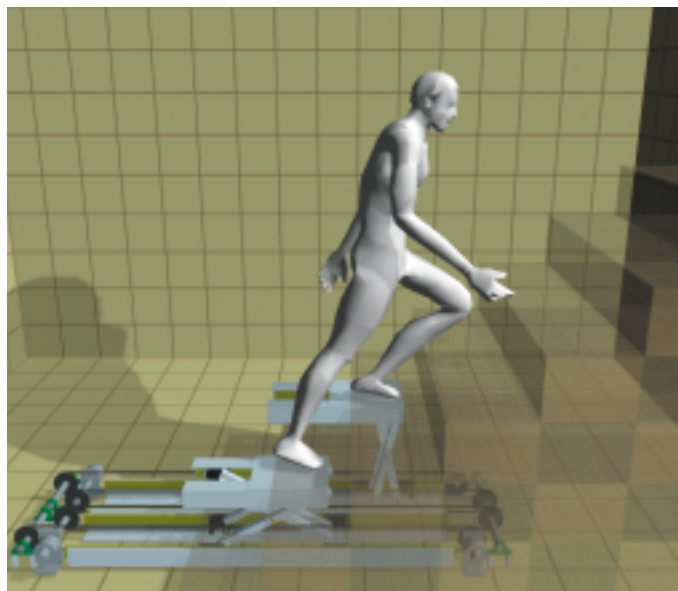# conference preview

SIGGRAPH 2000:
Ideas that Inspire the 21st Century's Digital Visions

Conference
23-28 July 2000

Exhibition
25-27 July 2000

Ernest N. Morial Convention Center
New Orleans, Louisiana USA

Gait Master, Hiroo Iwata, University of Tsukuba
Collaborators: Hiroaki Yano, Fumitaka Nakaizumi

SIGGRAPH is the world's premier conference and exhibition on computer graphics and interactive techniques. More than 25,000 computer graphics scientists, researchers, animators, engineers, artists, and educators from six continents are expected at the 27th annual conference in New Orleans this summer. SIGGRAPH 2000 will present the technologies that enable media convergence, 3-D adventures, revolutionary tools, and advance human-machine collaboration. The exhibition is the place the international computer graphics industry showcases its latest hardware, software, and services through high-tech, hands-on displays and demos.

For complete, up-to-date conference and exhibition information, check the SIGGRAPH website at **www.siggraph.org/s2000/**

Keynote Address/Awards
"The Human-Machine Merger: Why We Will Spend Most of our Time in Virtual Reality in the 21st Century"

Ray Kurzweil, author of "*The Age of Spiritual Machines: When Computers Exceed Human Intelligence*" (Penguin, 2000) and recipient of a 1999 National Medal of Technology, delivers the SIGGRAPH 2000 keynote address. Kurzweil has worked at the leading edge of artificial intelligence for more than 30 years, with firsts in speech and character recognition, optical scanning systems, music and speech synthesis, and automated investment decisions.

His most recent work explores the potential of human-machine hybrids. Immediately before the keynote address, SIGGRAPH presents the 2000 Computer Graphics Achievement Award and the SIGGRAPH Outstanding Service Award.

Technical Program
The SIGGRAPH 2000 technical program consists of Courses, Panels, Papers, Sketches & Applications, Educators Program, and the Creative Applications Lab.

Courses
Learn the what, why, and how of computer graphics and interactivity in the annual educational program that explains current practice and explores new paradigms. Courses are

offered in three formats: full-day and half-day courses, and two-hour tutorials.

Examples:
- Eye-Based Interaction in Graphical Systems: Theory & Practice
- Games Research: the Science of Interactive Entertainment
- 3-D User Interface Design: Fundamental Techniques, Theory, and Practice

Papers

Academic and corporate research results from the world's leading computer graphics scientists and engineers. Papers are selected by an international jury of the community's most respected researchers for presentation in three categories: research, system, and alternate.

Examples:
- The Digital Michelangelo Project: 3-D Scanning of Large Statues
- Efficient Image-based Methods for Rendering Soft Shadows
- A Fast Relighting Engine for Interactive Cinematic Lighting Design
- A Simple, Efficient Method for Realistic Animation of Clouds

A Flinching Mind, Mark Korn

Panels

The experts discuss, debate, and reveal how computer graphics and interactive techniques are applied in communication, production, aesthetic exploration, and advance visualization.

Examples:
- The Actual Reality of Virtual Reality Software
- Emotional Simulator: The Tears and Fears of Creating a Compelling Simulated Experience for Both Entertainment and Training
- The Healing Powers of Virtual Reality

Sketches & Applications

Sketches are works in progress, tentative breakthroughs, and new process paradigms. Applications show how new and traditional tools are used to produce practical, proven results. Three days of multimedia presentations are given in three categories: technical; art, design, and multimedia; and animation.

Educators Program

The latest uses of computer graphics and interactive techniques in an educational context. Papers, panels, and tutorials deliver knowledge, desire, inspiration, and tools. Educators actively explore, discover, and learn about pedagogically sound courses and techniques that create rich, interdisciplinary scenarios for learning.

