THE **38TH** INTERNATIONAL
CONFERENCE AND **EXHIBITION** ON
COMPUTER GRAPHICS
AND **INTERACTIVE TECHNIQUES**

ADVANCE PROGRAM

Table of Contents

Updated 25 July

VANCOUVER
SIGGRAPH2011 MAKE IT **HOME**

CONFERENCE 7-11 AUGUST 2011 **EXHIBITION** 9-11 AUGUST 2011

Sponsored by ACM**SIGGRAPH**

WWW.SIGGRAPH.ORG/S2011

CONFERENCE AT A GLANCE

Full Conference Access
Basic Conference Pass
Computer Animation Festival

	Sun 7 August	Mon 8 August	Tues 9 August	Wed 10 August	Thu 11 August
Registration/ Merchandise Pickup Center	8:00 am–6:00 pm	8:30 am–6:00 pm	8:30 am–6:00 pm	8:30 am–6:00 pm	8:30 am–3:30 pm
SIGGRAPH Store	8:00 am–6:00 pm	8:30 am–6:00 pm	8:30 am–6:00 pm	8:30 am–6:00 pm	8:30 am–3:30 pm
ACM SIGGRAPH Award Talks		2:00–3:30 pm			
ACM Student Research Competition Final Presentation					2:00–3:30 pm
Art Gallery	2:00–5:30pm	9:00 am–5:30 pm 9:00–11:00 pm	9:00 am–5:30 pm	9:00 am–5:30 pm	9:00 am–1:00 pm
Art Papers			9:00–10:30 am		
Birds of a Feather	All Week				
Courses	2:00–5:15 pm	9:00 am–5:15 pm	9:00–10:30 am 2:00–5:15 pm	9:00 am–5:15 pm	9:00 am–5:15 pm
Emerging Technologies	2:00–5:30 pm	9:00 am–5:30 pm 9:00–11:00 pm	9:00 am–5:30 pm	9:00 am–5:30 pm	9:00 am–1:00 pm
Exhibition			9:30 am–6:00 pm	9:30 am–6:00 pm	9:30 am–3:30 pm
Exhibitor Tech Talks			9:30 am–6:00 pm	9:30 am–6:00 pm	9:30 am–3:30 pm
Gamer Papers				9:00 am–12:15 pm	
International Center	9:00 am–6:00 pm	9:00 am–6:00 pm	9:00 am–6:00 pm	9:00 am–6:00 pm	9:00 am–3:30 pm
Job Fair			9:30 am–6:00 pm	9:30 am–6:00 pm	9:30 am–3:30 pm
Keynote Speaker (Includes ACM SIGGRAPH Awards Presentations)		11:00 am–1:00 pm			
Panels		3:45–5:15 pm	9:00–10:30 am 3:45–5:15 pm		
Posters	12:00–5:30 pm	9:00 am–5:30 pm	9:00 am–5:30 pm	9:00 am–5:30 pm	9:00 am–5:30 pm
Poster Sessions			12:15–1:15 pm	12:15–1:15 pm	
Reception		9:00–11:00 pm			
The Sandbox	12:00–5:30 pm	9:00 am–5:30 pm	9:00 am–5:30 pm	9:00 am–5:30 pm	9:00 am–1:00 pm
SIGGRAPH Dailies!				6:00–7:30 pm	
SIGGRAPH Symposium: The Business Think Tank (additional fee required)	9:00 am–6:00 pm				
The Studio	12:00 pm–5:30 pm	9:00 am–5:30 pm 9:00 pm–11 pm	9:00 am–5:30 pm	9:00 am–5:30 pm	9:00 am–1:00 pm
Talks	2:00–5:15 pm	2:00–5:15 pm	9:00–10:30 am 2:00–5:35 pm	9:00 am–5:15 pm	9:00 am–5:15 pm
Technical Papers		9:00–10:30 am 2:00–5:15 pm	9:00 am–5:35 pm	9:00 am–5:35 pm	9:00 am–5:15 pm
Technical Papers Fast Forward	6:00–8:00 pm				
Computer Animation Festival					
Electronic Theater		6:00–8:00 pm	6:00–8:00 pm	6:00–8:00 pm	
Festival Screenings		9:00–10:30 am 2:00–5:15 pm	9:00 am–5:15 pm	9:00 am–5:15 pm	9:00 am–12:15 pm
Production Sessions		2:00–3:30 pm 2:00–3:30 pm	10:45 am–12:15 pm 2:00–3:30 pm	9:00–10:30 am 2:00–3:30 pm	10:45 am–12:15 pm
Real-Time Live!		4:30–5:15 pm	4:30–5:15 pm	4:30–5:15 pm	

THE TOP 10 REASONS TO ATTEND SIGGRAPH 2011

Knowing that the majority of SIGGRAPH conference attendees rely on their employers to fund their registration and travel in part or in full, we have developed the following value-based talking points for you to share with your boss.

1. Value
Learn all the latest techniques, tips, and technologies in one location at a very reasonable price. SIGGRAPH 2011's exclusive educational programs offer the best return on investment for your organization's training budget.

2. Hands-On Knowledge
Consolidate new knowledge and skills by working directly with the experts in the field. In SIGGRAPH 2011's workshops and studios, you'll develop the professional assets you need for another year of creative and business success.

3. Time Optimization
Explore the full spectrum of computer graphics and interactive techniques in four intense, rewarding days. At SIGGRAPH 2011, you'll gain knowledge, contacts, and skills that could take more than a year to acquire elsewhere.

4. Customization
Design the conference experience that delivers the best value for you and your organization. SIGGRAPH 2011 offers a very diverse range of sessions, experiences, and collaboration opportunities.

5. Industry Visionaries
Meet and exchange ideas with the superstars who created this dynamic field and the young visionaries who are building its future. They'll all be coming home in Vancouver for SIGGRAPH 2011.

6. Connections
Join your friends and colleagues from around the world, and make invaluable new connections. SIGGRAPH 2011 is the annual world headquarters of computer graphics and interactive techniques.

7. Essential Resources
Discover all the resources you need to support your creativity, improve your efficiency, and grow your business. The SIGGRAPH 2011 Exhibition features hardware, software, and services from the leading companies who also consider SIGGRAPH Home.

8. World-Class Animation and Visual Effects
Immerse yourself in this year's best work in animated storytelling, scientific visualization, advertising, games, and feature films. The Computer Animation Festival presents four days of screenings, talks, panels, and live demos.

9. Vancouver
Enjoy this magical, entrepreneurial city where exploration, innovation, and experimentation merge on every corner, while soaking up the creativity, advanced technology, and business innovation that have made SIGGRAPH the world capital of digital media.

10. Inspiration
Leave Vancouver with new skills, creativity, and energy, ready to rejuvenate your career and inspire your organization's next phase of leadership in computer graphics and interactive techniques.

CONFERENCE OVERVIEW

SIGGRAPH2011
MAKE IT HOME

See, meet, and interact with the creators of the next wave of excellence in research, animation, art, software, visualization, hardware, games, visual effects, and education. Gain amazing insights, enrich your skill set, and expand your worldwide contacts in Vancouver; one of the most beautiful and cosmopolitan cities in the world.

Conference Registration Categories:

- Full Conference Access
- Basic Conference Pass
- Computer Animation Festival

One-Day registration includes access for one day to conference programs and events associated with that level of registration and all days of the Exhibition (Tuesday-Thursday). One-Day access does not include technical documentation or tickets for the Reception.

Keynote Speaker

Cory Doctorow

21st-century thinker, co-editor of Boing Boing

#siggraph #keynote

Monday, 8 August, 11 am–1 pm

Cory Doctorow is a contributor to *The Guardian, The New York Times, Publishers Weekly, and Wired*, and co-editor of the popular blog Boing Boing. He was formerly director of European affairs for the Electronic Frontier Foundation, a non-profit civil liberties group that defends freedom in technology law, policy, standards, and treaties. He is a visiting senior lecturer at Open University (UK) and previously served as the Fulbright chair at the Annenberg Center for Public Diplomacy at the University of Southern California.

Reception

Vancouver Convention Centre
Monday, 8 August, 9–11 pm

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 dessert and a convivial evening with people you haven't seen since SIGGRAPH 2010. And meet the people you need to know for another year of professional success and adventure.

The Art Gallery, Emerging Technologies, The Sandbox and The Studio will be open during the reception.

CONFERENCE OVERVIEW

ACM SIGGRAPH Awards Presentations (Included with Keynote Speaker)

#siggraph #awards

ACM SIGGRAPH Award Talks

#siggraph #awards

The Computer Graphics Achievement Award

Awarded annually to recognize a major accomplishment that provided a significant advance in the state of the art of computer graphics and is still significant and apparent.

The Significant New Researcher Award

Awarded annually to a researcher who has made a recent significant contribution to the field of computer graphics and is new to the field. The intent is to recognize people who, though early in their careers, have already made a notable contribution.

Steven Anson Coons Award

The Steven Anson Coons Award for Outstanding Creative Contributions to Computer Graphics

This award, presented during odd-numbered years, recognizes long-term creative impact on the field of computer graphics through a personal commitment over an extended period of time.

The Distinguished Artist Award for Lifetime Achievement in Digital Art

Awarded annually to an artist who has created a substantial and important body of work that significantly advances aesthetic content in the field of digital art.

ACM Student Research Competition

#siggraph #awards

Twenty-five student posters are selected for judging at SIGGRAPH 2011. The panel of distinguished judges selects five semi-finalists. And the semi-final poster authors present their work to the judges.

Art Gallery

#siggraph #artgallery

Tracing Home

Experience exceptional digital and technologically mediated artworks that explore issues related to the concept of home in the networked age.

Birds of a Feather (BOF)

#siggraph #bof

Informal presentations, discussions, and demonstrations, designed by and for people who share interests, goals, technologies, environments, or backgrounds.

To schedule a Birds of a Feather session before the conference, complete the online submission form.

Courses

#siggraph #courses

Learn from the experts in the field and gain inside knowledge that is critical to career advancement.

Courses range from an introduction to the foundations of computer graphics and interactive techniques for those new to the field to advanced instruction on the most current techniques and topics.

CONFERENCE OVERVIEW

Emerging Technologies

#siggraph #etech

Interact with the latest discoveries before they become hot topics in mainstream media and blogs. Explore this year's innovative technologies and applications from displays and input devices to collaborative environments and robotics, and technologies that apply to film and game production.

Exhibition

#siggraph #exhibits

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 generation of computer graphics and interactive techniques.

Exhibitor Tech Talks

#siggraph #techtalks

Exhibiting companies present in-depth information on their latest developments. Join question-and-answer exchanges and one-on-one conversations after each presentation by SIGGRAPH 2011 exhibitors.

International Resources

#siggraph #international

Learn how the industry is evolving worldwide and collaborate with attendees from five continents. The International Center offers informal translation services, and space for meetings, talks, and demonstrations.

Job Fair

#siggraph #jobfair

Looking for opportunity? Interested in meeting with some inspiring companies? The Job Fair is where SIGGRAPH 2011 attendees connect with employers before, during, and after the conference via the CreativeHeads.net job board and candidate profiling system. Discover what your future could hold.

Panels

#siggraph #panels

Expand your perspective as expert panelists share experiences, opinions, insights, speculation, disagreement, and controversy with each other and the audience.

Papers

Explore the most advanced research results in computer graphics and interactive techniques. These prestigious juried sessions are the premier international forums in their respective fields.

Technical Papers

#siggraph #techpapers

Immerse yourself in the premier international forum for disseminating new scholarly work in computer graphics and interactive techniques.

Art Papers

#siggraph #artpapers

Hear academic artists explain the changing roles of artists and the methods of art-making.

Game Papers

#siggraph #gamepapers

Monitor current and future issues in game development and player experience.

CONFERENCE OVERVIEW

Posters

#siggraph #posters

Take in innovative insights that will shape the future of computer graphics and interactive techniques.

Then join poster presenters to explore and critique their work in scheduled sessions.

The Sandbox

#siggraph #sandbox

Test drive current game-development technologies, explore game design, and play the games that are defining the next generation of digital interactivity.

