Advance Program

Contents

SIGGRAPH2007

The 34th International Conference and Exhibition on Computer Graphics and Interactive Techniques

Conference 5 - 9 August 2007 Exhibition 7 - 9 August 2007
San Diego, California USA

▶ REGISTER EARLY AND SAVE!

www.siggraph.org/s2007

Conference at a Glance

One Day registration includes access to conference programs and events for that day. Exhibits Plus One Day includes access to Exhibits Plus activities and events for that day. Both One Day registrations do not include technical documentation or tickets for the reception and the Electronic Theater.

Conference schedule subject to change.

Conference Registration Categories

- ● FULL CONFERENCE
- ○ CONFERENCE SELECT
- ○ EXHIBITS PLUS

	SATURDAY 4 AUGUST	SUNDAY 5 AUGUST	MONDAY 6 AUGUST	TUESDAY 7 AUGUST	WEDNESDAY 8 AUGUST	THURSDAY 9 AUGUST
Registration	1 - 7 pm	7:30 am - 6 pm	8 am - 6 pm	8 am - 6 pm	8 am - 6 pm	8 am - 3:30 pm
Merchandise Pickup	1 - 7 pm	7:30 am - 6 pm	8 am - 6 pm	8 am - 6 pm	8 am - 6 pm	8 am - 3:30 pm
SIGGRAPH Store	1 - 7 pm	7:30 am - 6 pm	8 am - 6 pm	8 am - 6 pm	8 am - 6 pm	8 am - 6 pm
●○○ Art Gallery		1 - 6 pm	9 am - 7 pm	9 am - 6 pm	9 am - 6 pm	9 am - 3:30 pm
●○○ Birds of a Feather	Throughout the week					
Computer Animation Festival						
● Electronic Theater (Pre-show starts a half hour before show time)			7 - 9 pm	7 - 9 pm	7 - 9 pm	
●○ Electronic Theater Matinée (Pre-show starts a half hour before show time)				2 - 4 pm	2 - 4 pm	
●○○ Animation Theaters		1 - 6 pm	9 am - 6 pm	9 am - 6 pm	9 am - 6 pm	9 am - 5 pm
● Courses		8:30 am - 5:30 pm	8:30 am - 5:30 pm	8:30 am - 5:30 pm	8:30 am - 5:30 pm	8:30 am - 5:30 pm
●○ Educators Program					8:30 am - 5:30 pm	8:30 am - 5:30 pm
●○○ Emerging Technologies		1 - 6 pm	9 am - 7 pm	9 am - 6 pm	9 am - 6 pm	9:30 am - 3:30 pm
●○○ Exhibition				9:30 am - 6 pm	9:30 am - 6 pm	9:30 am - 3:30 pm
●○○ Exhibitor Tech Talks				9:30 am - 6 pm	9:30 am - 6 pm	9:30 am - 3:30 pm
●○○ Featured Speakers			1:30 pm	1:30 pm		1:45 pm
●○○ FJORG!			9 am - 11 pm	8 am - 5 pm		
●○○ Guerilla Studio		1 - 6 pm	11 am - 11 pm	9 am - 6 pm	9 am - 6 pm	9 am - 2 pm
●○○ International Resources	1 - 7 pm	8 am - 6 pm	8 am - 6 pm	8 am - 6 pm	8 am - 6 pm	8 am - 4 pm
●○○ IP Marketplace				10 am - 4 pm	10 am - 4 pm	10 am - 4 pm
●○○ Job Fair				10 am - 4 pm	10 am - 4 pm	10 am - 4 pm
●○ Panels				10:30 am - 12:15 pm	10:30 am - 12:15 pm	10:30 am - 12:15 pm
● Papers			8:30 am - 5:30 pm	8:30 am - 6 pm	8:30 am - 6 pm	8:30 am - 5:30 pm
●○○ Posters		8:30 am - 5:30 pm	8:30 am - 5:30 pm	8:30 am - 5:30 pm	8:30 am - 5:30 pm	8:30 am - noon
● Reception					8 - 10 pm	
●○ Sketches				8:30 am - 5:30 pm	8:30 am - 5:30 pm	8:30 am - 5:30 pm
●○○ Special Events						
Fast-Forward Papers Preview		6 - 8 pm				
ACM Student Research Competition Presentations				10:30 am - 12:15 pm		
●○ Special Sessions						
"Happy Feet": Thawing the CG Pipeline			6 - 8 pm			
Shrekology, The History of an Ogre				6 - 8 pm		
"Spider-Man 3" - Triple Play					1:45 - 3:30 pm	
FJORG! Presentations					6 - 7 pm	

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Conference Overview

SIGGRAPH 2007: 25,000 creators and users of computer graphics and interactive techniques convene in San Diego for five full days of world-class technical presentations, creative exploration, and the industry's largest marketplace of products and services: the SIGGRAPH 2007 Exhibition.

Join the international digital community for this year's only opportunity to see, hear, and interact with digital innovators, creative researchers, award-winning producers, provocative artists, energetic executives, and adventurous engineers.

Featured Speakers

NEW FOR 2007

A Series of Featured Speakers Replaces the Traditional Keynote Address.

Prominent industry leaders and technology experts provide key insights on the future of art, the next wave of research, the evolution of entertainment, and new directions for the business of computer graphics and interactive techniques.

GLENN ENTIS
SVP, Chief Visual and Technical Officer
ELECTRONIC ARTS

Monday, 6 August
Recent Accomplishments and Upcoming Challenges for Interactive Graphics in Videogames

Glenn Entis is responsible for setting EA's overall graphics and technical strategy, and for leading the community of over 3,000 talented artists and engineers at EA's studios worldwide. He is also a member of the WW Studios executive team that oversees all aspects of the development of EA games. Before EA, Entis was a co-founder of PDI (now DreamWorks Animation) and CEO of DreamWorks Interactive. In addition to his professional achievements, Entis serves on the Board of Governors for the Emily Carr College of Art and on the Advisory Board for the Masters of Digital Media, a new graduate program at Great Northern Way in Vancouver.

SCOTT McCLOUD
Author and Comics Artist

Tuesday, 7 August
Comics: A Medium in Transition

Scott McCloud has been writing and drawing comics since 1984. His book Understanding Comics was a New York Times Notable book for 1994 and is available in 16 languages. "Sin City" and "300" creator Frank Miller called him "just about the smartest guy in comics." His new book, Making Comics, explores the art and craft of telling stories visually.

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Art Gallery: Global Eyes

Sunday - Thursday, 5 - 9 August

Artwork that expands awareness of people and nature. Illuminates the role digital media play in shaping, extending, and reflecting world views and cosmologies. Explores ecological, social, and political issues in imaginative and innovative ways. And fosters respect, tolerance, and empathy among people and nations. Global Eyes presents juried and curated work in several categories: Animation; Artist Books; Art Panels; Art Papers; Digital Performance; Installations; Monitor-Based Work; and Wall-Based Work.

The SIGGRAPH 2007 Art Gallery is collaborating with ISAST Leonardo to build bridges between people working creatively in art, science, and technology all around the world.

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Birds of a Feather

Sunday - Thursday, 5 - 9 August

Presentations, discussions, and demonstrations for people who share interests, goals, technologies, environments, or backgrounds. Birds of a Feather events are open to all SIGGRAPH 2007 attendees. Review a preliminary list of the Birds of a Feather sessions at:

http://www.siggraph.org/s2007

To schedule a Birds of a Feather session prior to arrival, fill out the Meeting Space Request Form online.

Computer Animation Festival

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Animation Theaters

Sunday - Thursday, 5 - 9 August

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Electronic Theater

Monday - Wednesday, 6 - 8 August

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Electronic Theater Matinée

Tuesday - Wednesday, 7 - 8 August

The premier annual event for the world's most innovative, accomplished, and amazing digital film and video creators. An internationally recognized jury receives hundreds of submissions and presents the best work of the year in daily Animation Theaters and the Electronic Theater (matinée and evening shows). Selections include outstanding achievements in time-based art, scientific visualization, visual effects, real-time graphics, and narrative shorts.

The Computer Animation Festival is recognized by the Academy of Motion Picture Arts and Sciences as a qualifying festival. Since 1999, several works originally presented in the Computer Animation Festival have been nominated for or have received a "Best Animated Short" Academy Award.

SIGGRAPH 2007 Computer Animation Festival award winners:

▸ BEST OF SHOW

Ark
Grzegorz Jonkajtys and Marcin Kobylecki
www.thearkfilm.com
POLAND

▸ JURY HONORS

Dreammaker
Leszek Plichta
Institute of Animation, Visual Effects, and Digital Post Production
Filmakademie Baden-Württemberg
GERMANY

▸ AWARD OF EXCELLENCE

En Tus Brazos
François-Xavier Goby, Edouard Jouret, Matthieu Landour
Supinfocom Valenciennes
FRANCE

●

Courses

Sunday - Thursday, 5 - 9 August

Instruction, insight, and inspiration from academic and industry experts. SIGGRAPH 2007 Courses deliver invaluable learning opportunities in three formats (tutorials, half-day classes, and full-day classes) and three levels of difficulty (beginning, intermediate, and advanced). Attendees learn principles and techniques that shape software evolution, hardware systems, feature-film production, and future research directions.

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Educators Program

Wednesday - Thursday, 8 - 9 August

Sessions and sharing that augment the quality of curricula, improve student learning, and inspire others to adopt the life-long pursuit of advancing education, technology, and culture. Educators Program offerings are formal (papers, panels, workshops, QuickTakes, and forums) and informal opportunities to reinforce the teaching-learning community's inspiration and commitment.

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Emerging Technologies

Sunday - Thursday, 5 - 9 August

Digital innovations that change the way we work, live, and play. Emerging Technologies presents creative, innovative technologies and applications in many fields, including but not limited to: displays, robotics, input devices, interaction techniques, computer vision, sensors, audio, speech, biometrics, wearable computing, information, data and scientific visualization, biotechnology, graphics, collaborative environments, and design.

And in several domains, including but not limited to: medicine, music, entertainment, education, home, business, aerospace, communication, transportation, security, military, and technologies for the aging and/or disabled.

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Exhibition

Tuesday - Thursday, 7 - 9 August

Get up-close and hands-on with the newest hardware systems, software tools, and creative services from hundreds of companies. Explore the products, systems, techniques, ideas, and inspiration that are creating the next three generations of computer graphics and interactive techniques.

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Exhibitor Tech Talks
Tuesday - Thursday, 7 - 9 August

Comprehensive summaries of the latest technologies in computer graphics and interactive techniques. SIGGRAPH 2007 exhibitors demonstrate software, hardware, and systems; answer questions; and host one-on-one conversations about how their applications improve professional and technical performance.

Guerilla Studio
Sunday - Thursday, 5 - 9 August

Powerful workstations, versatile software, artists, scientists, engineers, and you. Consult with the Guerilla Studio team of practitioners, artists in residence, and multimedia experts to realize your most imaginative concepts in 2D, 3D, 4D, and n-dimensional media. Then use its network of advanced input and output devices to create art in every subdiscipline of computer graphics and interactive techniques.

FJORG!
Monday - Tuesday, 6 - 7 August

In the first international FJORG! - an iron-animator event at SIGGRAPH 2007 - competing three-person teams of CG animators will forgo sleep and multiple staged distractions for 32 straight hours. Their goal is to resist the distractions and meet the deadline for creating the best character-driven animation the world has ever seen. In return for their efforts, these teams of artists will earn the attention of recruiters and talent from the top studios in computer graphics, feature films, animation, and game production.

International Resources
Saturday - Thursday, 4 - 9 August

Connect with colleagues and friends from around the world. The International Center offers bilingual tours of SIGGRAPH 2007 programs, informal translation services, and space for meetings, talks, and demonstrations.

Throughout the year, the International Resources program facilitates worldwide collaboration in the SIGGRAPH community, provides an English Review Service to help submitters whose first language is not English, and encourages participation in all conference sessions, activities, and events.

IP Marketplace
Tuesday - Thursday, 7 - 9 August

Another SIGGRAPH first! For a nominal fee, inventors and owners of patents, software libraries, circuit cores, etc. can list their intellectual properties for sale or license. IP offerings are presented in poster format at SIGGRAPH 2007, and a panel of experts discusses the issues: IP & Patents for Art, Technology, and Entertainment, a lively overview and discussion of patent processes, pitfalls, opportunities, and exploitation in the art and technology sectors.

Job Fair
Tuesday - Thursday, 7 - 9 August

The SIGGRAPH Job Fair returns! Employers and creative professionals will once again be able to connect before, during, and after the conference! Based on the overwhelmingly positive feedback received from last year's attendees, all of the same features and benefits will be provided again, PLUS a few new enhancements!

Panels
Tuesday - Thursday, 7 - 9 August

Debate, discussion, dissent, and disagreement on the big topics in computer graphics and beyond: humanoid robots, worldwide intellectual property protection, brain/machine interfaces, virtual humans, the Uncanny Valley, and 22nd-century entertainment. Panelists present their positions, exchange opinions, and answer audience questions.

Papers
Monday - Thursday, 6 - 9 August

The premier international forum for disseminating new scholarly work in computer graphics and interactive techniques. No other conference presents the full range of the world's most significant achievements in the field and illuminates new directions for future investigations.