Examples:
- Interaction in an IVR Museum of Color
- Painting Together Across the World: Collaborative Net Painting Between High School Students & a Professional Artist

Creative Applications Lab

Hands-on, up-close interaction with the people and techniques presented in Courses, Sketches & Applications, and Educators Program. Informal breakout sessions give attendees the opportunity to talk with speakers and presenters, apply their new knowledge and skills, and share insights and interests with others.

Conference Programs & Activities

SIGGRAPH 2000 complements the technical program with a multitude of programs and events that inspire new discoveries and extend the ability of attendees to build connections throughout the computer graphics community.

Art Gallery

The best digital work being created, produced, and performed at the beginning of the millennium by artists who think, feel, and

view everyday experiences through new eyes, beyond ordinary bandwidth. Inspiring, provocative, and engaging explorations of the interplay between bodies and technologies are shown in the Art Gallery.

Examples:
- Biotica. A visceral and immersive 3-D experience of evolving, responsive, and abstract artificial life forms.
- Hide-and-Seek. An interactive dining table that presents a creative augmented or mixed reality application.

Art Gallery Talks I & II
Artists talk with attendees and each other in sessions that lead to a panel discussion, "No Art Jargon!"

Computer Animation Festival
A rigorously juried compilation of the year's best computer-generated works, both in-progress and completed, in several categories: entertainment, visualization, education, art, non-narrative and experimental works, and student-produced works. Selected films and videos are presented in the daily Animation Theaters, The Electronic Theater matinée or evening shows, and special events.

Emerging Technologies: Point of Departure
A Point of Departure into the technology of the new millennium. Visionary, creative, and provocative installations and experiences that illuminate the path to a new era in technology. The future in human-computer interfaces, display technologies, workgroup computing, multi-user applications, smart environments, information visualization, and robotics.
- Augmented Groove: Collaborative Jamming in Augmented Reality
- Autostereoscopic Display for an Unconstrained Observer
- CYPHER: Cyber Photographer in Wonder Space

The Studio
Use today's advanced technologies to imagine and produce 2-D and 3-D creations. The Studio features an array of high-end, large

format printers, 3-D rapid prototyping machines, and 3-D scanners.

Exhibition
Over 300 companies from five continents display the hardware, software, and services that empower graphic and interactive breakthroughs on the exhibit floor. High-tech, hands-on displays and demos by the companies that invent, produce and distribute the products and services powering the next generation of graphics and interactive techniques.

Nosce Te Ipsum, Tiffany Holmes

Exhibitor Forums
Seminars, organized by SIGGRAPH 2000 exhibitors, on new features of their latest products. These instructional sessions on advanced techniques and reviews of where and how technology is evolving are presented in a classroom format on the exhibit floor.

Turing Award Lecture
Frederick P. Brooks, Jr., recipient of the 1999 A.M Turing Award "for landmark contributions to computer architecture, operating systems, and software engineering," delivers his lecture on "The Design of Design" at SIGGRAPH 2000.

MAY 2000

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JUNE 2000

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calendar

May 8-10
CHI-SA '00: Human-Computer Interaction in South Africa
South Africa
Contact: Jacques Hugo
hugo@acm.org or
jachugo@icon.co.za

May 10-12
5th IFIP 2.6 Working Conference Visual Database Systems
Fukuoka, Japan
Contact: www.arislab.dnj.ynu.ac.jp/VDBS/

May 14-17
HPC Asia 2000 Fourth International Conference/Exhibition on High Performance Computing in Asia-Pacific Region
Beijing, China
Contact: www.cs.wm.edu/hpcs/hpc-asia2000/

May 15-18
SIGMOD/PODS '00: ACM International Conference on Management of Data and Symposium on Principles of Database Symptoms
Dallas, Texas, USA
Contact: www.seas.smu.edu/sigmod 2000

May 23-27
AMAST 2000: International Conference on Algebraic Methodology and Software Technology
Contact: Teodor Rus
University of Iowa
Department of Computer Science
Contact: rus@cs.uiowa.edu

May 24-26
AVI '00: Advanced Visual Interfaces
Palermo, Italy
Contact: www.ing.univaq.it/avi2000/

May 30-June 3
ACM Hypertext 2000
San Antonio, Texas, USA
Contact: info@ht00.org

June 2-7
DL2000: Fifth ACM Conference on Digital Libraries
San Antonio, Texas, USA
Contact: www.dl00.org/

June 3-7
Fourth International Conference on Autonomous Agents
Barcelona, Catalonia, Spain
Contact: www.cs.umn.edu/agents2000/

June 4-6
IS2000- The WG 8.2 International Working Conference on the Social and Organizational Perspective on Research and Practice in Information Technology
Aalborg, Denmark
Contact: www.cs.auc.dk/~is2000/

June 4-11
ICSE00 22nd International Conference on Software Engineering
Limerick, Ireland
Contact: kevin.ryan@ul.ie

June 10-14
ISCA2000 27th International Symposium on Computer Architecture
Vancouver, Canada
Contact: Alan Berenbaum
adb@bell-labs.com

June 18-23
PLDI '00 Conference on Programming Language Design and Implementation 2000
Vancouver, Canada
Contact: James Larus
larus@microsoft.com