SIGGRAPH Dailies!

#siggraph #dailies

Catch up on state-of-the-art–and craft-computer graphics. Be astounded by sheer excellence in modeling, shading, animation, lighting, effects, and more.

The Studio

#siggraph #studio

Collaborate in a hands-on learning lab, where experts, attendees, and the latest technologies are brought together to create new works, experiment, and share.

The Studio features Studio Workshops, Digital Artistry Sessions, and Studio Talks.

Talks

#siggraph #talks

Discover recent achievements in all areas of computer graphics and interactive techniques: art, design, animation, visual effects, interactivity, research, engineering, and more.

Technical Papers Fast Forward

#siggraph #techpapers

The world's leading experts in computer graphics and interactive techniques preview the technical papers in provocative, sometimes hilarious summaries of the field's evolution.

NEW THIS YEAR

SIGGRAPH Symposium: The Business Think Tank

#siggraph #symposium

Sunday, 7 August, 9 am–6 pm

This one-day event brings together the leaders who have contributed to the direction, production, and evolution of the computer graphics community, a powerful global presence whose members are interconnected and interrelated. Join us for a full day of frank and honest conversations, featured speakers, and interactive sessions designed to elucidate the elements of finance, strategy, culture, and creativity.

In an intimate setting that will accommodate up to only 200, the Business Think Tank is designed for people in the business of the business, leaders of our global community, the visionaries who define the direction of our industry.

The Business Think Tank requires a separate admission fee, and is not included in any other SIGGRAPH 2011 registration categories.

See page 64 for The Business Think Tank pricing information.

COMPUTER ANIMATION FESTIVAL

Full Conference Access | Computer Animation Festival

#siggraph #caf

The leading annual festival 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 Festival Screenings and the Electronic Theater. 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 SIGGRAPH Computer Animation Festival have been nominated for or have received a "Best Animated Short" Academy Award.

PRODUCTION SESSIONS

Explore Key Scenes in "The Smurfs", "Kung Fu Panda 2", "Rango", and More

Fire & Water: The Yin and Yang of Creating the Final Battle in "Kung Fu Panda 2"

The climax of "Kung Fu Panda 2" is an epic battle featuring hundreds of characters in a very complex environment in a single shot. This talk summarizes the making of a CG-animated movie that goes beyond the traditional idealized pipeline concept.

Getting Dirty: Bringing "Rango" to Life

This in-depth discussion focuses on production of Industrial Light & Magic's first animated feature, "Rango". The presenters review all aspects, from initial asset development through animation, simulation, lighting, and compositing.

New Solutions for New Challenges

How the Industrial Light & Magic team created visual effects for four of 2011's biggest summer films: "Super 8", "Cowboys & Aliens", "Pirates of the Caribbean: On Stranger Tides", and "Transformers: Dark of the Moon".

The Creation of Killzone 3

How Guerilla Studio applies artistic design, production pipelines, and tool and engine development to video-game production.

The Smurf-olution: A Half-Century of Character Development

Sony Pictures Imageworks animation supervisor Troy Saliba and leading members of the Vancouver animation team take the Smurfs from the most primitive pencil sketch to a contemporary 3D stereo rendering.

REAL-TIME LIVE!

#siggraph #realtime

Immerse yourself in the world's most innovative and stimulating interactive real-time animation and graphics. As part of the Computer Animation Festival, Real-Time Live! is the premiere showcase for the latest trends and techniques for pushing the boundaries of interactive visuals. Selected projects are also available to try in The Sandbox.

CONFERENCE SCHEDULE

(Subject to change.)

Registration

Sunday, 7 August	8 am–6 pm
Monday, 8 August	8:30 am–6 pm
Tuesday, 9 August	8:30 am–6 pm
Wednesday, 10 August	8:30 am–6 pm
Thursday, 11 August	8:30 am–3:30 pm

Art Gallery, Emerging Technologies, Posters, The Sandbox, The Studio

Sunday, 7 August	2–5:30 pm
[The Studio and The Sandbox open at noon]	
Monday, 8 August	9 am–5:30 pm
Tuesday, 9 August	9 am–5:30 pm
Wednesday, 10 August	9 am–5:30 pm
Thursday, 11 August	9 am–1 pm

SUNDAY, 7 AUGUST

9 am–6 pm

SIGGRAPH Symposium: The Business Think Tank
(NOT included with SIGGRAPH conference registration packages. This is an additional cost. See page 66.)

International Center

11 am–Noon

BOF: IVRC (International Collegiate Virtual Reality Contest)

Noon–1:45 pm

The Studio Talk: Scan-Model-Print: A Roundtable Chat

12:30–1:45 pm

The Studio Digital Artistry: Bringing ZBrush to Life: Advanced Visualization Techniques

2–2:30 pm

The Studio Talk: SandCanvas: New Possibilities in Sand Animation

2–3 pm

International Resources Event: Overview of SIGGRAPH 2011 (with Japanese interpreter)

2–3:30 pm

Talks: Pushing Production Data

The Studio Digital Artistry: Animation and Rigging in Blender

The Studio Workshop: Introduction to Python Scripting

2–4 pm

BOF: Blender Foundation: Community Meeting

2–5:15 pm

Course: 3D Spatial Interaction: Applications for Art, Design, and Science

Course: Destruction and Dynamics for Film and Game Production

Course: Introduction to Modern OpenGL Programming

Course: Liquid Simulation With Mesh-Based Surface Tracking

3–3:30 pm

International Resources Event: The IGDA Presents Game Jam!

The Studio Talk: A Unified Dynamics Pipeline for Hair, Cloth, and Flesh in Rango

3:30–4 pm

International Resources Event: ACM SIGGRAPH Chapters Present Local Animation Festivals

3:45–4:15 pm

The Studio Talk: SolidState Drives in Developer and Artist Workstations

3:45–5 pm

The Studio Digital Artistry: Phase One Digital Tools

3:45–5:15 pm

Panel: Successful Creative Collaboration Across Time and Space

Talks: Facing Hairy Production Problems

The Studio Workshop: Using the GigaPan Imaging System

4–6 pm

BOF: SIGGRAPH Digital Arts Community

BOF: Blender Foundation: Artist Showcase

International Resources Event: SIGGRAPH Digital Arts Community

4:30–5 pm

The Studio Talk: Standards in 3D Modeling: Case Study and Applications From Stock 3D

5–5:30 pm

The Studio Talk: Creating a Compelling Character Performance

6–8 pm

Technical Papers Fast Forward

8:30–11 pm

BOF: Taipei ACM SIGGRAPH Chapter Reunion

CONFERENCE SCHEDULE

MONDAY, 8 AUGUST

9–9:30 am

The Studio Talk:
New and Used Cars

9–10 am

NVIDIA Exhibitor Session:
Advanced Rendering Solutions

9–10:30 am

Course: Build Your Own Glasses-Free 3D Display

Technical Papers:
Drawing, Painting & Stylization

Technical Papers:
Capturing & Modeling Humans

The Studio Digital Artistry:
3D Motion Graphics With Photoshop and After Effects

The Studio Workshop:
Getting Started in Maya

9 am–12:15 pm

Course: PhysBAM: Physically Based Simulation

Course: Advances in Real-Time Rendering in Games: Part I

9 am–6 pm

International Center

9:30–10:30 am

The Studio Talk: The Spirit of Rango: Dissection of Character Animation and Rigging

10–10:30 am

International Resources Event:
Vancouver ACM SIGGRAPH: We Make it Home

10 am–12:10 pm

The Studio Workshop: Creating a Multi-Platform Real-Time Portfolio for Your Artwork Using Unity

10:15–11:15 am

NVIDIA Exhibitor Session:
OpenGL & CUDA Based Tessellation

10:30–11 am

The Studio Talk: Digital Clothing: A New Paradighm for Fashion

10:40 am–12:10 pm

The Studio Workshop:
Creating a Multi-Platform Real-Time Portfolio for Your Artwork Using Unity

10:45 am–12:15 pm

The Studio Digital Artistry:
Digital Abstract Art With Real Flow and Maya

11 am–Noon

The Studio Talk: What's New in Rhinoceros 5.0?

11 am–1 pm

ACM SIGGRAPH Award Presentations

Keynote Speaker:
Cory Doctorow, 21st-century thinker, co-editor of Boing Boing

11:30 am–12:30 pm

NVIDIA Exhibitor Session:
Parallel Nsight 2.0 and CUDA 4.0 For The Win!

Noon–1 pm

The Studio Talk: Creating Cool Games Without a Programmer

12:15–1:45 pm

The Studio Workshop:
Creation of Your Own Digital Fashion Show

12:30–1:45 pm

The Studio Digital Artistry:
The Beauty of Black and White

12:45–1:30 pm

NVIDIA Exhibitor Session:
Using the GPU to Create a Seamless Display From Multiple Projectors

1–1:30 pm

Art Gallery: Daily Tours

1:15–1:45 pm

The Studio Talk: The Technology–Creativity Ratio

1:45–3 pm

NVIDIA Exhibitor Session:
VFX Trendspotting: Unlocking GPU Performance

2–2:30 pm

The Studio Talk: MakerBot

2–3:30 pm

ACM SIGGRAPH Award Talks

BOF: Cortex Open-Source Framework

Course: Storytelling With Color

Talks: Tiles and Textures and Faces Oh My!

Talks: Eye on the Road

Technical Papers:
Understanding Shapes

The Studio Digital Artistry:
Dynamic 3D & Photoshop Integration

The Studio Workshop:
From Concept to Creation

2–5:15 pm

Course: Advances in Real-Time Rendering in Games: Part 2

2:30–3:30 pm

BOF: 2020 3D Media Ongoing Research

CONFERENCE SCHEDULE

MONDAY, 8 AUGUST

2:30–4:30 pm

BOF: French Animation Showcase–Session 1

3–3:30 pm

The Studio Talk: Embroidery, Modeling and Rendering in Real Time

3:15–4:15 pm

NVIDIA Exhibitor Session: Tools for Mobile Photography and Vision

3:45–4:15 pm

The Studio Talk: Rapid Solutions to 3D Scanning

3:45–5 pm

The Studio Digital Artistry: Cross-Platform Concept Illustration

3:45–5:15 pm

Panel: The Need for Standardization Within Global Visual Effects Productions Through Open Source and Open Standards

Talks: Changing Dimension

Technical Papers: Tone Editing

The Studio Workshop: How to Write Fast iPhone and Android Shaders in Unity

3:45–5:35 pm

Technical Papers: Contact & Constraints

4–4:30 pm

International Resources Event: Developing a Computer Graphics Community: Communication, Conference and Industry Representation in Austria

4–5 pm

Art Gallery: Informal Art Talks

4:30–5 pm

The Studio Talk: Per-Face Texture Mapping for Real-time Rendering

4:30–5:30 pm

NVIDIA Exhibitor Session: GPU Ray Tracing

4:30–6:30 pm

BOF: ACCAD/Ohio State University Alumni Gathering

5–5:30 pm

The Studio Talk: Blending of Transforms with Non-Uniform Parent Scale

5–6 pm

BOF: Encontro dos Brasileiros 2011

5:30–7 pm

BOF: Linux and Graphics Pipeline Tools

8:30 pm–2 am

ACM SIGGRAPH Chapters Party

9–11 pm

Conference Reception

TUESDAY, 9 AUGUST

9–9:30 am

International Resources Event: Computer Graphics in the Washington DC Area

The Studio Talk: Prop Building for VFX

9–10 am

BOF: Studio Views of Student Demo Reels

9–10:30 am

Art Papers: Intervals: Media Time, Space, and Language

BOF: ASIFA-Hollywood Animation Educators Forum Asks: Vocation vs. Sandbox, Which Way Does Your Curriculum Lean?