Posters
Sunday - Thursday, 5 - 9 August

Graphic displays of incremental, preliminary, partial, and innovative insights that are important but not fully developed. Posters are displayed throughout the conference week, and presenters discuss their work in scheduled sessions.

Sketches
Tuesday - Thursday, 7 - 9 August

Short illustrated talks on computer graphics and interactive techniques in art, cinema, advertising, design, science, and engineering. Sketch presenters summarize speculative breakthroughs, work in progress, and recent achievements. Following their presentations, they answer questions and discuss future implications of their work.

Special Events
Sessions of special interest to specific segments of the SIGGRAPH community.

Fast-Forward Papers Preview
Sunday, 5 August

Snapshot overviews of the paper sessions, in which authors give short summaries of their work. It's a fast, fun, and provocative preview of the latest and most significant findings in computer graphics and interactive techniques.

ACM Student Research Competition Presentations
Tuesday, 7 August

Winners of the ACM Student Research Competition at SIGGRAPH 2007 present brief summaries of the work they are displaying in the Posters program.

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Special Sessions

Leading experts in computer graphics, interactive techniques, and beyond offer enlightening insights on the art, science, trends and breakthrough concepts that will define the future of digital technologies.

"Happy Feet": Thawing the CG Pipeline

Monday, 6 August

Due to its strong connection with traditionally animated films, CG filmmaking has historically been a realm of limited editorial control. Story, characters, environments, and even camera moves are firmly locked prior to commencement of production. This panel examines the implementation of the much more live-action approach to CG filmmaking taken by Animal Logic during the production of "Happy Feet."

Co-Organizers

David Peers
Layout and Camera Director
Animal Logic

Nick Hore
Training Supervisor
Animal Logic

Panelists

Aidan Sarsfield
Character Supervisor
Animal Logic

Ben Gunsberger
Lighting Supervisor
Animal Logic

Justen Marshall
R&D Supervisor
Animal Logic

Shrekology, The History of an Ogre

Tuesday, 7 August

Unique insights into how the "Shrek" world evolved over the life of the franchise, both technically and creatively. The speakers, who've held key roles on all the "Shrek" films, share stylistic conceits, technical overviews, production tips, and anecdotes, illustrated by abundant behind-the-scenes material and visual breakdowns.

Organizer

Philippe Gluckman
Visual Effects Supervisor
DreamWorks/PDI

Panelists

Raman Hui
Co-Director, Shrek the Third
DreamWorks/PDI

David Smith
Storyboard Artist
DreamWorks/PDI

Matt Baer
Head of Effects
DreamWorks/PDI

"Spider-Man 3" - Triple Play

Wednesday, 8 August

The leading artists on "Spider-Man 3" reveal the creative challenges and technical achievements associated with creating the movie's three dangerous villains. For the first time, Imageworks produced fully articulated, performing CG characters entirely from dynamically generated particles and fluids. These digital characters, which embodied key-framed performance animation, interacted with each other and with live-action characters in real and synthetic environments.

Organizer

Sande Scoredos
Executive Director, Training & Artist Development
Sony Pictures Imageworks

Panelists

Scott Stokdyk
Visual Effects Supervisor
Sony Pictures Imageworks

Peter Nofz
Digital Effects Supervisor
Sony Pictures Imageworks

Spencer Cook
Animation Director
Sony Pictures Imageworks

Ken Hahn
Digital Effects Supervisor
Sony Pictures Imageworks

Presentation of the Winners of the First International FJORG! Viking Animation Event

Wednesday, 8 August

In a Viking ceremony, special guest judges present awards to the winning team in the FJORG! competition. Attendees are encouraged to wear their finest Viking garb. The session includes video highlights of the event and the animations produced by the FJORG! finalists. Also featured: the FJORG! teams that receive the most votes in the attendee "popular vote."

Organizers

Patricia Beckmann
DreamWorks Animation

Samuel Lord Black
Autodesk, Inc.

Reception

Wednesday, 8 August

The international SIGGRAPH community's highest-energy, best-attended social event of the year. Drink a toast to your colleagues' achievements, and your own. Share a convivial evening with people you haven't seen since SIGGRAPH 2006. And meet the people you need to know for another year of professional success and adventure.

As Of 30 April 2007

Exhibitor List

1 Beyond, Inc.
3D Consortium
3dMD/3Q
3DTotal.com
5DT (Fifth Dimension Technologies)
A K Peters, Ltd.
Aberdeen LLC
Academic Superstore LP
Academy of Art University
Act-3D, B.V.
Activision
Addison-Wesley Professional
Aguru Images, Inc.
AJA Video Systems Inc.
AMD
American Paper Optics, Inc.
Andersson Technologies LLC
Animation Magazine Inc.
AnimationMentor.com
Animazoo
Anthro Corporation
Apace Systems Corporation
APAXIS Systems
ARC Science Simulations
ARRI Group
Art Institutes
auto.des.sys, Inc.
Autodesk, Inc.
Axceleon Inc.
Ballistic Media Pty. Ltd.
Barco
Bell Computer
BiTMICRO Networks, Inc.
Blue Box ME
Blue Sky Studios, Inc.
BlueArc Corporation
BOXX Technologies, Inc.
Brigham Young University
Bunkspeed, Inc.
CEA - Haption
cebas Computer GmbH
Center for Computation & Technology at Louisiana State University
CGAL Project, The
Chaos Group
Cinital, Inc.
Cogswell Polytechnical College
Collins College
Contour Design, Inc.
Corel Corporation
Cosmic Blobs / SolidWorks
Craft Animations and Entertainment
Creaform 3D
Create Magazine
Creative Media Institute of New Mexico State University - EMIT
Cycling '74
DataDirect Networks Inc.
Deep Light, LLC
Digimax
DigiPen Institute of Technology
Digital Anarchy
Digital Domain, Inc./ D2 Software, Inc.
Digital Media Arts College
Digital-Tutors
Dimension 3D Printing
DriveSavers Data Recovery
e frontier, Inc.
Electronic Arts Inc.
Electrosonic Systems Inc.
EON Reality, Inc.
e-on software, inc.
eyeon Software Inc.
Field Emission Technologies, Inc.
Flat Pyramid
Florida Interactive Entertainment Academy
FormFonts
Forum8 Co., Ltd.
Frantic Films Corporation
Freedom of Teach
Future Publishing Limited
Gnomon, Inc.
Google
Hash, Inc.
Hewlett Packard Company
HighRES, Inc.
IdN Magazine
IEEE Computer Society
Immersion Corporation
Immersive Media Corp.
Inscape
IntegrityWare, Inc.
International Academy of Design & Technology
InterSense
Isilon Systems, Inc.
ITT Educational Services, Inc.
IWANE Lab, Ltd.
John Wiley & Sons, Inc.
JourneyEd.com
Khronos Group
LAIKA
Lightspeed Design, Inc.
Lucasfilm Ltd.
lynda.com, Inc.
Massive Software
MAXON Computer Inc.
Measurand, Inc.
Mercury Computer Systems, Inc.
MESA Imaging AG
millimeter
Mitsubishi Electric Research Laboratories
Morgan Kaufmann Publishers
Motion Analysis Corporation
Motion Theory
Mova LLC
NaturalMotion Ltd.
NaturalPoint Inc.
NEC Display Solutions of America, Inc.
New York University - CADA
NewTek, Inc.
Nexstar
Next Limit Technologies
Noren Products Inc.
NVIDIA Corporation
Objet Geometries Ltd.
Okino Computer Graphics, Inc.
Organic Motion, Inc.
P.I. Engineering, Inc.
Panoscan Inc.
Paravue Corporation
PhoeniX Technologies
PipelineFx, LLC
Pixar Animation Studios
Pixellexis Systems & Technologies Inc.
Pixologic, Inc.
PNY Technologies, Inc.
Point Grey Research Inc.
Polhemus, Inc.
PowerUp Games
Purdue University, Department of Computer Graphics Technology
RapidMind Inc.
Reallusion Inc.
REALVIZ S.A.
RedEye RPM, Inc.
Renderosity
Rhythm & Hues Studios
Ringling School of Art and Design
Robert McNeel & Associates
Sandio Technology
Savannah College of Art and Design
Scalable Display Technologies
SeeFile Software LLC
Side Effects Software Inc.
Softimage
Solid Modeling Solutions
Solidscape, Inc.
Sony Pictures Imageworks Inc.
Sound Ideas
SpheronVR AG
Springer
Stash Media Inc.
Supacam
SyFlex LLC
TechViz
TeraRecon, Inc
Texas Memory Systems
The Art Center Design College
The Cleveland Institute of Art
The University of the Arts
The3DShop.com
Thomson Course Technology
THQ Inc.
Tippett Studio
Toon Boom Animation, Inc.
Torcomp, Inc.
Total Immersion
Trinity Animation Inc.
Triple Squid Software Design
T-Splines, Inc.
Turbo Squid, Inc.
Vancouver Film School
Verari Systems, Inc.
Vertus
Virtools SA
VR Times Co., Ltd.
Wacom Technology Corp.
Walt Disney Animation
Wolfram Research, Inc.
WorldViz
Xerox Corp.
Xsens
Z Corporation
Zygote Media Group, Inc.

Exhibitor Tech Talks

Comprehensive summaries of the latest technologies in computer graphics and interactive techniques. SIGGRAPH 2007 exhibitors demonstrate software, hardware, and systems; answer questions; and host one-on-one conversations about how their applications improve professional and technical performance.

Mercury Computer Systems, Inc.

Accelerating with Cell: Programming with the Mercury Cell Accelerator Board and the Cell BE Processor

Tuesday, 7 August, 9:45 - 11:30 am

The accelerator model is ubiquitous in the computer graphics and image processing industry. This talk demonstrates how the Cell Accelerator Board, coupled with the right programming tools, brings about a new generation of performance and programmability in a PCI Express form factor. It provides a hardware overview and demonstration followed by a fast-based introduction to the MultiCore Plus software suite for programming this unique hardware.

RapidMind Inc.

A Unified Development Platform for Cell, GPU, and CPU Programming RapidMind

Tuesday, 7 August, 1 - 2:30 pm

Michael McCool, Chief Scientist at RapidMind, demonstrates how the RapidMind Development Platform unifies the software development process and programming model for a variety of processors, including multi-core CPUs, GPUs, and the Cell BE. The generally applicable, single-source solution provided by RapidMind makes heterogeneous multi-core development as easy as single-threaded, single-core programming. Applications built with the RapidMind platform are processor-independent, and they automatically scale to any number of cores. In addition, the RapidMind platform enables high programmer productivity: high-performance portable software can be created with an order of magnitude less effort than with traditional approaches.

Vancouver Film School

Training for Careers in Animation

Wednesday, 8 August, 1 - 2:30 pm

Interested in a career in the world of animation? This session includes a screening of outstanding student work, a comprehensive overview of the Vancouver Film School's Classical & 3D animation programs, admissions requirements, discussion of career opportunities, and a question-and-answer period.

Craft Animations and Entertainment AB

Advanced Input-Driven 3D Animation Techniques in Speed Animation™

Wednesday, 8 August, 3:30 - 5:30 pm

This seminar focuses on some advanced techniques for extremely fast animation to demonstrate the power of Speed Animation, a photo-real 3D animation production pipeline concept that offers over 100 times faster production speeds when used to capacity. The key motivation in Speed Animation is for a producer/director to be certain beforehand that everything looks and moves as expected. It streamlines the production pipeline.

One of the enabling technologies of Speed Animation is Craft Animations' proprietary Modular Animation System which enables construction of Craft Templates: render- and animation-ready 3D models. The system also enables real-time, input-driven animation that is vital for successful application of the cutting edge Automatic Control. The seminar explores these advanced techniques in detail.

Inquiries about co-locating events with the annual SIGGRAPH conference should be directed to:

Alyn Rockwood
ACM SIGGRAPH Vice President
alyn_rockwood [at] siggraph.org

Co-Located Workshops & Events

Presented in cooperation with ACM SIGGRAPH, these small symposia are related to important aspects of computer graphics and interactive techniques.

For registration information: www.siggraph.org/s2007/attendees/registration/
For registration information on the SCA: www.siggraph.org/sca2007

www.edt2007.org

Emerging Display Technologies

Saturday, 4 August, 9 am - 5 pm
San Diego Convention Center

EDT 2007 is the third in a successful series of workshops dedicated to new and innovative display technologies. The recent flurry of display technology development has produced families of technologies that make fixed and projected pixels cheaper, faster, more flexible, of higher quality, and touchable. These advances enable "smart pixels" and a number of burgeoning applications ranging from displays used for better and more flexible images to innovative user interaction, scene sensing, and environment enhancement. The one-day EDT 2007 workshop is an opportunity to expand attendee thinking about ways to use contemporary display devices in virtual-reality systems and applications.

www.graphicshardware.org

Graphics Hardware 2007

Saturday, 4 August and Sunday, 5 August, 9 am - 5 pm
Hilton San Diego Gaslamp Quarter Hotel

Graphics Hardware is a highly visible, established international forum for exchanging experience and knowledge related to computer graphics hardware. The event, held annually since 1986, offers a unique perspective on graphics hardware by combining discussions and constructive critiques of innovative concepts and product-level designs. It is an inclusive forum for the entire graphics-hardware community and brings together researchers, engineers, and architects.

www.npar.org/2007

NPAR 2007 - 5th International Symposium on Non-Photorealistic Animation and Rendering

Saturday, 4 August and Sunday, 5 August, 8:30 am - 5:30 pm
San Diego Convention Center

NPAR 2007 is the 5th international symposium dedicated to non-photorealistic animation and rendering in cooperation with ACM SIGGRAPH and Eurographics. In 2007, it is co-located with SIGGRAPH for the first time. The idea is to raise awareness of this important field and open it to new people from academia, the arts, and industry. Once again, NPAR will bring together researchers and practitioners to showcase cutting-edge research in non-photorealistic animation and rendering systems and techniques.

sandbox.siggraph.org

Sandbox: An ACM SIGGRAPH Videogame Symposium

Saturday, 4 August, 9 am - 8 pm
Sunday, 5 August, 9 am - 3 pm
San Diego Convention Center

The Sandbox symposium includes keynotes, panels, papers, and a Hot Games session that previews unreleased titles from major game companies and independent developers.

