interest in computer animation as a research fellow at the Royal College of Art. Wyvill is now a full Professor at the University of Calgary, where he leads the GRAPHICSLAND animation research team. His current interests are in "soft" objects, motion control and recursive data structures for computer animation. He is a member of ACM, IEEE Computer Society, CGS and SIGGRAPH and the editorial board of *The Visual Computer*.

David Zeltzer received M.S. and Ph.D degrees in Computer and Information Science from Ohio State University, in 1979 and 1984. He received a B.S. degree in Mathematics from Southern Oregon State College in June 1978. While at Ohio State, he was a research assistant at the Computer Graphics Research Group, where his work centered on modeling the kinematics of the human figure, and goal-directed animation of human movement. He has produced animated sequences portraying a human skeleton walking over level and uneven terrain that have been shown at numerous computer graphics conferences and widely published.

Since September 1984, he has been assistant professor of computer graphics at the Media Laboratory of the Massachusetts Institute of Technology, where he is also the director of the Computer Graphics and Animation Group. The efforts of this group are aimed at developing a knowledge-based animation system which integrates robotics, artificial intelligence and computer graphics technologies to provide a powerful visualization tool for learning, simulation and design. He is a frequent speaker at computer graphics symposia and workshops, and currently holds the NEC Career Development Professorship of Computers and Communication.