BOF: Collaborative Undergraduate Computing Studios Facilitating Decentralized Participation

Talks: Let There Be Light

Talks: Out of Core

Technical Papers: Sampling & Noise

Technical Papers: Capturing Geometry & Appearance

The Studio Digital Artistry: Creating Characters With Character

The Studio Workshop: Rigging Characters for CryENGINE

The Studio Talk: Multiresolution, Gigapixel-Scale Video Exploration

9 am–12:15 pm

Course: Beyond Programmable Shading I

9 am–6 pm

International Center

9:30–10:30 am

The Studio Talk: GigaPan Time Machine: Explorable, Gigapixel-Scale Time-Lapse Imagery Authoring

9:30 am–6 pm

Exhibition

Job Fair

10–11:30 am

International Resources Event: Costa Rica's CGI Business: Beyond the Rainforest and the Beach!

10:30–11:30 am

The Studio Talk: Special Effects With Depth

10:40 am–12:10 pm

The Studio Workshop: The XVJ (Xpressive Video-Jockey)

CONFERENCE SCHEDULE

TUESDAY, 9 AUGUST

10:45 am–12:15 pm

Talks: Building Blocks

Talks: Walk the Line

Technical Papers: Geometry Acquisition

Technical Papers: Stochastic Rendering & Visibility

The Studio Digital Artistry: 3D Workflows in Photoshop CS5 Extended

11:15 am–12:15 pm

Exhibitor Tech Talks: AMD–Video Processing With AMD FirePro Solutions

11:30 am–Noon

The Studio Talk: Ornate Screens

Noon–1 pm

The Studio Talk: Revolution Evolution-Forging Industrial-Academic Collaboration

Noon–1:30 pm

International Resources Event: ISEA International Foundation–Open Forum

12:15–1:15 pm

Poster Session

12:15–1:45 pm

The Studio Workshop: Creation of Your Own Digital Fashion Show

12:30–1:45 pm

The Studio Digital Artistry: The Power of the (Wacom) Pen

12:30–2:30 pm

BOF: ACM SIGGRAPH Carto BOF

1–1:30 pm

Art Gallery: Daily Tours

1–2 pm

BOF: 3D Medical Visualization Using X3D

1–3 pm

BOF: StudioSysAdmins

1:15–1:45 pm

The Studio Talk: UV Layout

2–2:30 pm

The Studio Talk: StereoFX: Survey of the Main Stereo Film-Making Techniques

2–3 pm

International Resource Event: CG in Latino Countries

2–3:30 pm

BOF: Web3D Consortium–Declarative 3D for the Web

Computer Animation Festival Production Session: DreamWorks Animation: The Yin and Yang of Creating the Final Battle in "Kung Fu Panda 2"

Reception: Leonardo, Art Papers, and Art Gallery

Talks: 1000 Points of Light

Technical Papers: Volumes & Photons

Technical Papers: Geometry Processing

The Studio Digital Artistry: Fine Art Printmaking Workflow

The Studio Workshop: Advanced Creation of Your Own Digital Fashion Show

2–4 pm

BOF: Call for Contributions for the IEEE Computer Graphics and Applications' New Education Department

BOF: Multi-Projector Auto-Calibration Standards (MPACS)

2–5:15 pm

Course: Advances in New Interfaces for Musical Expression

Course: Beyond Programmable Shading II

Course: Modeling 3D Urban Spaces Using Procedural and Simulation-Based Techniques

The Studio Workshop: Advanced Creation of Your Own Digital Fashion Show

2:15–3:15 pm

Exhibitor Tech Talks: DigiPen Institute of Technology–The Academic Infrastructure of Innovative and Successful Videogames

2:30–3:30 pm

BOF: OpenColorIO Meetup

2:30–4:30 pm

BOF: French Animation Showcase–Session 2

BOF: JogAmp: 2D/3D & Multimedia Across Devices

3–3:30 pm

The Studio Talk: What's New in Rhinoceros 5.0?

3–4 pm

BOF: In-Formation San Francisco ACM SIGGRAPH

3–4:30 pm

International Resources Event: CG in Asia

3–5 pm

BOF: Motion Graphics

3:45–4:15 pm

The Studio Talk: Let There Be Hair

CONFERENCE SCHEDULE

TUESDAY, 9 AUGUST

3:45–4:40 pm

Exhibitor Tech Talks: The Bakery–Bakery Relight™ – Interactive Lighting, Shading & Rendering for Pros

3:45–5 pm

The Studio Digital Artistry: Digital Painting With ArtRage

3:45–5:15 pm

Talks: Fur and Feathers

Technical Papers: By-Example Image Synthesis

3:45–5:35 pm

Technical Papers: Call Animal Control!

4–5 pm

Art Gallery: Informal Art Talks

4:30–5 pm

The Studio Talk: Tokyo Race Lighting for Cars 2

4:30–5:15 pm

Real-Time Live!

5–5:30 pm

The Studio Talk: Animated Lines

5–6 pm

BOF: Global Pipelines v2

BOF: OpenSG

5:30–7 pm

BOF: Dynamic Simulation in Production

6–8 pm

ACM SIGGRAPH Pioneer Reception (Invitation Only)

Computer Animation Festival–Electronic Theater

7–9 pm

BOF: SIGGIG: Gays In Graphics

WEDNESDAY, 10 AUGUST

9–9:30 am

The Studio Talk: Developing a Fab Lab for 3D Data Capture, Modeling and Prototyping

9–10 am

BOF: What Industry Needs Graduates and New Hires to Know

International Resources Event: ACM SIGGRAPH Chapters Business Meeting

9–10:30 am

Computer Animation Festival Production Session: Industrial Light & Magic Presents: Getting Dirty: Bringing the Digital Feature "Rango" to Life

Course: Cinematography: The Visual & the Story

Game Papers: Analyzing Player Behavior and Experience

Talks: Mixed Grill

Technical Papers: Colorful

Technical Papers: Surfaces

The Studio Digital Artistry: Zbrush Life Sculpting and Portraiture

The Studio Workshop: The Newest Features of ZBrush

9 am–12:15 pm

Course: Stereoscopy From XY to Z

9 am–6 pm

International Center

9:30–10:30 am

The Studio Talk: The Explorable Microscopy Project: Enabling New Science + Exploration Through Gigapixel Imaging at the Microscopic Level

9:30 am–6 pm

Exhibition

Job Fair

9:45–10:45 am

Exhibitor Tech Talks: Optis - Physics-Based Virtual Reality

10–10:45 am

International Resources Event: DCAJ: Animation by Young Asian Artists

10–11 am

BOF: OpenSceneGraph BOF

10–11:30 am

BOF: Practical Integration of Alembic

BOF: Leonardo Community Meeting

10 am–Noon

BOF: Motion Capture Society

BOF: WebGL

10:30–11:00 am

The Studio Talk: DIYLILCNC

10:40 am–12:10 pm

The Studio Workshop: World Creation in CryENGINE

10:45–11:30 am

International Resources Event: DCAJ: Industrial Application of CG in Japan

10:45 am–12:15 pm

Course: Production Volume Rendering 1

Game Papers: Players and Game Worlds

Talks: From the Ground Up

Technical Papers: Example-Based Simulation

CONFERENCE SCHEDULE

WEDNESDAY, 10 AUGUST

10:45 am–12:15 pm

Technical Papers:
Image Processing

The Studio Digital Artistry:
Dynamic 3D & Photoshop Integration

11 am–Noon

The Studio Talk: The Newest Features of ZBrush

11:15 am-12:15 pm

Exhibitor Tech Talks:
AMD - OpenCL and OpenGL/ DirectX Interoperability

11:30 am–Noon

The Studio Talk: DIYLILCNC

11:30 am–12:30 pm

International Resources Event:
CG in Europe

Noon–1 pm

The Studio Talk: Rhinoceros 5.0: Rendering and Texture Mapping Improvements

12:15–1:15 pm

Poster Session

12:15–1:45 pm

The Studio Workshop:
GigaPan Time Machine: Authoring and Exploring Gigapixel-Scale, Time-Lapse Imagery

12:30–1:30 pm

International Resources Event:
Professional and Student ACM SIGGRAPH Chapters Start-Up Meeting

12:30–1:45 pm

The Studio Digital Artistry:
Real World Camera-Rig Creation

12:45–1:45 pm

Exhibitor Tech Talks: Autodesk–Multi-Thread 2D Renderer Design

1–1:30 pm

Art Gallery: Daily Tours

1–2:30 pm

BOF: Industry International Skills and Job Force Placement

1:15–1:45 pm

The Studio Talk: Map Design + Social and Environmental Issues: Graphic Design Education at its Best

1:30–3 pm

BOF: The New Media and the Industry in China

1:30–3:30 pm

BOF: OpenCL

2–3 pm

BOF: Computer Graphics for Simulation

2–3:30 pm

BOF: GPU Ray Tracing

Computer Animation Festival Production Session: Imageworks: The Smurf-alution: A Half-Century of Character Development

Course: Applying Color Theory to Digital Media and Visualization

Talks: Directing Destruction

Technical Papers:
Facial Animation

Technical Papers:
Mapping & Warping Shapes

The Studio Digital Artistry:
Anatomy of a Dragon–2D to 3D

The Studio Workshop:
An introduction Into After Effects for Motion Graphics

The Studio Talk: Rhinoceros 5.0: A Look at the UDT Commands

2–5:15 pm

Course: Character Rigging, Deformations, and Simulations in Film and Game Production

Course: Production Volume Rendering 2

The Studio Workshop:
An Introduction Into After Effects for Motion Graphics

2:15–3:15 pm

Exhibitor Tech Talks:
Xsens–How Much Animation Can You Do in a Day?

2:45–4:15 pm

BOF: Using Processing and G-Speak as Tools Within a Foundations Program at a School of Art and Design

3–5 pm

BOF: Managing Creative Projects

3:15–4:30 pm

BOF: X3D and HTML5/X3DOM

3:45–4:15 pm

The Studio Talk: Bridging Synthetic and Organic Materiality: Graded Transitions in Material Connections

3:45–4:40 pm

Exhibitor Tech Talks: organic Motion–Organic Motion Unveils the Latest Developments in Next Generation Computer Vision

3:45–5 pm

The Studio Digital Artistry:
Sensor Calibration

3:45–5:15 pm

Talks: Crowds

3:45–5:15 pm

Talks: Show Me the Pixels

CONFERENCE OVERVIEW

WEDNESDAY, 10 AUGUST

3:45–5:35 pm

Technical Papers: Fluid Simulation

Technical Papers: Procedural & Interactive Modeling

4–5 pm

BOF: Educators Meet and Greet

Art Gallery: Informal Art Talks

4–6 pm

BOF: OpenGL

4:30–5:15 pm

Real-Time Live!

4:30–5:30 pm

The Studio Talk: The Visual Style of "Legend of the Guardians: The Owls of Ga'Hoole"

5–6 pm

BOF: Undergraduate Research Alliance

5–7 pm

BOF: Ringling College Alumni Reception

6–7:30 pm

SIGGRAPH Dailies!

6–8 pm

Computer Animation Festival–Electronic Theater

6:30–8:30 pm

BOF: Purdue University Alumni Reception

BOF: Blacks in Animation & VFX

THURSDAY, 11 AUGUST

9–9:30 am

The Studio Talk: Photochromic Sculpture Volumetric Color-Forming Pixel

9–10:30 am

Talks: Hiding Complexity

Technical Papers: Fast Simulation

Technical Papers: Video Resizing & Stabilization

The Studio Workshop: Vignette Correction in GigaPan Stitch

9 am–Noon

BOF: The New Media and the Academy in China

9 am– 2:15 pm

Course: Compiler Techniques for Rendering

9 am–3:30 pm

International Center

9:30–10:30 am

The Studio Talk: Rhinoceros 5.0 Workflow Improvements

9:30 am–3:30 pm

Exhibition

Job Fair

10 am-Noon

BOF: Mobile APIs

10:30 am–Noon

BOF: Concepts Artists the Road to the Emmy Award

10:40 am–12:15 pm

The Studio Workshop: KeyShot: Amazing Rendering and Animation in Real Time

10:45 am–12:15 pm

Computer Animation Festival Production Session: Industrial Light & Magic: New Solutions for New Challenges

Panel: Designing Curriculum for 3D Computer Animation: Innovation and Experimentation for an Evolving Discipline

Talks: Volumes and Rendering

Talks: Smokin' Fluids

Technical Papers: Fun With Shapes

Technical Papers: Stereo & Disparity

The Studio Talk: Lighting Worlds in Unity

Noon–1 pm

The Studio Talk: Dynamic 3D Integration in CS5 Extended

1–2 pm

BOF: Augmented and Mixed Reality

2–3:30 pm

ACM Student Research Competition Final Presentation

Computer Animation Festival Production Session: Guerilla: The Creation of Killzone 3–Game Production Session

Talks: Heads or Tails

Talks: Speed of Light

Technical Papers: Discrete Differential Geometry

Technical Papers: Interactive Image Editing

2–4 pm

BOF: COLLADA

2–5 pm

BOF: Web3D Korea Chapter Meeting

CONFERENCE OVERVIEW

THURSDAY, 11 AUGUST

2–5:15 pm

Course: Filtering Approaches for Real-Time Anti-Aliasing

3:45–5:15 pm

Talks: Light My Fire

Talks: Capture and Construction

Technical Papers:
Real-Time Rendering Hardware

ART PAPERS

Full Conference Access #siggraph #artpapers

SIGGRAPH 2011, in collaboration with Leonardo/ISAST, features not only artists and artwork, but also the processes and theoretical frameworks for making art and contextualizing its place in society.