Video games are a singular technological medium, comparable in cultural impact to the telephone, television, or the internet. Sandbox explores such questions as: How can we advance the state of technology while ensuring that the medium flourishes? What role do independent developers play in maintaining diversity and creativity in this medium? How do video games affect societies and individuals?

www.siggraph.org/sca2007

Symposium on Computer Animation (SCA)

Friday, 3 August and Saturday, 4 August, 8:30 am - 5 pm
Wyndham San Diego

SCA is the premier forum for innovations in the software and technology of computer animation. This annual event brings together researchers and practitioners working on all aspects of time-based phenomena. The intimate size, the single track program, and comfortable surroundings make this symposium an ideal opportunity to exchange research results and implementation experiences, and to witness some of the best research in computer animation.

Sunday, 5 August

8:30 am - 12:15 pm
- **Course 6:** Anyone Can Cook: Inside Ratatouille's Kitchen
- **Course 7:** Introduction to SIGGRAPH and Computer Graphics
- **Course 8:** High-Quality Rendering Using Ray Tracing and Photon Mapping

8:30 am - 5:30 pm
- **Course 1:** Computational Photography
- **Course 2:** Mesh Parameterization: Theory and Practice
- **Course 3:** Sketch-Based Interfaces: Techniques and Applications
- **Course 4:** State of the Art in Massive Model Visualization
- **Course 5:** Introduction to Direct3D 10
- **Posters**

1 - 6 pm
- **Animation Theaters**
- **Art Gallery: Global Eyes**
- **Emerging Technologies**
- **Guerilla Studio**

1:45 - 5:30 pm
- **Course 9:** From "Shrek" to "Shrek the Third": Evolution of CG Characters in the "Shrek" Films
- **Course 10:** An Interactive Introduction to OpenGL Programming
- **Course 11:** Practical Least-Squares for Computer Graphics

6 - 8 pm
- **Special Event:** Fast-Forward Papers Preview

Monday, 6 August

8:30 - 10:15 am
- **Papers:** Image Analysis & Enhancement
- **Papers:** Character Animation I

8:30 am - 12:15 pm
- **Course 12:** "Surf's Up": The Making of an Animated Documentary
- **Course 13:** A Gentle Introduction to Bilateral Filtering and Its Applications
- **Course 14:** Urban Design and Procedural Modeling
- **Course 15:** Example-Based Texture Synthesis
- **Course 16:** Practical Global Illumination With Irradiance Caching
- **Course 17:** Spatial Augmented Reality: Merging Real and Virtual Worlds

8:30 am - 5:30 pm
- **Posters**

9 am - 6 pm
- **Animation Theaters**

9 am - 7 pm
- **Art Gallery: Global Eyes**
- **Emerging Technologies**

9 am - 11 pm
- **FJORG!**

10:30 am - 12:15 pm
- **Papers:** Image Slicing & Stretching
- **Papers:** Squish, Bounce, and Collide

11 am - 11 pm
- **Guerilla Studio**

1:30 pm
- **Featured Speaker:** Glenn Entis, SVP, Chief Visual and Technical Officer, Electronic Arts

3:15 - 5:30 pm
- **Course 18:** Résumés and Demo Reels: If Yours Don't Work, Neither Do You!
- **Course 19:** Sorting in Space: Multidimensional, Spatial, and Metric Data Structures for Computer Graphics Applications
- **Course 20:** Visualizing Quaternions
- **Course 21:** Database Techniques With Motion Capture
- **Course 22:** LucasArts and ILM: A Case Study in Film and Game Convergence

3:45 - 5:30 pm
- **Papers:** Shape Depiction and Stylization
- **Papers:** Point Sets

6 - 8 pm
- **Special Session:** "Happy Feet": Thawing the CG Pipeline

7 - 9 pm
- **Electronic Theater**

9 pm - 2 am
- **Professional and Student Chapter's Party**

Tuesday, 7 August

8 am - 5 pm
- **FJORG!**

8:30 - 10:15 am
- **Papers:** Lighting
- **Papers:** Illustration & Sculpture

8:30 am - 12:15 pm
- **Courses 26:** The Morphology of Digital Creatures
- **Course 27:** Anyone Can Make Quality Animated Films! The Eight Basic Steps to Success

8:30 am - 5:30 pm
- **Course 23:** Geometric Modeling Based on Polygonal Meshes
- **Course 24:** GPGPU: General-Purpose Computation on Graphics Hardware
- **Course 25:** The Mobile 3D Ecosystem
- **Posters**
- **Sketches**

9 am - 6 pm
- **Animation Theaters**
- **Art Gallery: Global Eyes**
- **Emerging Technologies**
- **Guerilla Studio**

9:30 am - 6 pm
- **Exhibition & Exhibitor Tech Talks**

10 am - 4 pm
- **Job Fair**
- **IP Marketplace**

10:30 am - 12:15 pm
- **Papers:** Performance Capture
- **Papers:** Light Field & High-Dynamic-Range Imaging
- **Panel**
- **Special Event:** ACM Student Research Competition Presentations

1:30 pm
- **Featured Speaker**

2 - 4 pm
- **Electronic Theater Matinée**

3:45 - 6 pm
- **Papers:** Sketching 3D Shapes
- **Papers:** Physical Simulation

6 - 8 pm
- **Special Session:** Shrekology, The History of an Ogre

7 - 9 pm
- **Electronic Theater**

Wednesday, 8 August

8:30 am - 10:15 am
- **Papers:** Appearance Capture & Editing
- **Papers:** Geometry Processing I

8:30 - 9:30 am
- **Education Committee Student Awards**

8:30 am - 12:15 pm
- **Course 29:** Crossing The Line: Moving From Film to Games (and Possibly Back)
- **Course 30:** Digital Art Techniques

8:30 am - 5:30 pm
- **Course 28:** Advanced Real-Time Rendering in 3D Graphics and Games
- **Posters**
- **Sketches**

9 am - 6 pm
- **Animation Theaters**
- **Art Gallery: Global Eyes**
- **Emerging Technologies**
- **Guerilla Studio**

9:30 - 10:15 am
- **Educators QuickTakes**

9:30 - 11:30 am
- **Educators Papers**

9:30 am - 6 pm
- **Exhibition & Exhibitor Tech Talks**

10 am - 4 pm
- **Job Fair**
- **IP Marketplace**

10:30 am - 12:15 pm
- **Papers:** Light Transport
- **Papers:** Geometry Processing II
- **Panel**

11 am - 12:15 pm
- **Educators Quicktakes**

1:30 - 2 pm
- **Educators Papers**

1:45 - 3:30 pm
- **Papers:** Computational Cameras
- **Papers:** Articulation
- **Special Session:** "Spider-Man 3" Triple Play

1:45 - 5:30 pm
- **Course 31:** Fluid Simulation
- **Course 32:** Interaction Tomorrow

2 - 3 pm
- **Educators QuickTakes**
- **Educators Papers**

2 - 4 pm
- **Electronic Theater Matinée**

3 - 4 pm
- **Educators QuickTakes**

3:45 - 5:30 pm
- **Educators Papers**

3:45 - 6 pm
- **Papers:** Perception & Color and Sampling
- **Papers:** Shape Deformation

6 - 7 pm
- **Special Session:** Presentation of the Winners of the First International FJORG! Event

7 - 9 pm
- **Electronic Theater**

8 - 10 pm
- **Reception**

Thursday, 9 August

8:30 - 9:30 am
- **Educators Panel**

8:30 - 10:15 am
- **Papers:** Image-Based Modeling
- **Papers:** Graphics Architecture

8:30 am - Noon
- **Posters**

8:30 am - 5:30 pm
- **Course 33:** Strands and Hair: Modeling, Animation, and Rendering
- **Sketches**

9 am - 2 pm
- **Guerilla Studio**

9 am - 3:30 pm
- **Art Gallery: Global Eyes**
- **Emerging Technologies**

9 am - 5 pm
- **Animation Theaters**

9:30 - 10:15 am
- **Educators Papers**
- **Educators Forum**

9:30 am - 3:30 pm
- **Exhibition & Exhibitor Tech Talks**

10 am - 4 pm
- **Job Fair**
- **IP Marketplace**

10:30 - 11 am
- **Educators QuickTakes**

10:30 - 11:30 am
- **Educators Forum**

10:30 am - 12:15 pm
- **Papers:** Big Images
- **Papers:** Fluids
- **Panel**

11 am - Noon
- **Educators Papers**

11:30 am - 12:15 pm
- **Educators QuickTakes**

1:30 - 2 pm
- **Educators Papers**

1:30 - 3 pm
- **Educators Workshop**

1:45 pm
- **Featured Speaker**

2 - 3:15 pm
- **Educators Papers**

3:30 - 5:15 pm
- **ACM Education Committee Forum and Ramp Out**

3:45 - 5:30 pm
- **Papers:** Video Processing
- **Papers:** Character Animation II

Seating in Courses is on a first-come, first-served basis. Please be sure to arrive early for the Courses you wish to attend. All the Course Notes are on the Full Conference DVD-ROM that Full Conference attendees receive with their registration.

Courses

IMPORTANT NOTICE

Full Conference registration allows attendees access to all SIGGRAPH 2007 Courses, with the two exceptions:

Course 7: Introduction to SIGGRAPH and Computer Graphics is open to Exhibits Plus, Conference Select, and Full Conference attendees.

Course 10: An Interactive Introduction to OpenGL Programming is open to Full Conference and Conference Select attendees.

Instruction, insight, and inspiration from academic and industry experts. SIGGRAPH 2007 Courses deliver invaluable learning opportunities in three formats (tutorials, half-day classes, and full-day classes) and three levels of difficulty (beginning, intermediate, and advanced). Attendees learn principles and techniques that shape software evolution, hardware systems, feature-film production, and future research directions.

1
Computational Photography

Sunday, 8:30 am - 5:30 pm FULL DAY
Level: Intermediate

Camera fundamentals, powerful computational tools, and many real world examples of the latest computational methods in digital imaging that overcome the traditional limitations of a camera and enable novel imaging applications. This course provides a practical guide to topics in image capture and manipulation methods for generating compelling pictures for computer graphics and for extracting scene properties for computer vision.

Co-Organizers

Ramesh Raskar
Mitsubishi Electric Research Laboratories (MERL)
raskar [at] merl.com

Jack Tumblin
Northwestern University
jet [at] cs.northwestern.edu

2
Mesh Parameterization: Theory and Practice

Sunday, 8:30 am - 5:30 pm FULL DAY
Level: Advanced

Mesh parameterization is a powerful geometry processing tool with numerous computer graphics applications, from texture mapping to animation transfer. This course outlines its mathematical foundations, describes recent methods for parameterizing meshes over various domains, discusses emerging tools like global parameterization and inter-surface mapping, and demonstrates a variety of parameterization applications.

Co-Organizers

Alla Sheffer
University of British Columbia
sheffa [at] cs.ubc.ca

Kai Hormann
Technische Universität Clausthal
kai.Hormann [at] tu-clausthal.de

Bruno Levy
INRIA
bruno.levy [at] loria.fr

3
Sketch-Based Interfaces: Techniques and Applications

Sunday, 8:30 am -5:30 pm FULL DAY
Level: Intermediate

Sketch-based interfaces are a natural (pencil-and-paper-like) approach to interaction with a variety of applications, including conceptual modeling, animation, and mechanical design. This course offers an in-depth discussion of the design of sketch-based interfaces ranging from simple gestural commands to complex sketch-understanding systems.

Organizer

Joseph LaViola
University of Central Florida
jjl [at] cs.ucf.edu

4
State of the Art in Massive Model Visualization

Sunday, 8:30 am - 5:30 pm FULL DAY
Level: Intermediate

Users consistently try to interactively display more data than computing systems allow. Massive 3D models commonplace in film, games, CAD product design, medical imaging, seismic exploration, information spaces, etc. and routinely cause problems. This course covers techniques that effectively overcome system constraints to allow real-time interaction with massive models.

Organizer
David J. Kasik
The Boeing Company
david.j.kasik [at] boeing.com

5
Introduction to Direct3D 10

Sunday, 8:30 am - 5:30 pm FULL DAY
Level: Intermediate

Direct3D 10 is a major revision of the Direct3D graphics API for high-performance applications and games running on a new generation of PC video hardware. This course provides a detailed overview of the new API, technologies, and techniques required for developing Direct3D 10 applications.