Art Papers:

- Explore the changing roles of artists and the methods of art-making in our increasingly networked and computationally mediated world.
- Present excellent ideas in accessible ways.
- Inform artistic disciplines, set standards, and stimulate future trends.

The Art Papers are published in a special issue of *Leonardo, The Journal of the International Society of the Arts, Sciences and Technology*, along with visual documentation of the works exhibited in the Art Gallery.

Publication of this third special issue coincides with SIGGRAPH 2011.

RECEPTION:

Leonardo, Art Papers, and Art Gallery

Tuesday, 9 August, 2–3:30 pm

Experience "home" in the networked age. Talk with the artists, designers, and Art Papers authors about their work. And meet the members of the SIGGRAPH 2011 committee who organized this year's Art Gallery.

Intervals: Media Time, Space, and Language

Tuesday, 9 August, 9–10:30 am

SESSION CHAIR
Teri Rueb
University at Buffalo

Conserving Digital Art for Deep Time

Displaying digital art in the late 20th and early 21st centuries can be challenging. Exhibiting this same art in the distant future may be impossible, unless today's artists, conservators, and curators adopt new thinking and practices. Established software engineering methods for dealing with aging systems can provide a new model for conservation of digital art and a foundation for enhancement of art history scholarship.

Francis Marchese
Pace University

ART PAPERS

Shadow Awareness: Enhancing Theater Space Through the Mutual Projection of Images on a Connective Slit Screen

This study presents media technology that enables improvisational and continuous creation of performers' physical expression as they are inspired by the imagery evoked from the audience. To realize this, the authors focus on "shadow media", a system that promotes continuous creation of imagery through "bodily awareness". The system projects shadows of the performers, which are then transformed into various shapes and colors. The shadows are connected to the performers' feet and projected on a "passable" slit screen set up between the stage and the audience. The result demonstrates that interactive and mutual creation of imagery from performers and audience can form an "empathetic" stage. To demonstrate its validity, the system was applied to a dance performance at Festival della Scienza in Genoa, Italy.

Yoshiyuki Miwa
Shiroh Itai
Takabumi Watanabe
Waseda University

Hiroko Nishi
Toyo Eiwa University

Collaboration With the Future: An Infrastructure for Art+Technology at the San José International Airport

This paper summarizes development and implementation of a three-part infrastructure for the ongoing program of technology-based public artwork at Silicon Valley's newly expanded airport. The physical, technological, and human infrastructure provides flexibility and opportunities for future artists and future technologies while providing a robust framework for ongoing maintenance and evolution of the program, and mediating between the needs of artists and the constraints of an airport.

Matt Gorbet
Susan Gorbet
Gorbet Design, Inc.

Banny Banerjee
Stanford University

Art and Code: The Aesthetic Legacy of Aldo Giorgini

Working extensively as both artist and scientist, Aldo Giorgini was one of the first computer artists to combine software writing with early printing technologies. His innovative process consisted of producing pen-plotted drawings embellished by painting, drawing, and screen-printing. In 1975, he developed a FORTRAN program called FIELDS, a numerical visual laboratory devoted entirely to art production.

This paper, the product of a multi-year study of Giorgini's primary source materials provided by his estate, examines the methods he used during the 1970s to create computer-aided art. It is an attempt to ensure that future generations of digital artists, technologists, and scientists can learn about Giorgini's aesthetic legacy and its contribution to the history of digital art.

Esteban Garcia
David Whittinghill
Purdue University

The Readers Project: Procedural Agents and Literary Vectors

The Readers Project is an aesthetically oriented system of software entities designed to explore the culture of human reading. These entities, or "readers", navigate texts according to specific reading strategies based on linguistic feature analysis and real-time probability models harvested from search engines. They function as autonomous text generators, writing machines that become visible within and beyond the typographic dimension of the texts on which they operate. The system has been deployed in a number of interactive art installations where the aggregate behavior of the readers can be viewed on a large screen, and viewers can subscribe, via mobile devices, to individual reader outputs. As the structures on which these readers operate are culturally and aesthetically implicated, they shed critical light on a range of institutional practices, particularly those of reading and writing, and explore what it means to engage with literary components in digital media.

Daniel Howe
John Cayley
Brown University

COURSES

Full Conference Access #siggraph #courses

Full Conference Access registration allows attendees access to all SIGGRAPH 2011 Courses. Seating is on a first-come, first-served basis. Please be sure to arrive early for the Course you wish to attend.

Learn from the experts in the field and gain inside knowledge that is critical to career advancement. Courses are structured sessions that often include elements of interactive demonstration, performance, or other imaginative approaches to teaching.

3D Spatial Interaction: Applications for Art, Design, and Science

Sunday, 7 August, 2–5:15 pm

Introductory

This introduction to 3D spatial interfaces demystifies the workings of modern videogame motion controllers and provides an overview of how it is used to create 3D interfaces for tasks such as 2D and 3D navigation, object selection and manipulation, and gesture-based application control.

Joseph LaViola
University of Central Florida

Daniel Keefe
University of Minnesota

Destruction and Dynamics for Film and Game Production

Sunday, 7 August, 2–5:15 pm

Intermediate

This course focuses on rigid-body and particle simulation and collision techniques used in breaking objects and large-scale destruction. Following a brief introduction to the basic theory, the course continues with examples from specific films and games, and highlights commonalities and differences between film and game practice. Topics include production aspects such as authoring tools, game-engine integration, and computational and algorithmic issues.

ORGANIZER
Erwin Coumans
Advanced Micro Devices, Inc.

LECTURERS
Takahiro Harada
Advanced Micro Devices, Inc.

Nafees Bin Zafar
Mark Carlson
DreamWorks Animation

Brice Criswell
Industrial Light & Magic

Michael Baker

Erin Catto
Activision Blizzard, Inc.

COURSES

Full Conference Access #siggraph #courses

Introduction to Modern OpenGL Programming

Sunday, 7 August, 2–5:15 pm

Introductory

This course is an accelerated introduction to programming OpenGL, emphasizing the most modern methods for using the library. In recent years, OpenGL has evolved and fundamentally changed how programmers interact with the API. The course reviews each of the shader stages in OpenGL, how to specify data for rendering with OpenGL, and how OpenGL's wealth of new functionality and features enables creation of ever-richer content.

Edward Angel
University of New Mexico

Dave Shreiner
ARM, Inc.

Liquid Simulation With Mesh-Based Surface Tracking

Sunday, 7 August, 2–5:15 pm

Advanced

This course begins with an overview of several existing liquid-surface-tracking techniques and the pros and cons of each method. Then it explains how to embed a triangle mesh into a finite-difference-based fluid simulator and describes several methods for allowing the liquid surface to merge together or break apart. The final section showcases the benefits and further applications of a mesh-based liquid surface, highlighting state-of-the-art methods for tracking colors and textures, maintaining liquid volume, preserving small surface features, and simulating realistic surface-tension waves.

Chris Wojtan
Institute of Science and Technology Austria

Matthias Müller-Fischer
NVIDIA Corporation

Tyson Brochu
The University of British Columbia

Build Your Own Glasses-Free 3D Display

Monday, 8 August, 9–10:30 am

Intermediate

This follow-up course to SIGGRAPH 2010, the Build Your Own 3D Display course, focuses more narrowly on glasses-free displays, describing in greater detail the practical aspects of real-time, OpenGL-based encoding for such multi-view, spatially multiplexed displays. It summarizes state-of-the-art methods and areas of active research, and it provides a step-by-step tutorial on how to construct a lenticular display.

Douglas Lanman
Matthew Hirsch
MIT Media Lab

Advances in Real-Time Rendering in Games: Part I

Monday, 8 August, 9 am–12:15 pm

Intermediate

This course links the game-development community and state-of-the-art 3D graphics research, encouraging cross-pollination for future games and other interactive applications. As the next installment in the now-established series of SIGGRAPH courses on real-time rendering, it surveys the best of graphics practices and research from the game-development community and provides practical, production-proven algorithms. The first part of the course includes speakers from several award-winning game companies, such as Bungie, Media Molecule, Crytek, and DICE.

Natalya Tatarchuk
Bungie, Inc.

COURSES

Full Conference Access #siggraph #courses

PhysBAM: Physically Based Simulation

Monday, 8 August, 9 am–12:15 pm

Intermediate

This course is as an introduction to the PhysBAM simulation library developed at Stanford University and used in both academic and industrial settings. The course contains information on the release of PhysBAM as well as information on how to obtain the source code, set up the library, and use it to run example smoke and water simulations. It also summarizes a visualization tool and a rendering tool included in the release of the library.

Craig Schroeder
Stanford University

Storytelling With Color

Monday, 8 August, 2–3:30 pm

Intermediate

This course discusses storytelling choices in fine art, illustration, and films (animated and live action), and how color selection supports the story. Topics include color rules, when and how to break them, and the differences between the analog and digital palettes. The course includes plenty of visuals and is appropriate for everyone interested in color.

Kathy Altiere
Dave Walvoord
DreamWorks Animation

Advances in Real-Time Rendering in Games: Part 2

Monday, 8 August, 2–5:15 pm

Intermediate

The focus of this course, the next installment in the now-established series of SIGGRAPH courses on real-time rendering, is on bridging the game-development community and state-of-the-art 3D graphics research to encourage cross-pollination of knowledge for future games and other interactive applications. Presenters review the best of graphics practices and research from the game-development community and provide practical and production-proven algorithms.

Natalya Tatarchuk
Bungie, Inc.

John White
Electronic Arts Black Box

Colin Barré-Brisebois
Electronic Arts Montréal

Dimitar Lazarov
Treyarch

Vassily Fillipov
Sony Santa Monica

Hugh Malan
CCP Games

Christopher Hall
Robert Hall
David Edwards
Avalanche Software

Eric Penner
Electronic Arts Vancouver

COURSES

Full Conference Access #siggraph #courses

Beyond Programmable Shading I

Tuesday, 9 August, 9 am–12:15 pm

Intermediate

There are strong indications that the future of interactive graphics programming is a more flexible model than today's OpenGL/Direct3D pipelines. Graphics developers need to have a basic understanding of how to combine emerging parallel programming techniques and more flexible graphics processors with the traditional interactive-rendering pipeline. As the first in a series, this course introduces trends and directions in this emerging field.

Michael Houston
Advanced Micro Devices, Inc.

Aaron Lefohn
Intel Corporation

Advances in New Interfaces for Musical Expression

Tuesday, 9 August, 2–5:15 pm

Introductory

This course summarizes what has been learned at NIME. Topics include the theory and practice of new musical-interface design, mapping from human action to musical output, control intimacy, tools for creating musical interfaces, sensors and microcontrollers, audio synthesis techniques, and communication protocols such as Open Sound Control (and MIDI).