Organizer
Chuck Walbourn
Microsoft Corporation
chuckw [at] microsoft.com

6
Anyone Can Cook - Inside Ratatouille's Kitchen

Sunday, 8:30 am - 12:15 pm HALF DAY
Level: Intermediate

The passion for cooking and food are the central theme of Pixar's recent film, "Ratatouille". This complex and multi-faceted problem posed many challenges that were solved using diverse computer graphics and production techniques. This course comprehensively covers all aspects related to food, including modeling, dressing, shading, lighting and effects.

Organizer
Apurva Shah
Pixar Animation Studios
apurva [at] pixar.com

7
Introduction to SIGGRAPH and Computer Graphics

Sunday, 8:30 am - 12:15 pm HALF DAY
Level: Beginning

This course eases newcomers into the SIGGRAPH experience, so they can make the best use of their time and extract maximum value from being here. Topics include the big ideas of computer graphics, a conference overview, and how to obtain the information that matters most to attendees.

Organizer
Mike Bailey
Oregon State University
Mjb [at] cs.oregonstate.edu

8
High-Quality Rendering Using Ray Tracing and Photon Mapping

Sunday, 8:30 am - 12:15 pm HALF DAY
Level: Intermediate

Detailed descriptions of the ray-tracing and photon-mapping algorithms for rendering complex scenes with indirect illumination, caustics, participating media, and subsurface scattering. The emphasis is on the practical insight necessary to use and implement these algorithms in production of high-quality images in movies, games, architecture, etc.

Organizer
Henrik Wann Jensen
University of California, San Diego
henrik [at] cs.ucsd.edu

9
From "Shrek" to "Shrek the Third": Evolution of CG Characters in the "Shrek" Films

Sunday, 1:45 - 5:30 pm HALF DAY
Level: Intermediate

Unique insights into how "Shrek" characters evolved over three films. The speakers, who have held key positions on all "Shrek" productions, will discuss the choices that helped keep the "Shrek" franchise unique, as well as the challenges of constantly adapting to new technical and creative demands.

Organizer
Philippe Gluckman
PDI/DreamWorks
philippe [at] anim.dreamworks.com

10
An Interactive Introduction to OpenGL Programming

Sunday, 1:45 - 5:30 pm HALF DAY
Level: Beginning

This course gives novice OpenGL programmer with the knowledge they need to author interactive 3D, graphics applications using OpenGL. It covers fundamental topics such as modeling, lighting, depth buffering, and texture mapping, and it introduces advanced topics such as using vertex and fragment shaders.

Organizer
Dave Shreiner
ARM
shreiner [at] siggraph.org

11
Practical Least-Squares for Computer Graphics

Sunday, 1:45 - 5:30 pm HALF DAY
Level: Intermediate

An overview of the least-squares technique and its variants, and how they are used in computer graphics applications. This course delivers a "cookbook" understanding of least-squares techniques and how they have been used to address graphics problems.

Organizer
Fred Pighin
Industrial Light + Magic
fpighin [at] ilm.com

12
"Surf's Up": The Making of an Animated Documentary

Monday, 8:30 am - 12:15 pm HALF DAY
Level: Beginning

A detailed look at the making of the animated documentary "Surf's Up": the live-action camera implementation, character animation, wave effects, and rendering techniques that contributed to the film's unique look and style.

Organizer
Rob Bredow
Sony Pictures Imageworks
rob [at] 185vfx.com

13
A Gentle Introduction to Bilateral Filtering and Its Applications

Monday, 8:30 am - 12:15 pm HALF DAY
Level: Intermediate

The bilateral filter is ubiquitous in computational photography applications. It is increasingly common in computer graphics research papers, but no single reference summarizes its properties and applications. This course provides a graphical, strongly intuitive introduction to bilateral filtering, and a practical guide for image editing, tone-maps, video processing and more.

Organizer
Sylvain Paris
Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory
sparis [at] csail.mit.edu

14
Urban Design and Procedural Modeling

Monday, 8:30 am - 12:15 pm HALF DAY
Level: Intermediate

How procedural modeling techniques are used to create urban environments for computer games, movies, architectures, and archeology. The course quickly surveys previously published techniques and theory, and then delve into their use in graphics practice: tool demonstrations, fitting to real and artistic data, the needs of gaming, and preparation for rendering.

Co-Organizers
Benjamin Watson
North Carolina State University
bwatson [at] ncsu.edu

Pascal Müller
ETH Zürich
pmueller [at] vision.ee.ethz.ch

15
Example-Based Texture Synthesis

Monday, 8:30 am - 12:15 pm HALF DAY
Level: Intermediate

An introduction to example-based texture synthesis and its applications. Topics include various algorithmic paradigms for synthesis including representational and processing issues across domains. The course also reviews applications such as image and video synthesis and editing, geometry and surface texture synthesis, controllable and interactive synthesis on the GPU, and fluid texturing.

Co-Organizers
Vivek Kwatra
University of North Carolina at Chapel Hill
kwatra [at] cs.unc.edu

Li-Yi Wei
Microsoft Research Asia
liyiwei [at] stanfordalumni.org

16
Practical Global Illumination With Irradiance Caching

Monday, 8:30 am - 12:15 pm HALF DAY
Level: Intermediate

A practical guide to implementing irradiance caching algorithm to efficiently render flawless images featuring global illumination. The course summarizes recent research advances related to irradiance caching: caching on glossy surfaces, temporal caching, acceleration through GPU implementation, and irradiance decomposition.

Organizer
Jaroslav Krivanek
Czech Technical University in Prague
Xkrivanj [at] fel.cvut.cz

17
Spatial Augmented Reality: Merging Real and Virtual Worlds

Monday, 8:30 am - 12:15 pm HALF DAY
Level: Intermediate

A survey of the latest techniques for augmented-reality that go beyond conventional head-mounted-displays. The course introduces prototypes, explain rendering and calibration algorithms, discusses case studies, and presenst techniques beyond visual augmentation. It also summarizes new applications in art, science, education, and industry that are enabled by modern techniques in augmented reality.

Co-Organizers
Ramesh Raskar
Mitsubishi Electric Research Laboratories (MERL)
raskar [at] merl.com

Oliver Bimber
Bauhaus University
bimber [at] uni-weimar.de

18
Résumés and Demo Reels: If Yours Don't Work, Neither Do You!

Monday, 3:15 - 5:30 pm TUTORIAL
Level: Beginning

Learn what it takes to get a job in the computer graphics field. A top career coach and recruiter reveals the secrets of how to create an irresistible résumé and showcase your talent in a demo reel to get the job you want. Sample résumés and demo reels are included.

Organizer
Pamela Kleibrink Thompson
Ideas to Go
PamRecruit [at] aol.com

19
Sorting in Space: Multidimensional, Spatial, and Metric Data Structures for Computer Graphics Applications

Monday, 3:15 - 5:30 pm TUTORIAL
Level: Beginning

How to represent spatial data using techniques that sort the data with respect to the space they occupy. These techniques include quadtrees, octrees, and bounding-volume hierarchies, and they are useful for speeding up operations that involve search in all computer graphics applications including games, ray tracing, and solid modeling.

Organizer
Hanan Samet
University of Maryland at College Park
hjs [at] cs.umd.edu

20
Visualizing Quaternions

Monday, 3:15 - 5:30 pm TUTORIAL
Level: Intermediate

The fundamental features of quaternions as they apply to all fields of computer graphics and visualization. The courses uses visual representations of quaternions themselves to provide intuition and insight.

Organizer
Andrew Hanson
Indiana University
hansona [at] indiana.edu

21
Database Techniques With Motion Capture

Monday, 3:15 - 5:30 pm TUTORIAL
Level: Intermediate

Motion capture databases are now large, varied, and widely used. This course covers database techniques useful for organizing, processing, and navigating such databases. Topics include choice of distance function, indexing for fast retrieval, and time-series prediction for stitching, segmentation, and outlier detection. Current and potential applications are discussed.

Organizer
Nancy Pollard
Carnegie Mellon University
Nsp [at] cs.cmu.edu

22

LucasArts and ILM: A Case Study in Film and Game Convergence

Monday, 3:15 - 5:30 pm TUTORIAL
Level: Beginning

Everyone is talking about film-game convergence. Lucasfilm is actually doing it. Working literally side by side, on the same codebase, LucasArts and ILM are leveraging each others' expertise to create a unified set of tools and techniques serving both companies. This course reviews their progress and challenges in unifying game and film technologies.

Co-Organizers
Steve Sullivan
Industrial Light + Magic
sullivan [at] ilm.com

Chris Williams
LucasArts
williams [at] lucasarts.com

23

Geometric Modeling Based on Polygonal Meshes

Tuesday, 8:30 am - 5:30 pm FULL DAY
Level: Intermediate

This course discusses the entire geometry processing pipeline based on polygonal meshes. Topics include fundamental concepts and recent developments for mesh generation, optimization, parameterization, and deformation. The course includes interactive demonstrations and provides full source code for most topics.

Co-Organizers
Mario Botsch
ETH Zürich
botsch [at] inf.ethz.ch

Mark Pauly
ETH Zürich
Pauly [at] inf.ethz.ch

24

GPGPU: General-Purpose Computation on Graphics Hardware

Tuesday, 8:30 am - 5:30 pm FULL DAY
Level: Advanced

Graphics processors (GPUs) have become powerful engines capable of a variety of computations beyond computer graphics. This course takes a detailed look at both basic and advanced issues related to computation on graphics hardware (GPGPU), with an emphasis on core computational building blocks and a focus on applications to graphics and simulation.

Co-Organizers
Mike Houston
Stanford University
Mhouston [at] graphics.stanford.edu

Naga Govindaraju
Microsoft Corporation
nagag [at] microsoft.com

25

The Mobile 3D Ecosystem

Tuesday, 8:30 am - 5:30 pm FULL DAY
Level: Intermediate

How to develop 3D applications for mobile devices, how they function, and where they are heading. The course focuses on OpenGL ES and M3G, and how to use these technologies to create efficient applications and deploy them in the mobile world. It covers the structure and evolution of 3D applications, shows programming examples, and provides tips and tricks for programmers and artists.

Organizer
Kari Pulli
Nokia Research Center
kari.pulli [at] nokia.com

26

The Morphology of Digital Creatures

Tuesday, 8:30 am - 12:15 pm HALF DAY
Level: Beginning

Fundamental features of human and animal anatomy inform the structure of digital creatures, whether they are realistic or based upon novel combinations of known morphologies. This course connects the biomechanics and environmental adaptations of living and extinct organisms to techniques used to represent bone, muscles, and skin in digital creatures.

Organizer
Tim McLaughlin
Lucasfilm Animation
timm [at] lucasfilm.com

27

Anyone Can Make Quality Animated Films! The Eight Basic Steps to Success

Tuesday, 8:30 am - 12:15 pm HALF DAY
Level: Intermediate

How anyone with a little talent can apply industry-standard techniques to create professional animated films. Topics include: developing the client "pitch"; writing a winning script; creating a dynamite storyboard; character design; recording and/or gathering quality audio; animation production; 2D ink and paint process; and professional editing.

Organizer
Eric vanHamersveld
Art Institute of California-San Diego
evanhamersveld [at] sbcglobal.net

28

Advanced Real-Time Rendering in 3D Graphics and Games

Wednesday, 8:30 am - 5:30 pm FULL DAY
Level: Intermediate

The amazing power of the latest GPUs has spurred a real osmosis of ideas between the game developers and state-of-the-art graphics research. This course presents ground-breaking 3D rendering and innovative real-time algorithms from award-winning game engines that are pushing the visual boundaries and interactive experience of complex virtual worlds. These techniques are applicable in both real-time and offline domains.

Organizer
Natalya Tatarchuk
AMD Graphics, 3D Application Research Group
natashat [at] bu.edu

29

Crossing The Line: Moving From Film to Games (and Possibly Back)

Wednesday, 8:30 am - 12:15 pm HALF DAY
Level: Beginning

As games have matured into the HDTV era, the need for rich, polished graphics is greater than ever. This course explores the impact that film artists can have upon video games and what game artists and studios can expect as game teams grow and more film people; move into games.

Organizer
Evan Hirsch
Microsoft Corporation
evhirsch [at] microsoft.com

30
Digital Art Techniques

Wednesday, 8:30 am - 12:15 pm HALF DAY
Level: Intermediate

A partial survey of techniques for creation of digital art works. The course combines experiences of practicing artists with state-of-the-art research. Topics include: aesthetic concepts, novel interaction paradigms and mixed-media processing issues. Example works range from partially generative still imagery to VJ performances and interactive installations.

Co-Organizers
Pascal Müller
ETH Zürich
pmueller [at] vision.ee.ethz.ch

Stefan Müller Arisona
ETH Zürich
Sma [at] corebounce.org

31
Fluid Simulation

Wednesday, 1:45 - 5:30 pm HALF DAY
Level: Advanced

Animating fluids like water, smoke, and fire by physics-based simulation is increasingly important in visual effects and is starting to make an impact in real-time games. This course goes from the basics of 3D fluid flow to the state of the art in graphics. Topics include: the core concepts of fluid flow, a broad coverage of cutting-edge techniques, and details on implementing fluid simulators.