Michael Lyons
Ritsumeikan University

Sidney Fels
The University of British Columbia

Beyond Programmable Shading II

Tuesday, 9 August, 2–5:15 pm

Intermediate

There are strong indications that the future of interactive graphics programming is a more flexible model than today's OpenGL/Direct3D pipelines. Graphics developers need to have a basic understanding of how to combine emerging parallel programming techniques and more flexible graphics processors with the traditional interactive-rendering pipeline. As the second in a series, this course introduces trends and directions in this emerging field.

Michael Houston
Advanced Micro Devices, Inc.

Aaron Lefohn
Marco Salvi
Intel Corporation

Steven G. Parker
NVIDIA Corporation

Chris Wyman
University of Iowa

COURSES

Full Conference Access #siggraph #courses

Modeling 3D Urban Spaces Using Procedural and Simulation-Based Techniques

Tuesday, 9 August, 2–5:15 pm

Intermediate

This course explains new modeling techniques for urban environments as an important complement to traditional modeling software. It explains how to use procedural, image-based, and simulation-based techniques to efficiently create highly detailed three-dimensional urban models for computer games, movies, architecture, and urban planning.

Peter Wonka
Arizona State University

Daniel Aliaga
Carlos Vanegas
Purdue University

Pascal Mueller
Procedural Inc.

Michael Frederickson
Pixar Animation Studios

Cinematography: The Visuals & the Story

Wednesday, 10 August, 9–10:30 am

Introductory

The virtual or actual camera, its placement in a scene, the choice of lens, the camera's movement, the lighting, color, and exposure all contribute to visual communication between the storytelling cinematographer and the audience. A story has structure. The visuals must have structure, too.

Bruce Block
University of Southern California

Stereoscopy From XY to Z

Wednesday, 10 August, 9 am–12:15 pm

Intermediate

This comprehensive course summarizes standard stereo-projection techniques, audience depth perception and comfort factors, recommended uses of depth as a storytelling tool, how stereo is used in gaming and real-time applications, details on conversion of 2D content to 3D, guidance on new creative choices, and using depth in an aesthetic way.

Samuel Gateau
NVIDIA Corporation

Robert Neuman
Walt Disney Animation Studios

Marc Salvati
OLM Digital, Inc.

Production Volume Rendering 1

Wednesday, 10 August, 10:45 am–12:15 pm

Intermediate

This course begins with an introduction to generating and rendering volumes, then presents a production-usable volumetrics toolkit, focusing on the feature set and why those features are desirable. Special emphasis is focused on the approaches taken in tackling efficient data structures, shading approaches, multi-threading/parallelization, holdouts, and motion blurring.

Magnus Wrenninge
Sony Pictures Imageworks

Nafees Bin Zafar
DreamWorks Animation

Applying Color Theory to Digital Media and Visualization

Wednesday, 10 August, 2–3:30 pm

Introductory

This course highlights the visual impact of specific color combinations, provides practical suggestions on color mixing, and includes a hands-on session that teaches how to build and evaluate color schemes for digital media visualization.

Theresa-Marie Rhyne
Consultant

COURSES

Full Conference Access #siggraph #courses

Character Rigging, Deformations, and Simulations in Film and Game Production

Wednesday, 10 August, 2–5:15 pm

Intermediate

This course focuses on rigging, deformations, dynamics, and production practices in animation, visual effects, and game development. Topics include analysis of performance requirements, motion system set-up, procedural rigging for secondary animation, and efficient extension of techniques over a wide range of primary and secondary characters.

Tim McLaughlin
Texas A&M University

Larry Cutler
DreamWorks Animation

David Coleman
Electronic Arts Inc.

Production Volume Rendering 2

Wednesday, 10 August, 2–5:15 pm

Advanced

Computer-generated volumetric elements such as clouds, fire, and whitewater are becoming commonplace visual effects. This course provides a behind-the-scenes look at the techniques used and how they are implemented. It demonstrates tools and workflows that are not typically covered in production talks but are integral to successful completion of many effects.

Magnus Wrenninge
Sony Pictures Imageworks

Andrew Clinton
Side Effects Software Inc.

Ollie Harding
Gavin Graham
Double Negative Visual Effects

Jerry Tessendorf
Clemson University

Victor Grant
Rhythm & Hues Studios

Antoine Bouthors
Weta Digital Ltd.

Compiler Techniques for Rendering

Thursday, 11 August, 9 am–12:15 pm

Intermediate

This course summarizes five cutting-edge projects that apply compiler technology to improve the performance and functionality of renderers and shading systems. Topics include: customizing shading languages for global illumination and other advanced rendering, analysis of shaders so that renderers may perform physically based light transport in correct units, automatic differentiation, and use of LLVM and dynamic code generation for improved shader performance.

Larry Gritz
Sony Pictures Imageworks

Mark Leone
Weta Digital Ltd.

Steven Parker
NVIDIA Corporation

Philipp Slusallek
Deutsches Forschungszentrum für
Künstliche Intelligenz GmbH

Bruce Walter
Cornell University

Filtering Approaches for Real-Time Anti-Aliasing

Thursday, 11 August, 2–5:15 pm

Intermediate

This course includes an overview of both research and industry filter-based, anti-aliasing techniques in games for all modern platforms (AMD and NVIDIA GPUs, PlayStation 3, and Xbox 360), low-level insight to ease adoption of these techniques and give attendees a complete concept-to-implementation roadmap, and deep quality, performance, and ease-of-integration comparisons of each technique.

Jorge Jimenez
Diego Gutierrez
Universidad de Zaragoza

Jason Yang
Advanced Micro Devices, Inc.

Alexander Reshetov
Intel Labs

Pete Demoreuille
Double Fine Productions, Inc.

Tobias Berghoff
Cedric Perthuis
Sony Computer Entertainment

Henry Yu
Kalloc Studios

Morgan McGuire
NVIDIA Corporation and Williams College

Timothy Lottes
NVIDIA Corporation

Hugh Malan
CCP hf.

Emil Persson
Avalanche Studios

Dmitry Andreev
Lucas Arts

Tiago Sousa
Crytek

GAME PAPERS

Full Conference Access #siggraph #gamepapers

Game Papers explore key issues in video games, inform and substantively advance our current state of knowledge and understanding, and foster new areas for investigation that will drive the next generation of design and player experience.

Accepted papers are published in Sandbox 2011: ACM SIGGRAPH Video Game Proceedings as a part of the ACM SIGGRAPH 2011 Full Conference DVD-ROM publication.

Analyzing Player Behavior and Experience

Wednesday, 10 August, 9–10:30 am

SESSION CHAIR:
Drew Davidson
Carnegie Mellon University

Evaluating Enjoyment Within Alternate-Reality Games

This paper on understanding enjoyment within alternate-reality games discusses the unique demands of the genre and why pre-existing enjoyment models are not applicable.

Andrew Macvean
Heriot-Watt University

Mark Riedl
Georgia Institute of Technology

Visualizing and Understanding Players' Behavior in Video Games: Discovering Patterns and Supporting Aggregation and Comparison

There is a growing need for procedures that can support analysis and understanding of players' behaviors within game environments. This paper proposes a system that allows analysts to build and compare visualizations of clusters of players to better understand the causes and effects of players' actions.

Dinara Moura
Magy Seif el-Nasr
Christopher D. Shaw
Simon Fraser University

Evaluating Gesture-Based Games With Older Adults on a Large-Screen Display

This work reports on design and evaluation of three novel gesture-based games with healthy, older adults. It describes key features in the physical and social engagement, and general usability of the games, to determine their applicability to the target audience.

Mark Rice
Marcus Wan
Min-Hui Foo
Jamie Ng
Zyndie Wai
Janell Kwok
Samuel Lee
Linda Teo
Institute for Infocomm Research

The Impact of Negative Game Reviews and User Comments on Player Experience

This study of how game reviews and user comments influence player experience found that players who read negative reviews rated the game lower than those who read either positive reviews or no reviews at all.

Ian Livingston
Lennart Nacke
Regan Mandryk
University of Saskatchewan

GAME PAPERS

Full Conference Access #siggraph #gamepapers

Players and Game Worlds

Wednesday, 10 August, 10:45 am–12:15 pm

SESSION CHAIR
Drew Davidson
Carnegie Mellon University

All in a Day's Work: A Study of World of Warcraft NPCs Comparing Gender to Professions

This study explores whether non-player characters within World of Warcraft reinforce stereotypical assumptions surrounding gender and work. Even though all professions are represented (albeit not equally) by male and female NPCs, there seem to be subtle hierarchies within the distribution of "work" in this game world.

Kelly Bergstrom
Victoria McArthur
Jennifer Jenson
Tamara Peyton
York University

Designing Stories: Narrative Practices in 3D Computer Games

Drawing on theories from game, film, and theater studies, this paper explores two primary ways in which 3D computer games deal with stories.

Teun Dubbelman
Universiteit Utrecht

Beyond Player Types: Gaming Achievement Goals

Educational psychology studies use motivational constructs called achievement goals to predict learning success. This paper examines whether gaming achievement goals influence game play in similar ways. Gaming achievement goals could help determine whether people will play and which players are more likely to learn from educational games.

Carrie Heeter
Yu-Hao Lee
Michigan State University

Ben Medler
Brian Magerko
Georgia Institute of Technology

Modeling Play: Re-Casting Expertise in MMOGs

Studies of expertise in massively multiplayer online games (MMOGs) involve either small-scale ethnographic accounts of elite players or large-scale accounts relying on one-dimensional measures of expert play. This paper presents a quantifiable model of expertise in MMOGs that is generated through qualitative analyses of both novices and experts.

Nicholas Taylor
York University

Suzanne de Castell
Simon Fraser University

Jennifer Jenson
York University

Megan Humphrey
Simon Fraser University

PANELS

Full Conference Access #siggraph #panels

Full Conference Access registration allows attendees access to all SIGGRAPH 2011 Panels. Seating is on a first-come, first-served basis. Please be sure to arrive early for the Panel you wish to attend.

A forum for the community to share experiences, opinions, insights, speculation, disagreement, controversy, and audience interaction with the leading experts in computer graphics and inter active techniques.

Successful Creative Collaboration Across Time and Space

Sunday, 7 August, 3:45–5:15 pm

This panel discusses issues surrounding globally distributed projects in animation, games, and visual effects. Success in these ventures depends on unique production structures, review processes, universal tool sets, and adaptation of artists and engineers to technology-mediated communication. Topics include speculation on possible future work environments and how the rising generation of artists and engineers will influence the collaboration process. Each panelist brings a specific area of expertise to the general topic and represents an organization recognized for successfully advancing industry capability with distributed projects.

Tim McLaughlin
Texas A&M University

Tim Fields
Certain Affinity, Inc.

Jonathan Gibbs
DreamWorks Animation

David A. Parrish
Reel FX Creative Studios

Steve Sullivan
Industrial Light & Magic

The Need for Standardization Within Global Visual Effects Productions Through Open Source and Open Standards

Monday, 8 August, 3:45–5:15 pm

This panel highlights some of the open-source projects that are helping visual-effects companies share data worldwide and explore areas for future improvement. In most cases, production companies need to set up a hub to ingest data from sets and/or locations during principal photography, and then send and receive data from the various visual-effects vendors during post production. Because there is not much standardization in this area, a standard framework for information exchange could provide huge efficiencies for both production companies and vendors. The panel explores options for sharing assets such as plates, models, and textures as well as new issues related to stereo conversion.

MODERATOR

Sam Richards
Sony Pictures Imageworks

PANELISTS

Hannes Ricklefs
The Moving Picture Company

Ray Feeney
RFX Inc.

Rob Bredow
Sony Pictures Imageworks

Steve Cronan
5th Kind

Ryan Mayeda
Digital Domain

Tommy Burnette
Lucasfilm Singapore

PANELS

Full Conference Access #siggraph #panels

Designing Curriculum for 3D Computer Animation: Innovation and Experimentation for an Evolving Discipline

Thursday, 11 August, 10:45 am–12:15 pm

What makes an undergraduate or graduate program in 3D computer animation successful? Why do some schools seem to be so much better than others? How are they different, in philosophy, educational strategies, proposed projects, curriculum grid, industry relationships, and resources? This panel brings together leaders and thinkers from some of the top animation schools in the world to present, discuss, and share their specific approaches and educational philosophies.