Organizer
Robert Bridson
University of British Columbia
Rbridson [at] cs.ubc.ca

32
Interaction Tomorrow

Wednesday, 1:45 - 5:30 pm HALF DAY
Level: Beginning

A comprehensive overview of user interface technologies on the newly emerging interactive tabletops and large wall displays. Topics include: input devices, interface metaphors, modality of interaction, sensing technologies, applications, and future directions. Examples are drawn from both commercial systems and research prototypes.

Co-Organizers
Michael Haller
Upper Austria University of Applied Sciences
haller [at] fh-hagenberg.at

Chia Shen
Mitsubishi Electric Research Laboratories (MERL)
shen [at] merl.com

33
Strands and Hair: Modeling, Animation, and Rendering

Thursday, 8:30 am - 5:30 pm FULL DAY
Level: Intermediate

Over the past six years, there has been a Renaissance in hair modeling, rendering, and animation. This course covers the gamut of hair simulation problems and presents working solutions. Topics include recent and novel research ideas, and time-tested industrial practices that created spectacular imagery.

Organizer
Sunil Hadap
Adobe Systems Incorporated, formerly at PDI/DreamWorks
sunilhadap [at] acm.org

Full Conference registration allows attendees access to all SIGGRAPH 2007 Papers. Seating is on a first-come, first-served basis. Please be sure to arrive early for the Papers sessions you wish to attend.

Papers

Special Event

Fast-Forward Papers Preview

Sunday, 5 August, 6 - 8 pm

Snapshot overviews of the paper sessions, in which authors give short summaries of their work. It's a fast, fun, and provocative preview of the latest and most significant findings in computer graphics and interactive techniques.

The SIGGRAPH Papers program is the premier international forum for disseminating new scholarly work in computer graphics. This year the Papers Committee accepted 108 papers, a new record. These papers span the core areas of modeling, animation, rendering, and imaging, but they also touch on related areas such as visualization, computer vision, human-computer interaction, and applications of computer graphics.

NEW FOR 2007

Per-Paper Discussants

To promote a lively exchange of ideas during the Papers Program, we are introducing this year a system of per-paper discussants.

Each paper in the program will be allotted 25 minutes, 20 minutes for presentation and five minutes for discussion of the paper, with the session chair serving as discussant. Anyone may submit a question to the discussant for any session. These questions should be scholarly in nature, diplomatically phrased, and specific to one of the papers being presented in that session.

How do I submit a question?

In advance:

To submit your question electronically, click on SUBMIT QUESTION to the right of the session chair/discussant in the program below. This year's papers will be officially published, and made available in the ACM Digital Library, one week before the conference begins.

At SIGGRAPH 2007:

During the conference, you can continue to submit questions the same way. In addition, the Program and Buyer's Guide and the Conference Locator will list a unique email address for each session. Finally, as you walk into each paper session, there will be a box of index cards and pencils at the door. Feel free to pick up a card, scribble a question (even during the talk), and hand it to a Student Volunteer, who will hand-deliver it to the discussant.

What will happen to my question after I submit it?

Emails sent to these addresses will be routed to the appropriate session chairs, who will check their email at least until the night before the session. Questions will not be shown to speakers beforehand.

Will my question remain anonymous?

In your questions, you may identify yourself or you may remain anonymous. (If you submit electronically, indicate whether you wish to be identified or not.) In either case, don't forget to designate which of the papers in that session you are asking a question about.

Image Analysis & Enhancement

Monday, 8:30 - 10:15 am

Session Chair/Discussant
Richard Szeliski SUBMIT QUESTION
Microsoft Research
ImageAnalysis-Enhancement [at] siggraph.org

Image Deblurring With Blurred/Noisy Image Pairs
A novel method to deblur an image, with the help of another noisy image of the same scene. The paper also proposes new methods of de-ringing the deconvoluted image.

Lu Yuan
The Hong Kong University of Science and Technology

Jian Sun
Microsoft Research Asia

Long Quan
The Hong Kong University of Science and Technology

Heung-Yeung Shum
Microsoft Research Asia

Solid Texture Synthesis From 2D Exemplars
A novel method for synthesizing solid textures from 2D exemplars. In addition to producing compelling texture-mapped surfaces, this method models the material in the interior of solid objects.

Johannes Kopf
Universität Konstanz

Chi-Wing Fu
The Hong Kong University of Science and Technology

Daniel Cohen-Or
Tel Aviv University

Oliver Deussen
Universität Konstanz

Dani Lischinski
The Hebrew University

Tien-Tsin Wong
The Chinese University of Hong Kong

Photo Clip Art
An interactive system for inserting new objects into existing photographs using a vast image-based object library.

Jean-François Lalonde
Derek Hoiem
Alexei A. Efros
Carnegie Mellon University

Carsten Rother
John Winn
Antonio Criminisi
Microsoft Research Cambridge

Scene Completion Using Millions of Photographs
A method for filling holes in images using semantically and structurally similar scenes from a large internet photo library.

James Hays
Alexei A. Efros
Carnegie Mellon University

Character Animation I

Monday, 8:30 - 10:15 am

Session Chair/Discussant
Michiel van de Panne SUBMIT QUESTION
The University of British Columbia
Character-Animation-I [at] siggraph.org

Active Learning for Real-Time Motion Controllers
An active learning approach to real-time controllable motion. The approach builds the controller in an interactive capture session and optimizes for sample locations.

Seth Cooper
University of Washington

Aaron Hertzmann
University of Toronto

Zoran Popović
University of Washington

Responsive Characters From Motion Fragments
A data-driven animation controller designed for on-line, direct character-control applications that achieves good results by modeling user behavior.

James McCann
Nancy Pollard
Carnegie Mellon University

Optimal Character Animation With Continuous User Control
A real-time character animation system that produces fluid, near-optimal motion under continuously changing multidimensional user control.

Adrien Treuille
Yongjoon Lee
Zoran Popović
University of Washington

Constraint-Based Motion Optimization Using a Statistical Dynamic Model
A method for generating human animation from a variety of spatial-temporal constraints using a low-dimensional, statistical dynamical model (from motion capture data) as a motion prior in a trajectory optimization framework.

Jinxiang Chai
Texas A&M University

Jessica K. Hodgins
Carnegie Mellon University

Image Slicing & Stretching

Monday, 10:30 am - 12:15 pm

Session Chair/Discussant
Aseem Agarwala SUBMIT QUESTION
Adobe Systems Incorporated
ImageSlicing-Stretching [at] siggraph.org

Soft Scissors: An Interactive Tool for Real-Time High Quality Matting
An interactive tool for extracting high quality alpha mattes and creating high quality composites of foreground objects in real time.

Jue Wang
University of Washington

Maneesh Agrawala
University of California, Berkeley

Michael F. Cohen
Microsoft Research

Seam Carving for Content-Aware Image Resizing
Seam carving is a method for content-aware resizing that changes the size of an image according to its content. This paper shows applications to aspect-ratio change, image retargeting, and object removal.

Shai Avidan
Mitsubishi Electric Research Laboratories (MERL)

Ariel Shamir
The Interdisciplinary Center (IDC) and
Mitsubishi Electric Research Laboratories (MERL)

Image Vectorization Using Optimized Gradient Meshes
A method to optimize gradient mesh for image vectorization.

Jian Sun
Lin Liang
Fang Wen
Heung-Yeung Shum
Microsoft Research Asia

Detail Preserving Shape Deformation in Image Editing
When deforming an image, reshaping a textured portion will unrealistically stretch the texture. This paper resynthesizes texture and properly orients it to preserve texture detail in these regions.

Hui Fang
Google Inc.

John C. Hart
University of Illinois at Urbana Champaign

Squish, Bounce, and Collide

Monday, 10:30 am - 12:15 pm

Session Chair/Discussant
Carol O'Sullivan SUBMIT QUESTION
Trinity College Dublin
Squish-Bounce-Collide [at] siggraph.org

Volume Conserving Finite Element Simulations of Deformable Models
A method for simulating incompressible deformable solids by preserving volume in a one-ring around each node. The paper also presents a novel method for treating collision and contact constraints during Poisson solves.

Geoffrey Irving
Stanford University and Pixar Animation Studios

Craig Schroeder
Stanford University

Ronald Fedkiw
Stanford University and Industrial Light & Magic

Many-Worlds Browsing for Control of Multibody Dynamics
A simple method for controlling rigid-body motion based on showing the user example motions and providing tools to browse and refine them interactively.

Christopher D. Twigg
Carnegie Mellon University

Doug L. James
Cornell University

Continuous Collision Detection for Articulated Models Using Taylor Models and Temporal Culling
CATCH: Fast continuous collision detection (CCD) algorithm for articulated models using Taylor models and temporal culling. CATCH performs CCD at interactive rates for complex articulated models.

Xinyu Zhang
Ewha Womans University

Stephane Redon
INRIA

Minkyoung Lee
Young J. Kim
Ewha Womans University

A Finite Element Method for Animating Large Viscoplastic Flow
A finite-element method for simulating materials such as shampoo, dough, and clay that exhibit a combination of elastic deformation and large viscoplastic flow.

Adam W. Bargteil
Carnegie Mellon University

Chris Wojtan
Georgia Institute of Technology

Jessica K. Hodgins
Carnegie Mellon University

Greg Turk
Georgia Institute of Technology

Shape Depiction and Stylization

Monday, 3:45 - 5:30 pm

Session Chair/Discussant
Doug DeCarlo SUBMIT QUESTION
Rutgers University
ShapeDepiction-Stylization [at] siggraph.org

Locally Controllable Stylized Shading
A set of simple stylized shading algorithms that allow the user to freely add localized light and shade in a manner that is consistent with conventional lighting techniques.

Hideki Todo
The University of Tokyo

Ken-ichi Anjyo
William Baxter
OLM Digital, Inc.

Takeo Igarashi
The University of Tokyo

Line Drawings Via Abstracted Shading
A new real-time method for producing computer-generated line drawings of 3D shapes.

Yunjin Lee
Lee Markosian
University of Michigan

Seungyong Lee
POSTECH

John F. Hughes
Brown University

Apparent Ridges for Line Drawing
Apparent Ridges are view-dependent versions of ridge and valley lines that encapsulate or enhance many previously defined feature lines.

Tilke Judd
Frédo Durand
Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory

Edward H. Adelson
Massachusetts Institute of Technology, Department of Brain and Cognitive Sciences, and Computer Science and Artificial Intelligence Laboratory

Dynamic 2D Patterns for Shading 3D Scenes
A real-time method for rendering 3D scenes in halftone, hatching, and painterly styles based on dynamic image space stroke and halftone patterns.

Simon Breslav
Karol Szerszen
Lee Markosian
University of Michigan

Pascal Barla
Joelle Thollot
INRIA Grenoble University

Point Sets

Monday, 3:45 - 5:30 pm

Session Chair/Discussant
Mark Pauly SUBMIT QUESTION
ETH Zürich
Point-Sets [at] siggraph.org

Global Non-Rigid Alignment of 3D Scans
A new pipeline for non-rigid global registration of large, high-resolution 3D scanned data sets. This reduces visible misalignment artifacts such as tearing and blurring of detail.

Benedict J. Brown
Szymon Rusinkiewicz
Princeton University

Parameterization-Free Projection for Geometry Reconstruction
This paper introduces a locally optimal projection operator for surface reconstruction. The operator is parameterization-free, so it can deal with complex geometry and high noise level.

Yaron Lipman
Daniel Cohen-Or
David Levin
Tel Aviv University

Hillel Tal-Ezer
Academic College of Tel-Aviv Yaffo

Algebraic Point Set Surfaces
An efficient and robust surface representation based on spherical fit that allows handling complex, low-sampled, point-based models. A normal evaluation procedure and sharp features are also included.

Gael Guennebaud
Markus Gross
ETH Zürich

Direct Visibility of Point Sets
This paper proposes a simple operator for determining the visible points in a point cloud, as viewed from a given viewpoint. Visibility is determined without reconstructing a surface or estimating normals.

Ayellet Tal
Sagi Katz
Technion

Ronen Basri
The Weizmann Institute of Science

Lighting

Tuesday, 8:30 - 10:15 am

Session Chair/Discussant
Steve Marschner SUBMIT QUESTION
Cornell University
Lighting [at] siggraph.org

The Lightspeed Automatic Interactive Lighting Preview System
A system for automatic interactive preview of RenderMan scenes during lighting design. Lightspeed automatically creates previews from unmodified input, supports final-quality motion-blur/transparency, and guarantees interactivity performance through progressive refinement.

Jonathan Ragan-Kelley
Massachusetts Institute of Technology

Charlie Kilpatrick, Brian Smith
Industrial Light & Magic

Doug Epps
Tippett Studio

Paul Green
Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory

Christophe Hery
Industrial Light & Magic

Frédo Durand
Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory

Matrix Row-Column Sampling for the Many-Light Problem
An approach to the many-light problem that samples rows and columns of the lighting matrix on the GPU. By exploiting the inherent structure of the matrix, this approach produces fast, high-quality approximations.

Milos Hasan
Cornell University

Fabio Pellacini
Dartmouth College

Kavita Bala
Cornell University

Interactive Relighting With Dynamic BRDFs
A novel technique for interactive relighting in which lighting, viewing direction, and BRDFs can all be changed on the fly.

Xin Sun
Zhejiang University

Kun Zhou, Yanyun Chen, Steve Lin
Microsoft Research Asia

Jiaoying Shi
Zhejiang University

Baining Guo
Microsoft Research Asia

Frequency Domain Normal Map Filtering
A method of filtering normal maps that convolves the BRDF with the normal distribution function (NDF). The NDF can be represented in spherical harmonics or by using a new spherical vMF representation.

Charles Han, Bo Sun, Ravi Ramamoorthi, Eitan Grinspun
Columbia University

Illustration & Sculpture

Tuesday, 8:30 - 10:15 am

Session Chair/Discussant
Takeo Igarashi SUBMIT QUESTION
The University of Tokyo
Illustration-Sculpture [at] siggraph.org

Image-Guided Maze Construction
This system for designing mazes based on images can draw a wide variety of attractive mazes, with style and layout under control of a human designer.

Jie Xu
Craig S. Kaplan
University of Waterloo

Dynamic Planar Map Illustration
Live Paint allows editing of colored planar vector illustrations, maintaining the integrity of the original paths that define the geometry. Previous methods divided paths at intersections, decreasing editability.

Paul Asente
Mike Schuster
Teri Pettit
Adobe Systems Incorporated

Interactive Cutaway Illustrations of Complex 3D Models
A system for authoring and viewing interactive cutaway illustrations of complex 3D models using conventions of traditional scientific and technical illustration.

Wilmot Li
Lincoln Ritter
University of Washington

Maneesh Agrawala
University of California, Berkeley

Brian Curless
David Salesin
University of Washington

Digital Bas-Reliefs From 3D Scenes
Generation of bas-relief sculptures from 3D scenes.

Tim Weyrich
Jia Deng
Connelly Barnes
Szymon Rusinkiewicz
Adam Finkelstein
Princeton University

Performance Capture

Tuesday, 10:30 am - 12:15 pm

Session Chair/Discussant
James Davis SUBMIT QUESTION
University of California, Santa Cruz
Performance-Capture [at] siggraph.org

Multi-Scale Capture of Facial Geometry and Motion
A novel multi-scale representation and acquisition method for animation of high-resolution facial geometry and wrinkles. The model consists of high-resolution geometry, motion capture data, and expression wrinkles.

Bernd Bickel
Mario Botsch
Roland Angst
ETH Zürich

Wojciech Matusik
Mitsubishi Electric Research Laboratories (MERL)

Miguel Otaduy
ETH Zürich

Hanspeter Pfister
Mitsubishi Electric Research Laboratories (MERL)

Markus Gross
ETH Zürich

Capturing and Animating Occluded Cloth
Geometry capture of dynamic cloth garments with folding and occlusion using cloth printed with a color coded pattern.

Ryan White
University of California, Berkeley and University of Illinois at Urbana-Champaign

KM Crane
DA Forsyth
University of Illinois at Urbana-Champaign

Practical Motion Capture in Everyday Surroundings
This system relies on ultrasonic time-of-flight measurements, linear accelerations, and angular velocities to compute joint configurations of a human body in almost any setting and for extended periods of time.

Daniel Vlasic
Massachusetts Institute of Technology

Rolf Adelsberger
Mitsubishi Electric Research Laboratories and ETH Zürich

Giovanni Vannucci
John Barwell
Mitsubishi Electric Research Laboratories (MERL)

Markus Gross
ETH Zürich

Wojciech Matusik
Mitsubishi Electric Research Laboratories (MERL)

Jovan Popović
Massachusetts Institute of Technology

Performance Capture continues

Performance Capture

Tuesday, 10:30 am - 12:15 pm

Continued from page 20

Prakash: Lighting-Aware Motion Capture Using Photosensing Markers and Multiplexed Illuminators
A high-speed optical motion capture system also measures orientation and incident illumination via photosensing tags. Imperceptible tags work in natural lighting, to support on-set mocap or real-time broadcast of virtual sets.

Ramesh Raskar
Hideaki Nii
Mitsubishi Electric Research Laboratories (MERL)

Bert de Decker
Universiteit Hasselt

Yuki Hashimoto
Jay Summet
Dylan Moore
Yong Zhao
Jonathan Westhues
Paul Dietz
Mitsubishi Electric Research Laboratories (MERL)

Masahiko Inami
University of Electrocommunications

Shree Nayar
Columbia University

John Barnwell
Michael Noland
Mitsubishi Electric Research Laboratories (MERL)

Philippe Bekaert
University of Hasselt

Vlad Branzoi
Erich Bruns
Mitsubishi Electric Research Laboratories (MERL)

Light Field & High-Dynamic-Range Imaging

Tuesday, 10:30 am - 12:15 pm

Session Chair/Discussant
Sing Bing Kang SUBMIT QUESTION
Microsoft Research
LightField-HDR-Imaging [at] siggraph.org

Veiling Glare in High-Dynamic-Range Imaging
Veiling glare limits the dynamic range that can be captured by high-dynamic-range imaging techniques. This method removes glare using a high-frequency mask to reduce noise and increase dynamic range.

Eino-Ville Talvala, Andrew Adams
Mark Horowitz, Marc Levoy
Stanford University

Do HDR Displays Support LDR Content? A Psychophysical Evaluation
A set of psychophysical experiments compared high-dynamic-range, tone-mapping, and conventional imaging pipelines, and set guidelines to optimally display eight-bit legacy imagery on HDR display systems.

Ahmet Oguz Akyuz
University of Central Florida

Erik Reinhard
University of Bristol

Roland Fleming, Bernhard E. Riecke,
Heinrich H. Bulthoff
Max Planck Institute for Biological Cybernetics

Ldr2Hdr: On-the-Fly Reverse Tone Mapping of Legacy Video and Photographs
A method for on-the-fly boosting of the dynamic range of legacy video for viewing on high-dynamic-range displays.

Allan G. Rempel, Matthew Trentacoste
The University of British Columbia

Helge Seetzen
The University of British Columbia and Brightside Technologies

H. David Young, Wolfgang Heidrich,
Lorne Whitehead
The University of British Columbia

Greg Ward
Brightside Technologies

Rendering for an Interactive 360-Degree Light Field Display
An autostereoscopic light field display using commodity graphics and projector hardware. It displays interactive 3D graphics or photographic 3D images with correct horizontal perspective and tracked vertical parallax.

Andrew Jones
USC Institute for Creative Technologies

Ian McDowall
Fakespace Labs

Hideshi Yamada
Sony Corporation

Mark Bolas
USC School of Cinematic Arts

Paul Debevec
USC Institute for Creative Technologies

Sketching 3D Shapes

Tuesday, 3:45 - 6 pm

Session Chair/Discussant
Tom Funkhouser SUBMIT QUESTION
Princeton University
Sketching-3DShapes [at] siggraph.org

FiberMesh: Designing Freeform Surfaces With 3D Curves
An interface for designing freeform surfaces using a collection of hand-drawn 3D curves, which serve as handles for controlling the geometry.

Andrew Nealen
Technische Universität Berlin

Takeo Igarashi
The University of Tokyo / PRESTO JST

Olga Sorkine
Marc Alexa
Technische Universität Berlin

Editing The Topology of 3D Models by Sketching
A user-guided method for repairing and editing the topology of a 3D model.

Tao Ju
Washington University in St. Louis

Qian-Yi Zhou
Shi-Min Hu
Tsinghua University

Interactive Topology-Aware Surface Reconstruction
A topology-aware, interactive reconstruction technique that requires minimal user-input to make correct decisions at topology-weak regions. When the technique was applied to structured light scanned-models it reconstructed them with few scribbles.

Andrei Sharf
Tel Aviv University

Thomas Lewiner
Pontifícia Universidade Católica do Rio de Janeiro

Gil Shklarski, Sivan Toledo, Daniel Cohen-Or
Tel Aviv University

ShapePalettes: Interactive Normal Transfer Via Sketching
A new markup metaphor for interactive modeling of complex 3D objects.

Tai-Pang Wu, Chi-Keung Tang
The Hong Kong University of Science and Technology

Michael S. Brown
Nanyang Technological Univesity

Heung-Yeung Shum
Microsoft Research Asia

Plushie An Interactive Design System for Plush Toys
An interactive system that allows non-professional users to design their own original plush toys.

Yuki Mori, Takeo Igarashi
The University of Tokyo

Physical Simulation

Tuesday, 3:45 - 6 pm

Session Chair/Discussant
Irfan Essa SUBMIT QUESTION
Georgia Institute of Technology
Physical-Simulation [at] siggraph.org

Curl-Noise for Procedural Fluid Flow
A simple noise-based approach to procedurally modeling turbulent fluid flow that can handle arbitrary solid boundaries and more.

Robert Bridson
The University of British Columbia

Jim Hourihan
Tweak Films

Markus Nordenstam
Double Negative

Wrinkled Flames and Cellular Patterns
Using asymptotic detonation-shock-dynamics to obtain fire and flames with characteristic cellular patterns, which provides better velocities for the level set in a coupled Navier-Stokes fire simulator.

Jeong-Mo Hong, Tamar Shinar, Ron Fedkiw
Stanford University

Adaptively Sampled Particle Fluids
An adaptive sampling algorithm based on an extended local feature size and a distance-based surface definition for particle fluids.

Bart Adams
Stanford University and Katholieke Universiteit Leuven

Mark Pauly, Richard Keiser
ETH Zürich

Leonidas J. Guibas
Stanford University

Efficient Simulation of Inextensible Cloth
A method that efficiently obtains very low strain along the warp and weft using constrained Lagrangian dynamics. It can be easily integrated into existing cloth simulators.

Rony Goldenthal
The Hebrew University of Jerusalem & Columbia University

David Harmon
Columbia University

Raanan Fattal
University of California, Berkeley

Michel Bercovier
The Hebrew University of Jerusalem

Eitan Grinspun
Columbia University

TRACKS: Toward Directable Thin Shells
Tracking begins with a rough animation already set by the artist, and uses physical simulation to add fine-scale details without deviating from the artist's intentions.

Miklós Bergou, Saurabh Mathur
Columbia University

Max Wardetzky
Freie Universität Berlin

Eitan Grinspun
Columbia University

Appearance Capture & Editing

Wednesday, 8:30 - 10:15 am

Session Chair/Discussant
Hendrik Lensch SUBMIT QUESTION
Max-Planck-Institut für Informatik
AppearanceCapture-Editing [at] siggraph.org

Multiscale Shape and Detail Enhancement From Multi-Light Image Collections
A new method to enhance detail and surface shading using a few images with different lighting. Our approach uses a new, fast multiscale bilateral image decomposition.

Raanan Fattal
Maneesh Agrawala
University of California, Berkeley

Szymon Rusinkiewicz
Princeton University

Post-Production Facial Performance Relighting Using Reflectance Transfer
Facial performance video relighting using quotient images and optical flow to transfer reflectance from a static reflectance field to the performance, showing both same-subject and cross-subject cases.

Pieter Peers
USC Institute for Creative Technologies

Naoki Tamura
The University of Tokyo and Mitsubishi Electric Research Laboratories (MERL)

Wojciech Matusik
Mitsubishi Electric Research Laboratories (MERL)

Paul Debevec
USC Institute for Creative Technologies

Interactive Editing and Modeling of Bidirectional Texture Functions
A new approach for interactively manipulating and creating bidirectional texture functions.

Jan Kautz
University College London

Solomon Boulos
University of Utah

Frédo Durand
Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory

AppWand: Editing Measured Materials Using Appearance-Driven Optimization
A stroke-based approach to editing spatially and time-varying measured reflectance that smoothly propagates user-supplied editing constraints using an appearance-driven optimization.

Fabio Pellacini
Dartmouth College

Jason Lawrence
University of Virginia

Geometry Processing I

Wednesday, 8:30 - 10:15 am

Session Chair/Discussant
Pierre Alliez SUBMIT QUESTION
INRIA Sophia-Antipolis, Geometrica
Geometry-Processing-I [at] siggraph.org

Rotational Symmetry Field Design on Surfaces
A framework for analysis and interactive design of rotational symmetry fields on surfaces, with applications in pen-and-ink sketching and geometry remeshing.

Eugene Zhang
Jonathan Palacios
Oregon State University

Design of Tangent Vector Fields
Interactive design of smooth vector fields on surfaces using a sparse linear system formulation, which is amazingly fast.

Matthew Fisher
Peter Schröder
Mathieu Desbrun
California Institute of Technology

Hugues Hoppe
Microsoft Research

Isosurface Stuffing: Fast Tetrahedral Meshes With Good Dihedral Angles
Tetrahedral mesh generation with strong guaranteed bounds on the dihedral angles at interactive speeds.

François Labelle
Jonathan Richard Shewchuk
University of California at Berkeley

Robust On-line Computation of Reeb Graphs: Simplicity and Speed
A robust Reeb graph computation algorithm handling non-manifold, degenerate meshes of any dimension. The method uses little memory to process large models efficiently (374 Mtriangle StMathew: 8.1 minutes, 67 Mb of memory).