An outreach expert from DreamWorks Animation and a talent-development director from Walt Disney Animation Studios present the industry point of view.

MODERATOR

Raquel Coelho
San José State University

PANELISTS

Eric Riewer
Gobelins, l'école de l'image

Maija Burnett
California Institute of the Arts

Thomas Haegele
Filmakademie Baden-Württemberg

Jim McCampbell
Ringling College of Art + Design

Tim McLaughlin
Texas A&M University

Marilyn Friedman
DreamWorks Animation

Dawn Rivera-Emster
Walt Disney Animation Studios

TALKS

Full Conference Access

#siggraph #talks

Full Conference registration allows access to all SIGGRAPH 2011 Talks. Seating is on a first-come, first-served basis. Please be sure to arrive early for the Talk sessions you wish to attend.

SIGGRAPH 2011 Talks provide a broad spectrum of presentations on recent achievements in all areas of computer graphics and interactive techniques, including art, design, animation, visual effects, interactivity, research, and engineering.

Talks often highlight the latest developments before publication, present ideas that are still in progress, or showcase how computer graphics and interactive techniques are actually implemented and used, in graphics production or other fields. Talks take you behind the scenes and into the minds of SIGGRAPH 2011 creators.

Pushing Production Data

Sunday, 7 August, 2–3:30 pm

SESSION CHAIR:
Tamy Boubekeur
Telecom ParisTech-CNRS

Coherent Out-of-Core, Point-Based Global Illumination

Janne Kontkanen
Google, Inc.

Eric Tabellion
Ryan S. Overbeck
PDI/DreamWorks

Destroying Metro City: An Art-Directable Demolition System for "Megamind"

David Lipton
EliBocek-Rivele
Greg Gladstone
Fangwei Lee
Mark Carlson
DreamWorks Animation

PhotoSpace: A Vision-Based Approach for Digiziting Props

Pravin Bhat
Sebastian Burke
Weta Digital Ltd.

Artistic Rendering of Feathers for Animated Films

Feng Xie
DreamWorks Animation

Facing Hairy Production Problems

Sunday, 7 August, 3:45–5:15 pm

SESSION CHAIR:
Daniel Wexler

Kami Geometry Instancer: Putting the Smurfy in Smurf Village

Francois Chardavoine
Armin Bruderlin
Sony Pictures Imageworks

Making Faces: Eve Online's New Portrait Rendering

Bert Peers
CCP Games

SpeedFur–A GPU-Based Procedural Hair and Fur Modeling System

Vilhelm Hedberg
Mattias Lagergren
Fredrik Limsäter
Fido VFX

GPU Fluids in Production: A Compiler Approach to Parallelism

Dan Bailey
Ian Masters
Matt Warner
Double Negative Visual Effects

TALKS

Full Conference Access #siggraph #talks

Tiles and Textures and Faces Oh My!

Monday, 8 August, 2–3:30 pm

SESSION CHAIR:
David McAllister
NVIDIA Corporation

Procedural Mosaic Arrangement In "Rio"

Rhett Collier
Josh Smeltzer
Blue Sky Studios

Generating Displacement From Normal Map for Use in 3D Games

Kirill Dmitriev
Evgeny Makarov
NVIDIA Corporation

Per-Face Texture Mapping for Real-Time Rendering

John McDonald
NVIDIA Corporation

Brent Burley
Walt Disney Animation Studios

Spherical Skinning With Dual Quaternions and QTangents

Ivo Zoltan Frey
Ivo Herzeg
Crytek

Eye on the Road

Monday, 8 August, 2–3:30 pm

SESSION CHAIR:
Mike Bailey
Oregon State University

MotorStorm Apocalypse: Creating Urban Off Road Racing

Alex Perkins
Dan Hawson
Evolution Studios, Sony Computer Entertainment Europe

Interactive Hybrid Simulation of Large-Scale Traffic

Jason Sewall
Intel Corporation

David Wilkie
Ming Lin
University of North Carolina at Chapel Hill

Impact of Subtle Gaze Direction on Short-Term, Spatial, Information Recall

Reynold Bailey
Rochester Institute of Technology

Ann McNamara
Texas A&M

Aaron Costello
Rochester Institute of Technology

Cindy Grimm
Washington University in St. Louis

Facial Cartography: Interactive High-Resolution Scan Correspondence

Cyrus Wilson
Oleg Alexander
Borom Tunwattanapong
USC Institute for Creative Technologies

Pieter Peers
College of William and Mary

Abhijeet Ghosh
Jay Busch
Arno Hartholt
Paul Debevec
USC Institute for Creative Technologies

TALKS

Full Conference Access #siggraph #talks

Changing Dimension

Monday, 8 August, 3:45–5:15 pm

SESSION CHAIR:
Ann McNamara
Texas A&M University

Design and Realization of Stereoscopic 3D for Disney Classics

Evan Goldberg
Robert Neuman
Matthew Schnittker
Dale Mayeda
Olun Riley
Kevin Koneval
Katie Tucker-Fico
Walt Disney Animation Studios

StereoFX: Survey of the Main Stereo Film-Making Techniques

Damien Fagnou
The Moving Picture Company

Developing Tools for 2D/3D Conversion of Japanese Animations

Marc Salvati
Yosuke Katsura
Tatsuo Yotsukura
Miki Kinoshita
Ken Aniyo
Hiroshi Uchibori
OLM Digital Inc.

Processing.js: Sketching With Canvas

Andor Salga
Daniel Hodgin
Anna Sobiepanek
Scott Downe
Mickael Medel
Catherine Leung
Seneca College of Applied Arts and Technology

Let There Be Light

Tuesday, 9 August, 9–10:30 am

SESSION CHAIR:
Kenny Mitchell
Black Rock Studio, The Walt Disney Company

"Rango": A Case of Lighting and Compositing a CG-Animated Feature in an FX-Oriented Facility

Leandro Estebecorena
Nelson Sepulveda
Greg Grusby
Industrial Light & Magic

Ocean Mission on "Cars 2"

Alexis Angelidis
Josh Anon
Gary Bruins
Jon Reisch
Esdras Varagnolo
Pixar Animation Studios

Untangling Hair Rendering at Disney

Lewis Siegel
Walt Disney Animation Studios

Ramon Montoya-Vozmediano
DreamWorks Animation

Michelle Robinson
Mitchell Snary
Ryan Duncan
Chris Springfield
Walt Disney Animation Studios

TALKS

Full Conference Access #siggraph #talks

Out of Core

Tuesday, 9 August, 9–10:30 am

SESSION CHAIR:
Paul Strauss
Google, Inc.

Google Body: 3D Human Anatomy in the Browser

Arthur Blume
Won Chun
David Kogan
Vangelis Kokkevis
Nico Weber
Rachel Weinstein Petterson
Roni Zeiger
Google, Inc.

Interactive Indirect Illumination Using Voxel Cone Tracing: An Insight

Cyril Crassin
INRIA Rhone-Alpes

Fabrice Neyret
CNRS/LJK/INRIA

Miguel Sainz
Simon Green
NVIDIA Corporation

Elmar Eisemann
École d'Ingénieurs Télécom ParisTech

Rendering the Interactive Dynamic Natural World of the Game: From Dust

Ronan Bel
Benoît Vimont
Ubisoft Montpellier Studio

Out-of-Core GPU Ray Tracing of Complex Scenes

Kirill Garanzha
Keldysh Institute of Applied Mathematics
(Russian Academy of Sciences)

Simon Premoze

Alexander Bely
CentiLeo

Walk the Line

Tuesday, August 9, 10:45 am-12:15 pm

SESSION CHAIR:
Mehmet Atkin
29 Ironworks

Motion Comics: Browsing and Searching for Human Motion Data

Myung Geol Choi
JST ERATO Igarashi Design Interface Project

Jehee Lee
Seoul National University

Takeo Igarashi
Jun Mitani
JST ERATO Igarashi Design Interface Project

Kyungyong Yang
Seoul National University

Parameterizing Animated Lines for Stylized Rendering

Bert Buchholz
Tamy Boubekeur
Noura Faraj
Elmar Eisemann
École d'Ingénieurs Télécom ParisTech

Sylvain Paris
Adobe Systems Incorporated

Multiperspective Rendering for Anime-Like Exaggeration of Joint Models

Kei Utsugi
Hitach, Ltd.

Takeshi Naemura
The University of Tokyo

Takafumi Koike
Michio Oikawa
Hitachi Ltd.

Learning to Classify Human Object Sketches

Mathias Eitz
Technischen Universität Berlin

James Hays
Brown University

TALKS

Full Conference Access #siggraph #talks

Building Blocks

Tuesday, August 9, 10:45 am–12:15 pm

SESSION CHAIR:
Tamy Boubekeur
École d'Ingénieurs Télécom ParisTech

KinectFusion : Real-Time Interactions With Dynamic 3D Surface Reconstructions

Shahram Izadi
Microsoft Research Cambridge

Richard Newcombe
Imperial College London

David Kim
Otmar Hilliges
David Molyneaux
Pushmeet Kohli
Jamie Shotton
Steven Hodges
Microsoft Research Cambridge

Andrew Davison
Imperial College London

Andrew Fitzgibbon
Microsoft Research Cambridge

SBL Mesh Filter: Fast Separable Approximation of Bilateral Mesh Filtering

Guillaume Vialaneix
Tamy Boubekeur
École d'Ingénieurs Télécom ParisTech

Band Decomposition of 2-Manifold Meshes for Physical Construction of Large Structures

Ergun Akleman
Qing Xing
Gabriel Esquivel
Jianer Chen
Texas A&M University

Jonathan Gross
Columbia University

Pattern Mapping With Quad-Pattern-Coverable Quad-Meshes

Shiyu Hu
Qing Xing
Ergun Akleman
Jianer Chen
Texas A&M University

Jonathan Gross
Columbia University

1000 Points of Light

Tuesday, 9 August, 2–3:30 pm

SESSION CHAIR:
Peter-Pike Sloan
Disney Interactive Studios

Lighting Tokyo for Pixar's "Cars 2"

Mitchell Kopelman
Pixar Animation Studios

"Megamind"–Lighting Metro City at Night

Jimmy Maidens
Philippe Denis
Gianni Aliotti
DreamWorks Animation

Deferred Shading Technique Using Frostbite in Battlefield 3 and Need for Speed The Run

Alex Ferrier
Electronic Arts

Christina Coffin
DICE (Electronic Arts)

TALKS

Full Conference Access #siggraph #talks

Fur and Feathers

Tuesday, 9 August, 3:45–5:15 pm

SESSION CHAIR:
Nafees Bin Zafar
DreamWorks Animation

Quill: Birds of a Feather Tool

Daniel Heckenberg
Damien Gray
Bryan Smith
Jonathan Wills
Chris Bone
Animal Logic

Dynamic, Penetration-Free Feathers in "Rango"

Stephen Bowline
Zoran Kacic-Alesic
Industrial Light & Magic

Accurate Contact Resolution for Interpolated Hairs

Rony Goldenthal
Industrial Light & Magic

Mixed Grill

Wednesday, 10 August, 9–10:30 am

SESSION CHAIR:
Chris Klug
Carnegie Mellon University

The Power of Atomic Assets: An Automated Approach to Pipeline on "Legend of the Guardians: The Owls of Ga'Hoole"

Aidan Sarsfield
Eoin Murphy
Animal Logic

Animation Workflow in Killzone 3: A Fast Facial Retargeting System for Game Characters

Andrea Arghinenti
Guerrilla Games

Adaptive Importance Sampling for Multi-Ray Gathering

Ivan Neulander
Rhythm & Hues Studios

High-Resolution Relightable Buildings From Photographs

Francho Melendez
The University of Manchester

Mashhuda Glencross
Loughborough University

Gregory. J. Ward
Dolby Canada

Roger J. Hubbold
The University of Manchester

TALKS

Full Conference Access #siggraph #talks

From the Ground Up

Wednesday, 10 August, 10:45 am–12:15 pm

SESSION CHAIR:
Shalin Shodhan
Pixar Animation Studios

We Built This City: Big City Design and Implementation in "Kung Fu Panda 2"

Wes Burian
DreamWorks Animation

The Visual Style of "Legend of the Guardians: The Owls of Ga'Hoole"

Grant Freckelton
Craig Welsh
Ben Gunsberger
Animal Logic

Clouds in the Skies of Rio

Andrew Schneider
Trevor Thomson
Mathew Wilson
Blue Sky Studios

Directing Destruction

Wednesday, 10 August, 2–3:30 pm

SESSION CHAIR:
Olivier Maury
Industrial Light & Magic

End of Line: Character Destruction in "Tron: Legacy"

Atsushi Ikarashi
Edmond Smith
Ryo Sakaguchi
Brian Gazdik
Digital Domain

Nafees Bin Zafar
DreamWorks Animation

Kali: High-Quality FEM Destruction in Zack Snyder's "Sucker Punch"

Ben Cole
The Moving Picture Company

Directing Hair Motion on "Tangled"

Maryann Simmons
Kelly Ward
Hidetaka Yosumi
Hubert Leo
Xinmin Zhao
Walt Disney Animation Studios

Choreographing Destruction: Art Directing a Dam Break in "Tangled"

Michael Kaschalk
Brett Boggs
Andrew Selle
Lawrence Chai
Walt Disney Animation Studios

TALKS

Full Conference Access #siggraph #talks

Crowds

Wednesday, 10 August, 3:45–5:15 pm

SESSION CHAIR:
Anastasio Garcia Rodriguez
Sony Pictures Imagework

Crowds on "Cars 2"

Robert Moyer
Michael Lorenzen
J.D. Northrup
Trent Crow
Stephen Gustafson
Jake Merrell
Pixar Animation Studios

Synthesizing Complexity for Characters and Landscapes in "Rio"

Sean Palmer
Eric Maurer
Blue Sky Studios

Staging Carnival: Ray Tracing Crowds in "Rio"

Hugo Ayala
Matthew Simmons
Christopher Moore
Blue Sky Studios

Show Me the Pixels

Wednesday, 10 August, 3:45–5:15 pm

SESSION CHAIR:
Robert Kooima
Louisiana State University

Slow Art With a Trillion Frames Per Second Camera

Andreas Velten
Ramesh Raskar
MIT Media Lab

Moungi Bawendi
MIT Department of Chemistry

Display Pixel Caching

Clemens Birklbauer
Oliver Bimber
Tianlun Liu
Johannes Kepler Universität Linz

Max Grosse
Bauhaus-Universität Weimar

Anselm Grundhöfer
Disney Research

Device-Independent Imaging System for High-Fidelity Colors

Akiko Yoshida
Kazunari Tomizawa
Makoto Hasegawa
Yasuhiro Yoshida
SHARP Corporation

Yoshifumi Shimodaira
Shizuoka University

Who Do You Think You Really Are?

Ailsa Barry
The Natural History Museum

Mark Jacobs
BBC

TALKS

Full Conference Access #siggraph #talks

Hiding Complexity

Thursday, 11 August, 9–10:45 am

SESSION CHAIR:
Theodore Kim
University of Saskatchewan

Occlusion Culling in Alan Wake

Ari Silvennoinen
Teppo Soininen
Umbra Software Ltd

Markus Mäki
Olli Tervo
Remedy Entertainment, Ltd.

Increasing Scene Complexity: Distributed Vectorized View Culling

Andrew Routledge
Electronic Arts: Blackbox

Practical Occlusion Culling in Killzone 3

Michal Valient
Guerrilla

High-Quality Previewing of Shading and Lighting for Killzone 3

Francesco Giordana
Guerrilla Games

Volumes and Rendering

Thursday, 11 August, 10:45 am–12:15 pm

SESSION CHAIR:
Chris Wyman
University of Iowa

Gaussian Quadrature for Photon Beams in "Tangled"

Jared Johnson
University of Central Florida

Wojciech Jarosz
Disney Research Zürich

Dylan Lacewell
DreamWorks Animation

Andrew Selle
Walt Disney Animation Studios

Importance Sampling of Area Lights in Participating Media

Christopher Kulla
Sony Pictures Imageworks

Marcos Fajardo
Solid Angle SL

Decoupled Ray Marching of Heterogeneous Participating Media

Christopher Kulla
Sony Pictures Imageworks

Demand-Driven Volume Rendering of Terascale EM Data

Johanna Beyer
Markus Hadwiger
King Abdullah University of Science and Technology

Won-Ki Jeong
Hanspeter Pfister
Harvard University

TALKS

Full Conference Access #siggraph #talks

Smokin' Fluids

Thursday, 11 August, 10:45 am–12:15 pm

SESSION CHAIR:
Mark Carlson
DreamWorks Animation SKG

DB+Grid: A Novel Dynamic Blocked Grid for Sparse High-Resolution Volumes and Level Sets

Ken Museth
DreamWorks Animation

Capturing Thin Features in Smoke Simulations

Magnus Wrenninge
Chris Allen
Henrik Fält
Stephen Marshall
Sony Pictures Imageworks

Implicit FEM and Fluid Coupling on GPU for Interactive Multiphysics Simulation

Jérémie Allard
Hadrien Courtecuisse
INRIA

François Faure
Université de Grenoble

Correcting Low-Frequency Impulses in Distributed Simulations

Jeff Lait
Side Effects Software Inc.

Heads or Tails

Thursday, 11 August, 2–3:30 pm

SESSION CHAIR:
Jerry Edsall
Relic Entertainment

Building the Birds of "Rio"

Aaron Walsman
Todd Hill
Blue Sky Studios

"Kung Fu Panda 2": Rigging a Peacock Tail

Robert Vogt
PDI/DreamWorks

Optimized Local Blendshape Mapping for Facial-Motion Retargeting

Wan-Chun Ma
Graham Fyffe
Paul Debevec
USC Institute for Creative Technologies

TALKS

Full Conference Access #siggraph #talks

Speed of Light

Thursday, August 11, 2–3:30 pm

SESSION CHAIR:
Dylan Moore
Apple, Inc.

Runtime Implementation of Modular Radiance Transfer

Bradford J. Loos
University of Utah

Lakulish Antani
University of North Carolina at Chapel Hill

Kenny Mitchell
Disney Interactive Studios

Derek Nowrouzezahrai
Wojciech Jarosz
Disney Research Zürich

Peter-Pike Sloan
Disney Interactive Studios

Next-Generation Image-Based Lighting Using HDR Video

Jonas Unger
Stefan Gustavson
Joel Kronander
Linköpings universitet

Gerhard Bonnet
Gunnar Kaiser
SPHERON-VR AG

Triple Depth Culling

Pascal Gautron
Technicolor Research & Innovation

Non-Uniform Motion Deblurring for Camera Shakes Using Image Registration

Sunghyun Cho
Hojin Cho
Pohang University of Science and Technology

Yu-Wing Tai
Korea Advanced Institute of Science and Technology

Seungyong Lee
Pohang University of Science and Technology

Light My Fire

Thursday, 11 August, 3:45–5:15 pm

SESSION CHAIR:
Jeff Lait
Side Effects Software Inc.

Simulating Massive Dust in "Megamind"

Koen Vroeijenstijn
Ronald D. Henderson
DreamWorks Animation

"Megamind": Fire, Smoke, and Data

Krzysztof Rost
Greg Hart
DreamWorks Animation

Volumetric Effects in a Snap

Joseph Hegarty
Denis Teplyashin
Peter Georges
Daniel Heckenberg
Animal Logic

Fluid Dynamics and Lighting Implementation in PixelJunk Shooter 2

Jaymin Kessler
Paolo Carabaich
Naoki Kinoshita
Dylan Cuthbert
Ben Carter
Q-Games Ltd.

TALKS

Full Conference Access #siggraph #talks

Capture and Construction

Thursday, 11 August, 3:45–5:15 pm

SESSION CHAIR:
Evan Hirsch

Data-Driven Bird Simulation

Eunjung Ju
Seoul National University

Byungkuk Choi
Jungyong Noh
Korea Advanced Institute of Science and Technology

Jehee Lee
Seoul National University

Designing With Constraints: Parametric BIM

Andrzej Zarzycki
New Jersey Institute of Technology

Form-Making With Special-Effect Tools

Andrzej Zarzycki
New Jersey Institute of Technology

Building and Animating Cobwebs for Antique Sets

Fangwei Lee
PDI/DreamWorks

Alex Ongaro
DreamWorks Animation

TECHNICAL PAPERS

Full Conference Access

#siggraph #techpapers

Full Conference registration allows access to all SIGGRAPH 2011 Technical Papers. Seating is on a first-come, first-served basis. Please be sure to arrive early for the Technical Papers sessions you wish to attend.

SIGGRAPH Technical Papers is the premier international forum for disseminating new scholarly work in computer graphics and interactive techniques. At the conference, paper authors provide brief overviews of their work in the Technical Papers Fast Forward session.

Technical Papers are published as a special issue of *ACM Transactions on Graphics*. In addition to papers selected by the SIGGRAPH 2011 Technical Papers Jury, the conference presents papers that have been published in *ACM Transactions on Graphics* during the past year.

Technical Papers Fast Forward

Sunday, 7 August, 6–8 pm

#siggraph #techpapers

The world's leading experts in computer graphics and interactive techniques preview their latest work in provocative, sometimes hilarious summaries of the field's evolution.

Capturing & Modeling Humans

Monday, 8 August, 9–10:30 am

SESSION CHAIR:
Karen Liu
Georgia Institute of Technology

Physically Valid Statistical Models for Human Motion Generation

Xiaolin Wei
Jianyuan Min
Jinxiang Chai
Texas A&M University

Motion Capture From Body-Mounted Cameras

Takaaki Shiratori
Disney Research Pittsburgh

Hyun Soo Park
Carnegie Mellon University

Leonid Sigal
Disney Research Pittsburgh

Yaser Sheikh
Carnegie Mellon University

Jessica K. Hodgins
Carnegie Mellon University and Disney Research Pittsburgh

Motion Reconstruction Using Sparse Accelerometer Data

Jochen Tautges
Rheinische Friedrich-Wilhelms-Universität Bonn

Arno Zinke
GfaR mbH

Björn Krüger
Jan Baumann
Andreas Weber
Rheinische Friedrich-Wilhelms-Universität Bonn

Thomas Helten
Meinard Müller
Hans-Peter Seidel
Universität des Saarlandes und Max-Planck-Institut für Informatik

Bernd Eberhardt
Hochschule der Medien Stuttgart

Video-Based Characters: Creating New Human Performances From a Multi-View Video Database

Feng Xu
Tsinghua University

Yebin Liu
Carsten Stoll
Max-Planck-Institut für Informatik

James Tompkin
University College London

Gaurav Bharaj
Max-Planck-Institut für Informatik

QiongHai Dai
Tsinghua University

Hans-Peter Seidel
Max-Planck-Institut für Informatik

Jan Kautz
University College London

Christian Theobalt
Max-Planck-Institut für Informatik

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Drawing, Painting & Stylization

Monday, 8 August, 9–10:30 am

SESSION CHAIR:
Adam Finkelstein
Princeton University

Shadow Draw: Real-Time User Guidance for Freehand Drawing

Yong Jae Lee
University of Texas at Austin

C. Lawrence Zitnick
Michael F. Cohen
Microsoft Research

OverCoat: An Implicit Canvas for 3D Painting

Johannes Schmid
Martin Sebastian Senn
Markus Gross
ETH Zürich, Disney Research Zürich

Robert W. Sumner
Disney Research Zürich

A Programmable System for Artistic Volumetric Lighting

Derek Nowrouzezahrai
Disney Research Zürich

Jared Johnson
Andrew Selle
Dylan Lacewell
Michael Kaschalk
Walt Disney Animation Studios