Valerio Pascucci
Peer-Timo Bremer
Ajith Mascarenhas
Giorgio Scorzelli
Lawrence Livermore National Laboratory

Light Transport

Wednesday, 10:30 am - 12:15 pm

Session Chair/Discussant
Kavita Bala SUBMIT QUESTION
Cornell University
Light-Transport [at] siggraph.org

Eikonal Rendering: Efficient Light Transport in Refractive Objects
A new method for real-time rendering of sophisticated lighting effects in and around refractive objects. The method enables us to realistically display refractive objects with complex material properties.

Ivo Ihrke, Gernot Ziegler, Art Tevs, Christian Theobalt
Max-Planck-Institut für Informatik

Marcus Magnor
Technische Universität Braunschweig

Hans-Peter Seidel
Max-Planck-Institut für Informatik

Computing the Scattering Properties of Participating Media Using Generalized Lorenz-Mie Theory
This paper introduces a generalized Lorenz-Mie theory for computing the scattering properties of participating media and translucent materials given a description of the basic composition of the material.

Jeppe Revall Frisvad
Niels Jorgen Christensen
Danmarks Tekniske Universitet

Henrik Wann Jensen
University of California, San Diego

Implicit Visibility and Antiradiance for Interactive Global Illumination
A reformulated rendering equation that allows interactive global illumination computation using implicit visibility. This method shifts visibility to local iterations and store directional "antiradiance" information, allowing an efficient GPU implementation.

Carsten Dachsbacher
REVES/INRIA Sophia-Antipolis

Marc Stamminger
Universität Erlangen-Nürnberg

George Drettakis
REVES/INRIA Sophia-Antipolis

Frédo Durand
Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory

A Theory of Locally Low Dimensional Light Transport
A theory of how the dimensionality of local light transport varies with patch area. This paper analyzes how rendering cost varies with patch size, deriving an optimal block size.

Dhruv Mahajan
Columbia University

Ira Kemelmacher Shlizerman
Weizmann Institute of Science

Ravi Ramamoorthi
Peter Belhumeur
Columbia University

Geometry Processing II

Wednesday, 10:30 am - 12:15 pm

Session Chair/Discussant
Nina Amenta SUBMIT QUESTION
University of California, Davis
Geometry-Processing-II [at] siggraph.org

Symmetrization
A symmetrization algorithm for geometric objects that enhances approximate symmetries of a model while minimally altering its shape. The algorithm successfully symmetrizes complex 2D and 3D shapes.

Niloy Mitra
Technische Universität Wien

Leonidas Guibas
Stanford University

Mark Pauly
ETH Zürich

Geometric Modeling in Shape Space
This paper introduces a Riemannian space of shape and presents algorithms to geodesically interpolate and extrapolate shapes. More specific applications include shape exploration, isometric shape modeling, shape morphing, and deformation transfer.

Martin Kilian
Niloy Mitra
Helmut Pottmann
Technische Universität Wien

Geometry of Multilayer Freeform Structures for Architecture
Solutions for several fundamental geometric problems in the architectural design of freeform structures by optimization procedures based on a theory of parallel meshes, offset meshes, and discrete curvatures.

Helmut Pottmann
Yang Liu
Technische Universität Wien

Johannes Wallner
Technische Universität Graz

Alexander Bobenko
Technische Universität Berlin

Wenping Wang
University of Hong Kong

A Variational Approach to Eulerian Geometry Processing
A density-based Eulerian framework for geometry processing of foliations. This paper demonstrates applications varying from variational surface processing to volumetric medical data smoothing and mass-preserving fluid simulation.

Patrick Mullen
Alexander McKenzie
Yiying Tong
Mathieu Desbrun
California Institute of Technology

Computational Cameras

Wednesday, 1:45 - 3:30 pm

Session Chair/Discussant
Marc Levoy SUBMIT QUESTION
Stanford University
Computational-Cameras [at] siggraph.org

Active Refocusing of Images and Videos
A system for refocusing images and videos of dynamic scenes using a single-view depth estimation method. This method is based on the defocus of a sparse set of projected dots.

Francesc Moreno-Noguer
CVLAB, Ecole Polytechnique Fédérale de Lausanne

Peter N. Belhumeur
Shree K. Nayar
Columbia University

Multi-Aperture Photography
This paper describes a camera that simultaneously captures multiple images of a scene taken with different aperture settings and demonstrates algorithms for extrapolating depth of field, synthetic refocusing, and other editing.

Paul Green
Massachusetts Institute of Technology

Wenyang Sun
Wojciech Matusik
Mitsubishi Electric Research Laboratories (MERL)

Frédo Durand
Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory

Dappled Photography: Mask Enhanced Cameras for Heterodyned Light Fields and Coded Aperture Refocusing
This method exploits Fourier-domain remapping of 4D ray-space to capture 4D light field on a 2D sensor in a conventional camera using a transmissive mask. No lens array is used.

Ashok Veeraraghavan
Ramesh Raskar
Amit Agrawal
Ankit Mohan
Mitsubishi Electric Research Laboratories (MERL)

Jack Tumblin
Northwestern University

Image and Depth From a Conventional Camera With a Coded Aperture
A simple modification to a conventional camera that allows for simultaneous recovery of both high-resolution image information and depth information from a single image.

Anat Levin
Rob Fergus
Frédo Durand
William T. Freeman
Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory

Articulation

Wednesday, 1:45 - 3:30 pm

Session Chair/Discussant
Doug L. James SUBMIT QUESTION
Cornell University
Articulation [at] siggraph.org

Harmonic Coordinates for Character Articulation
This paper investigates the use of Laplace's equation to create deformations for use in high-end character articulation systems.

Pushkar Joshi
University of California, Berkeley and Pixar Animation Studios

Mark Meyer
Tony DeRose
Brian Green
Tom Sanocki
Pixar Animation Studios

Automatic Rigging and Animation of 3D Characters
A method for automatically rigging a 3D character for skeletal animation. This prototype, called Pinocchio, can animate a given character mesh in under a minute.

Ilya Baran
Jovan Popović
Massachusetts Institute of Technology

Real-Time Enveloping With Rotational Regression
A fast and accurate example-based enveloping technique that can run on graphics hardware. Our technique seeks to be a replacement for linear-blend skinning.

Robert Y. Wang
Massachusetts Institute of Technology

Kari Pulli
Massachusetts Institute of Technology and Nokia Research Center

Jovan Popović
Massachusetts Institute of Technology

Key Point Subspace Acceleration and Soft Caching
A statistical acceleration scheme that uses examples to compute a statistical subspace and a set of characteristic key points. Applications include articulation and rendering.

Mark Meyer
John Anderson
Pixar Animation Studios

Perception & Color

Wednesday, 3:45 - 6 pm

Session Chair/Discussant
Erik Reinhard SUBMIT QUESTION
University of Bristol
Perception-Color [at] siggraph.org

Color Images Visible Under UV light
Fluorescent inks allow us to create color images visible only under UV light. This paper proposes spectral prediction, gamut mapping, and juxtaposed half-toning methods specifically adapted to fluorescent ink halftones.

Roger D. Hersch
Philipp Donzé
Sylvain Chosson
Ecole Polytechnique Fédérale de Lausanne

Visual Equivalence: Towards a New Standard for Image Fidelity
Visual equivalence occurs when noticeably different images convey the same scene appearance to an observer. This paper analyzes this phenomenon for illumination transformations and proposes a metric for novel rendering optimizations.

Ganesh Ramanarayanan
James Ferwerda
Bruce Walter
Kavita Bala
Cornell University

The Influence of Shape on the Perception of Material Reflectance
The shape of an object has a significant influence on the perception of its material. 3D modeling applications should offer material visualization and editing directly on the target object.

Peter Vangorp
Jurgen Laurijssen
Philip Dutré
Katholieke Universiteit Leuven

Sampling

Wednesday, 3:45 - 6 pm

Session Chair/Discussant
Fabio Pellacini SUBMIT QUESTION
Dartmouth College
Sampling [at] siggraph.org

Sampling With Polyominoes
A new general-purpose method for fast hierarchical importance sampling with blue-noise properties. The approach is based on self-similar tiling of the plane with rectifiable polyominoes.

Victor Ostromoukhov
Université de Montréal

Stochastic Simplification for Aggregate Detail
Complex scenes are simplified by randomly selecting a subset of the elements and altering them statistically to preserve overall appearance.

Rob Cook, John Halstead
Maxwell Planck, David Ryu
Pixar Animation Studios

Shape Deformation

Wednesday, 3:45 - 6 pm

Session Chair/Discussant
Helmut Pottmann SUBMIT QUESTION
Technische Universität Wien
Shape-Deformation [at] siggraph.org

Embedded Deformation for Shape Manipulation
An algorithm for natural deformations of a wide range of shape representations and editing scenarios, including traditional meshes, polygon soups, mesh animations, and animated particle systems.

Robert W. Sumner, Johannes Schmid, Mark Pauly
ETH Zürich

Mesh Puppetry: Cascading Optimization of Mesh Deformation With Inverse Kinematics
A variational framework for detail-preserving mesh manipulation through a set of high-level, intuitive, and interactive design tools.

Xiaohan Shi
Zhejiang University

Kun Zhou
Microsoft Research Asia

Yiying Tong, Mathieu Desbrun
California Institute of Technology

Hujun Bao, Baining Guo
Microsoft Research Asia

FastLSM: Fast Lattice Shape Matching for Robust Real-Time Deformation
An extremely simple technique that enables robust approximation of detailed, volumetric, large-deformation dynamics for real-time applications. This paper presents a linear-time, fast-summation algorithm that exploits redundancy in shape-matching summations.

Alec R. Rivers, Doug L. James
Cornell University

Handle-Aware Isolines for Scalable Shape Editing
An introduction to handle-aware rigidity and an isoline-based reduced model that respects rigidity and geometry for deformation applications, achieving resolution-independent per-iteration cost and fast convergence.

Oscar Kin-Chung Au, Hongbo Fu, Chiew-Lan Tai
The Hong Kong University of Science and Technology

Daniel Cohen-Or
Tel Aviv University

Gradient Domain Editing of Deforming Mesh Sequences
A gradient domain editing framework for mesh animations.

Weiwei Xu, Kun Zhou
Microsoft Research Asia

Yizhou Yu
University of Illinois at Urbana-Champaign

Qifeng Tan, Qunsheng Peng, Baining Guo
Microsoft Research Asia

Image-Based Modeling

Thursday, 8:30 - 10:15 am

Session Chair/Discussant
Hanspeter Pfister SUBMIT QUESTION
Mitsubishi Electric Research Laboratories (MERL)
Image-Based-Modeling [at] siggraph.org

Image-Based Procedural Modeling of Facades
Automatic derivation of 3D models of high visual quality from single-façade images of arbitrary resolution. The method has applications in urban reconstruction and digital set creation.

Pascal Mueller
Gang Zeng
ETH Zürich

Peter Wonka
Arizona State University

Luc Van Gool
ETH Zürich and Katholieke Universiteit Leuven

VideoTrace: Rapid Interactive Scene Modeling From Video
VideoSketch is a system for interactively generating realistic 3D models of objects by sketching the shape to be modeled over one or more frames of video.

Anton van den Hengel
Anthony Dick
Thorsten Thormaehlen
Ben Ward
University of Adelaide

Philip H. S. Torr
Oxford Brookes University

Image-Based Tree Modeling
An approach for generating 3D models of natural-looking trees from images that has the additional benefit of requiring little user intervention.

Ping Tan
The Hong Kong University of Science and Technology

Gang Zeng
Jingdong Wang
The Hong Kong University of Science and Technology

Sing Bing Kang
Microsoft Research

Long Quan
The Hong Kong University of Science and Technology

Approximate Image-Based Tree-Modeling Using Particle Flows
A new method for creating an approximate but convincing 3D tree model from a single or a set of photographs of an existing tree.

Boris Neubert
Thomas Franken
Oliver Deussen
Universität Konstanz

Graphics Architecture

Thursday, 8:30 - 10:15 am

Session Chair/Discussant
Greg Humphreys SUBMIT QUESTION
University of Virginia
Graphics-Architecture [at] siggraph.org

Fast Triangle Reordering for Vertex Locality and Reduced Overdraw
Extremely efficient, novel algorithms that reorder triangles for post-transform vertex cache efficiency, and for view-independent overdraw reduction, suitable for use in run-time.

Pedro Sander
The Hong Kong University of Science and Technology

Diego Nehab
Princeton University

Joshua Barczak
Advanced Micro Devices, Inc.

A Hardware Architecture for Surface Splatting
This architecture for hardware-accelerated rendering of point primitives implements a refined version of EWA splatting and allows for the integration into conventional graphics pipelines to complement triangle-based rendering.

Tim Weyrich
ETH Zürich and Princeton University

Simon Heinzle
ETH Zürich

Timo Aila
Helsinki University of Technology and NVIDIA Research

Daniel Fasnacht
Stephan Oetiker
Mario Botsch
Daniel Fasnacht
Cyril Flaig
Simon Mall
Kaspar Rohrer
Norbert Felber
Hubert Kaeslin
Markus Gross
ETH Zürich

Direct Manipulation of Subdivision Surfaces on GPUs
An algorithm for real-time deformation of subdivision surfaces, including displaced subdivision surfaces and subdivision surfaces with geometric textures.

Kun Zhou
Xin Huang
Weiwei Xu
Baining Guo
Heung-Yeung Shum
Microsoft Research Asia

PCU: The Programmable Culling Unit
The programmable culling unit, which is as flexible as the fragment program unit and capable of rapidly culling entire blocks of fragments.

Jon Hasselgren
Tomas Akenine-Möller
Lund University

Big Images

Thursday, 10:30 am - 12:15 pm

Session Chair/Discussant
Ramesh Raskar SUBMIT QUESTION
Mitsubishi Electric Research Laboratories (MERL)
Big-Images [at] siggraph.org

Capturing and Viewing Gigapixel Images
A novel system to capture and view very high-resolution, high-dynamic-range, wide-angle imagery ("gigapixel images") of several billion pixels each.

Johannes Kopf
Universität Konstanz

Matt Uyttendaele
Microsoft Research

Oliver Deussen
Universität Konstanz

Michael F. Cohen
Microsoft Research

Efficient Gradient-Domain Compositing Using Quadtrees
A dramatic improvement in the efficiency of gradient-domain compositing, a widely used algorithm in computational photography, by using quadtrees to build a greatly reduced linear system that well approximates the full solution.

Aseem Agarwala
Adobe Systems Incorporated

Image Upsampling Via Imposed Edge Statistics
A new method for upsampling images that preserves the sharpness of the edges and does not introduce halo artifacts by exploiting statistical relations between edges at different resolutions.

Raanan Fattal
University of California, Berkeley

Joint Bilateral Upsampling
The joint bilateral upsampling procedure can be used to upsample solutions run on downsampled input images for applications like tone mapping, colorization, stereo depth, and photomontage.

Johannes Kopf
Universität Konstanz

Michael F. Cohen
Microsoft Research

Dani Lischinski
The Hebrew University

Matt Uyttendaele
Microsoft Research

Fluids

Thursday, 10:30 am - 12:15 pm

Session Chair/Discussant
Markus Gross SUBMIT QUESTION
ETH Zürich
Fluids [at] siggraph.org

Bubbling and Frothing Liquids
A method to generate bubbles from gas contained in liquids and simulate their dynamic behavior using a particle-based fluid simulation technique.

Paul Cleary
Commonwealth Scientific and Industrial Research Organization

Soon Hyoung Pyo
Electronics and Telecommunications Research Institute

Mahesh Prakash
Commonwealth Scientific and Industrial Research Organization

Bon Ki Koo
Electronics and Telecommunications Research Institute

Simulation of Bubbles in Foam With Volume Control
Volumes of fluid regions in simulated bubbles are controlled by this proposed volume-control method that applies carefully computed divergences to compensate for the volume error.

ByungMoon Kim
Yingjie Liu
Georgia Institute of Techonology

Ignacio Llamas
NVIDIA Corporation

Xiangmin Jiao
Jarek Rossignac
Georgia Institute of Technology

Wave Particles
A new method for real-time unconditionally stable simulation of fluid-surface waves and their two-way interactions with floating objects of arbitrary shape.

Cem Yuksel
Donald H. House
John C. Keyser
Texas A&M University

A Fast Variational Framework for Accurate Solid-Fluid Coupling
A simple new simulation approach to animating fluid coupled with arbitrary solids, providing significantly faster simulation, sub-grid resolution, and a novel wall-separation boundary condition.

Christopher Batty
Florence Bertails
Robert Bridson
The University of British Columbia

Video Processing

Thursday, 3:45 - 6 pm

Session Chair/Discussant
Maneesh Agrawala SUBMIT QUESTION
University of California, Berkeley
Video-Processing [at] siggraph.org

Factored Time-Lapse Video
A compact representation that separates time-lapse video into illumination, reflectance and shadow components, enabling applications including pseudo-normal estimation, compression, and intuitive video editing.

Kalyan Sunkavalli
Wojciech Matusik
Hanspeter Pfister
Mitsubishi Electric Research Laboratories (MERL)

Szymon Rusinkiewicz
Princeton University

Computational Time-Lapse Video
Techniques for the generation of novel time-lapse videos that address the inherent sampling issues of traditional photographic time-lapse capture with the use of non-uniform sampling and non-linear filtering.

Eric P. Bennett
Leonard McMillan
University of North Carolina at Chapel Hill

Real-Time Edge-Aware Image Processing With the Bilateral Grid
A new data structure that enables real-time edge-aware image processing on high-definition video.

Jiawen Chen
Sylvain Paris
Frédo Durand
Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory

Video Watercolorization Using Bidirectional Texture Advection
We present a method for creating watercolor animation from video. The primary contributions are extensions of previous methods, including texturing (using advection) and abstraction (using mathematical morphology), for temporal coherence.

Adrien Bousseau
INRIA, Grenoble University, and Adobe Systems Incorporated

Fabrice Neyret
LJK /IMAG-INRIA

Joelle Thollot
INRIA, Grenoble University

David Salesin
Adobe Systems Incorporated and University of Washington

Character Animation II

Thursday, 3:45 - 6 pm

Session Chair/Discussant
Okan Arikan SUBMIT QUESTION
University of Texas at Austin
Character-Animation-II [at] siggraph.org

SIMBICON: Simple Biped Locomotion Control
Controllers for physics-based simulation of bipedal gaits, including multiple styles of walking, running, and skipping. The controllers can mimic motion capture data, enabling dynamic interaction with captured motions.

Kangkang Yin
Kevin Loken
Michiel van de Panne
The University of British Columbia

Construction and Optimal Search of Interpolated Motion Graphs
A method that uses discrete optimization to find a globally optimal motion that matches the user's specification in a motion graph constructed to support interpolation and pruned for efficient search.

Alla Safonova
Jessica K. Hodgins
Carnegie Mellon University

Simulating Biped Behaviors From Human Motion Data
Planar articulated characters that are dynamically simulated in real time, equipped with an integrated repertoire of motor skills learned from motion capture data, and controlled interactively to perform desired motions.

Kwang Won Sok
Manmyung Kim
Jehee Lee
Seoul National University

Efficient Symbolic Differentiation for Graphics Applications
D* is a simple, functional, symbolic language embedded in C# that allows for computation of very efficient symbolic derivatives.

Brian K. Guenter
Microsoft Corporation

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General Information

Bookstore

BreakPoint Books offers the latest and greatest books, CDs, and DVDs on computer animation, graphic design, gaming, 3D graphics, modeling, and digital artistry. The bookstore features recent books by SIGGRAPH 2007 speakers and award winners. To suggest books, CDs, or DVDs that should be available in the bookstore, contact:

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Childcare

IMPORTANT NOTICE

Child Care will not be provided at SIGGRAPH 2007. Contact your hotel concierge for suggestions.

Internet Access

Free wireless access will be available for SIGGRAPH 2007 throughout the San Diego Convention Center. SIGGRAPH 2007 will not be providing public workstations for Internet access, however, there will be limited internet access in the San Diego Business Center.

San Diego Convention Center

Accessibility

The convention center is handicap accessible. If you have special needs or requirements, please call Conference Management at:

+1.312.644.6610

Business Center

The FedEx Kinkos located inside the main lobby of Hall D at the San Diego Convention Center offers the following services: faxing, copying, shipping, office supplies, internet access and computer workstation rental.

Food Services

Several restaurants, concessions, and food carts are available throughout the convention center for the convenience of SIGGRAPH 2007 attendees.

Parking

SIGGRAPH 2007 attendees can park at the San Diego Convention Center parking lot for $10. There are no in/out privileges and no 24-hour overnight parking is available.

Shuttle Service

SIGGRAPH 2007 provides complimentary shuttle service between most conference hotels and the San Diego Convention Center.

IMPORTANT NOTICE

The SIGGRAPH 2007 Shuttle Service is available only to attendees who register at official conference hotels through the SIGGRAPH 2007 hotel reservation system. Those attendees will receive a wristband upon check-in that allows them to board the shuttle buses. Attendees who are not registered at official conference hotels will be allowed to purchase wristbands. Attendees without wristbands will not be allowed to use the shuttle service.

Special Policies

Registered attendees under the age of 16 must be accompanied by an adult at all times.

Children under 16 are not permitted in the Exhibition. Age verification is required.

SIGGRAPH 2007 reserves the right to deny registration or entrance to any attendee or prospective attendee, and to cancel an existing registration, if it determines that a registration or an attendee is not in the best interest of SIGGRAPH 2007 or ACM SIGGRAPH

No cameras or recording devices are permitted at SIGGRAPH 2007. Abuse of this policy will result in the loss of the individual's registration credentials.

Food and beverages cannot be brought into Electronic Theater performances.

Travel & Housing

Visit the SIGGRAPH 2007 web site to access the easy to use online hotel reservation system, which includes complete information on housing policies, procedures and rates:

www.siggraph.org/s2007

Or contact:

SIGGRAPH 2007 Housing
c/o Travel Technology Group

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SIGGRAPH 2007 has negotiated discount rates for hotels in San Diego. These discounts are available to SIGGRAPH 2007 attendees only. Please make your hotel reservation by 9 July 2007. Reservations made after 9 July will be based on availability only and rates may increase.

One Day registration includes access to conference programs and events for that day. Exhibits Plus One Day includes access to Exhibits Plus activities and events for that day. Both One Day registrations do not include technical documentation or tickets for the reception and the Electronic Theater.

Conference Registration Categories

- ● FULL CONFERENCE
- ◎ CONFERENCE SELECT
- ○ EXHIBITS PLUS

Included With Your Registration

- ●◎○ Art Gallery
- ●◎○ Awards Presentation
- ●◎○ Birds of a Feather
- Computer Animation Festival
  - ● Electronic Theater
  - ●◎ Electronic Theater Matinée
  - ●◎○ Animation Theaters
- ● Courses
- ●◎ Educators Program
- ●◎○ Emerging Technologies
- ●◎○ Exhibition
- ●◎○ Exhibitor Tech Talks
- ●◎○ Featured Speakers
- ●◎○ FJORG!
- ●◎○ Guerilla Studio
- ●◎○ International Resources
- ●◎○ IP Marketplace
- ●◎○ Job Fair
- ●◎ Panels
- ● Papers
- ●◎○ Pathfinders
- ●◎○ Posters
- ● Reception
- ●◎ Sketches
- ●◎○ Special Events
- ●◎ Special Sessions

Documentation

- ● Full Conference DVD-ROM
- ◎ Conference Select CD-ROM

Technical Materials

Full Conference and Conference Select registrants must pick up conference technical materials included with registration at the SIGGRAPH 2007 Merchandise Pickup Center. Shipping services are available at SIGGRAPH 2007. Unclaimed technical materials will not be shipped after the conference. Most of the technical publications are also available for sale in the SIGGRAPH 2007 Store and Boutique.

IMPORTANT NOTICE

The printed ACM Transactions on Graphics (Conference Proceedings Special Issue) and the printed Electronic Art and Animation Catalog are not included in your registration and may be purchased separately.

●

Full Conference DVD-ROM

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This digital publication contains the electronic version of the technical papers, images, and supplemental material; all of the course and tutorial notes, including supplemental material (movies, source code, HTML presentations); and the permanent record of the Educators Program, Emerging Technologies, Panels, Posters, Sketches, and Special Sessions; along with the permanent record of the Art Gallery: Global Eyes and Computer Animation Festival.

ACM Transactions on Graphics (Conference Proceedings Special Issue) - Printed

Contains the SIGGRAPH 2007 technical papers and the ACM SIGGRAPH awards. This can be purchased at the time of registration, or it may be purchased individually at the conference.

◎

Conference Select CD-ROM

Included with Conference Select Registration

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Electronic Art & Animation Catalog - Printed

Contains the permanent record of images from the Art Gallery: Global Eyes and the Computer Animation Festival. The catalog can be purchased at the time of registration, or it may be purchased individually at the conference.

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Registration Fees & Information

Full Conference

Received by 29 June:	Member $800	Non-Member $850	Student $345
Received by 25 July:	Member $975	Non-Member $1025	Student $400
At SIGGRAPH 2007:	Member $1075	Non-Member $1125	Student $450

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This digital publication contains the electronic version of the technical papers, images, and supplemental material; all of the course and tutorial notes, including supplemental material; and the permanent record of the Educators Program, Emerging Technologies, Panels, Posters, Sketches, and Special Sessions; along with the permanent record of the Art Gallery: Global Eyes and Computer Animation Festival.

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Conference Select

Received by 29 June:	Member $275	Non-Member $295	Student $195
Received by 25 July:	Member $305	Non-Member $325	Student $225
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This digital publication contains the permanent record of the Art Gallery: Global Eyes and Computer Animation Festival and the electronic version of the Educators Program, Emerging Technologies, Panels, Posters, Sketches, and Special Sessions.

The content of the Electronic Art and Animation Catalog is included on the Conference Select CD-ROM.

One Day Registration

Received by 29 June:	$300
Received by 25 July:	$350
At SIGGRAPH 2007:	$385

Includes access to conference programs, events, the Exhibition (if available) for the day selected. Does not include technical documentation or tickets to the Electronic Theater or Reception.

Exhibits Plus

Received by 29 June:	$75
Received by 25 July:	$85
At SIGGRAPH 2007:	$95

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Exhibits Plus One Day

Purchased before or at SIGGRAPH 2007:	$40

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* Based on an average attendee's participation in 25 sessions of various types over five days at the SIGGRAPH 2007 Member Discounted Registration rate.