Wojciech Jarosz
Disney Research Zürich

Coherent Noise for Non-Photorealistic Rendering

Michael Kass
Davide Pesare
Pixar Animation Studios

Understanding Shapes

Monday, 8 August, 2–3:30 pm

SESSION CHAIR:
Tom Funkhouser
Princeton University

Exploration of Continuous Variability in Collections of 3D Shapes

Maks Ovsjanikov
Stanford University

Wilmot Li
Adobe Systems Incorporated

Leonidas Guibas
Stanford University

Niloy J. Mitra
King Abdullah University of Science and Technology

Characterizing Structural Relationships in Scenes Using Graph Kernels

Matthew Fisher
Manolis Savva
Pat Hanrahan
Stanford University

Probabilistic Reasoning for Assembly-Based 3D Modeling

Siddhartha Chaudhuri
Evangelos Kalogerakis
Leonidas J. Guibas
Vladlen Koltun
Stanford University

Shape Google: Geometric Words and Expressions for Invariant Shape Retrieval

Alexander M. Bronstein
Tel Aviv University

Michael M. Bronstein
University of Lugano

Leonidas J. Guibas
Maks Ovsjanikov
Stanford University

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Contact & Constraints

Monday, 8 August, 3:45–5:35 pm

SESSION CHAIR:
Adam Bargteil
University of Utah

Eulerian Solid Simulation With Contact
David I.W. Levin
Joshua Litven
Garrett L. Jones
Shinjiro Sueda
Dinesh K. Pai
The University of British Columbia

Efficient Elasticity for Character Skinning With Contact and Collisions
Aleka McAdams
University of California, Los Angeles and
Walt Disney Animation Studios

Yongning Zhu
PDI/DreamWorks

Andrew Selle
Mark Empey
Rasmus Tamstorf
Walt Disney Animation Studios

Joseph Teran
University of California, Los Angeles and
Walt Disney Animation Studios

Eftychios Sifakis
University of Wisconsin-Madison and
Walt Disney Animation Studios

Toward High-Quality Modal Contact Sound
Changxi Zheng
Doug L. James
Cornell University

A Nonsmooth Newton Solver for Capturing Exact Coulomb Friction in Fiber Assemblies
Florence Bertails-Descoubes
Florent Cadoux
Gilles Daviet
Vincent Acary
INRIA

Large-Scale Dynamic Simulation of Highly Constrained Strands
Shinjiro Sueda
Garrett L. Jones
David I. W. Levin
Dinesh K. Pai
The University of British Columbia

Tone Editing

Monday, 8 August, 3:45–5:15 pm

SESSION CHAIR:
Karol Myszkowski
Max-Planck-Institut für Informatik

HDR-VDP-2: A Calibrated Visual Metrics for Visibility and Quality Predictions in All Luminance Conditions
Rafal Mantiuk
Bangor University

Kil Joong Kim
Seoul National University

Allan G. Rempel
Wolfgang Heidrich
The University of British Columbia

A Versatile HDR Video Production System
Michael D. Tocci
Contrast Optical Design & Engineering, Inc.
and University of New Mexico

Chris Kiser
University of New Mexico

Nora Tocci
Contrast Optical Design & Engineering, Inc.

Pradeep Sen
University of New Mexico

Perceptually Based Tone Mapping for Low-Light Conditions
Adam G. Kirk
James F. O'Brien
University of California, Berkeley

Illumination Decomposition for Material Recoloring With Consistent Interreflections
Robert Carroll
Ravi Ramamoorthi
Maneesh Agrawala
University of California, Berkeley

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Capturing Geometry & Appearance

Tuesday, 9 August, 9–10:30 am

SESSION CHAIR:
Marc Levoy
Stanford University

Building Volumetric Appearance Models of Fabric Using Micro CT Imaging

Shuang Zhao
Wenzel Jakob
Steve Marschner
Kavita Bala
Cornell University

Pocket Reflectometry

Peiran Ren
Tsinghua University

Jiaping Wang
Microsoft Research Asia

John Snyder
Microsoft Research

Xin Tong
Baining Guo
Microsoft Research Asia

Microgeometry Capture Using an Elastomeric Sensor

Micah K. Johnson
Forrester Cole
Alvin Raj
Edward Adelson
Massachusetts Institute of Technology

CATRA: Interactive Measuring and Modeling of Cataracts

Vitor F. Pamplona
MIT Media Lab and Universidade Federal do Rio Grande do Sul

Erick B. Passos
MIT Media Lab and Universidade Federal Fluminense

Jan Zizka
MIT Media Lab and Comenius University

Manuel M. Oliveira
Universidade Federal do Rio Grande do Sul

Everett Lawson
MIT Media Lab

Esteban Clua
Universidade Federal Fluminense

Ramesh Raskar
MIT Media Lab

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Sampling & Noise

Tuesday, 9 August, 9–10:30 am

SESSION CHAIR:
Sylvain Lefebvre
INRIA

Blue-Noise Point Sampling Using Kernel Density Model

Raanan Fattal
Hebrew University

Efficient Maximal Poisson-Disk Sampling

Mohamed S. Ebeida
Sandia National Laboratories

Anjul A. Patney
Scott Mitchell
Andrew A. Davidson
University of California, Davis

Patrick M. Knupp
Sandia National Laboratories

John D. Owens
University of California, Davis

Differential Domain Analysis for Non-Uniform Sampling

Li-Yi Wei
Microsoft Research

Rui Wang
University of Massachusetts Amherst

Filtering Solid Gabor Noise

Ares Lagae
Katholieke Universiteit Leuven and REVES/INRIA Sophia-Antipolis

George Drettakis
REVES/INRIA Sophia-Antipolis

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Geometry Acquisition

Tuesday, 9 August, 10:45 am–12:15 pm

SESSION CHAIR:
Paolo Cignoni
ISTI-CNR

GlobFit: Consistently Fitting Primitives by Discovering Global Relations

Yangyan Li
Shenzhen Institute of Advanced Technology

Xiaokun Wu
Shenzhen Institute of Advanced Technology
and Zhejiang University

Yiorgos Chrysanthou
University of Cyprus

Andrei Sharf
Ben-Gurion University and
Shenzhen Institute of Advanced Technology

Daniel Cohen-Or
Tel Aviv University

Niloy J. Mitra
King Abdullah University of Science and Technology

Global Registration of Dynamic Range Scans for Articulated Model Reconstruction

Will Chang
University of California, San Diego

Matthias Zwicker
Universität Bern

Texture-Lobes for Tree Modeling

Yotam Livny
Shenzhen Institute of Advanced Technology

Soeren Pirk
Universität Konstanz

Zhanglin Cheng
Feilong Yan
Shenzhen Institute of Advanced Technology

Oliver Deussen
Universität Konstanz

Daniel Cohen-Or
Tel-Aviv University

Baoquan Chen
Shenzhen Institute of Advanced Technology

ℓ1-Sparse Reconstruction of Sharp Point Set Surfaces

Haim Avron
Tel-Aviv University, IBM T.J. Watson Research Center

Andrei Sharf
Ben Gurion University

Chen Greif
The University of British Columbia

Daniel Cohen-Or
Tel-Aviv University

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Stochastic Rendering & Visibility

Tuesday, 9 August, 10:45 am–12:15 pm

SESSION CHAIR:
Elmar Eisemann
École d'Ingénieurs Télécom ParisTech

High-Quality Spatio-Temporal Rendering Using Semi-Analytical Visibility

Carl Johan Gribel
Rasmus Barringer
Tomas Akenine-Möller
Lunds universitet

Frequency Analysis and Sheared Filtering for Shadow Light Fields of Complex Occluders

Kevin Egan
Columbia University

Florian Hecht
University of California, Berkeley

Frédo Durand
MIT CSAIL

Ravi Ramamoorthi
University of California, Berkeley

Temporal Light Field Reconstruction for Rendering Distribution Effects

Jaakko Lehtinen
Timo Aila
NVIDIA Research

Jiawen Chen
MIT CSAIL

Samuli Laine
NVIDIA Research

Frédo Durand
MIT CSAIL

The Area Perspective Transform: A Homogeneous Transform for Efficient In-Volume Queries

Warren A. Hunt
Intel Corporation

Gregory S. Johnson
University of Texas at Austin and
Intel Corporation

Volumes & Photons

Tuesday, 9 August, 2–3:30 pm

SESSION CHAIR:
Jaakko Lehtinen
NVIDIA Corporation

A Quantized-Diffusion Model for Rendering Translucent Materials

Eugene d'Eon
Geoffrey Irving
Weta Digital Ltd

A Comprehensive Theory of Volumetric Radiance Estimation Using Photon Points and Beams

Wojciech Jarosz
Disney Research Zürich

Derek Nowrouzezahrai
Disney Research Zürich and University of Toronto

Iman Sadeghi
Henrik Wann Jensen
University of California, San Diego

Progressive Photon Mapping: A Probabilistic Approach

Claude Knaus
Matthias Zwicker
Universität Bern

Cache-Oblivious Ray Reordering

Bochang Moon
Yongyoung Byun
Tae-Joon Kim
Pio Claudio
Korea Advanced Institute of
Science and Technology

Hye-Sun Kim
Yun-Ji Ban
Seung Woo Nam
Electronics and Telecommunications
Research Institute

Sung-Eui Yoon
Korea Advanced Institute of
Science and Technology

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Geometry Processing

Tuesday, 9 August, 2–3:30 pm

SESSION CHAIR:
Scott Schaefer
Texas A&M University

Interactive and Anisotropic Geometry Processing Using the Screened Poisson Equation

Michael Kazhdan
Ming Chuang
Johns Hopkins University

DINUS: Double Insertion, Non-Uniform, Stationary Subdivision Surfaces

Kerstin Müller
Christoph Fuenfzig
Lars Reusche
Technische Universität Kaiserslautern

Dianne Hansford
Gerald Farin
Arizona State University

Hans Hagen
Technische Universität Kaiserslautern

An Efficient Scheme for Curve and Surface Construction Based on a Set of Interpolatory Basis Functions

Renjiang Zhang
Zhejiang Gongshang University

Weiyin Ma
City University of Hong Kong

By-Example Image Synthesis

Tuesday, 9 August, 3:45–5:15 pm

SESSION CHAIR:
Dan B. Goldman
Adobe Systems Incorporated

Expression Flow for 3D-Aware Face Component Transfer

Fei Yang
Rutgers University

Jue Wang
Eli Shechtman
Adobe Systems Incorporated

Lubomir Bourdev
University of California, Berkeley

Dimitri Metaxas
Rutgers University

Image-Guided Weathering: A New Approach Applied to Flow Phenomena

Carles Bosch
Pierre-Yves Laffont
REVES/INRIA Sophia Antipolis

Holly Rushmeier
Julie Dorsey
Yale University

George Drettakis
REVES/INRIA Sophia Antipolis

Exploring Photobios

Ira Kemelmacher-Shlizerman
University of Washington

Eli Shechtman
Adobe Systems Incorporated

Rahul Garg
Steven M. Seitz
University of Washington

Discrete Element Textures

Chongyang Ma
Tsinghua University and Microsoft Research Asia

Li-Yi Wei
Microsoft Research

Xin Tong
Microsoft Research Asia

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Call Animal Control!

Tuesday, 9 August, 3:45–5:35 pm

SESSION CHAIR:
KangKang Yin
National University of Singapore

Space-Time Planning With Parameterized Locomotion Controllers
Sergey Levine
Stanford University

Yongjoon Lee
University of Washington

Vladlen Koltun
Stanford University

Zoran Popović
University of Washington

Articulated Swimming Creatures
Jie Tan
Yuting Gu
Greg Turk
Karen Liu
Georgia Institute of Technology

Locomotion Skills for Simulated Quadrupeds
Stelian Coros
Andrej Karpathy
Ben Jones
University of British Columbia

Lionel Reveret
INRIA

Michiel van de Panne
The University of British Columbia

Composite Control of Physically Simulated Characters
Uldarico Muico
University of Washington

Jovan Popović
Abobe Systems Incorporated

Zoran Popović
University of Washington

Character Animation in Two-Player Adversarial Games
Kevin Wample
Erik Andersen
Evan Herbst
Yongjoon Lee
Zoran Popović
University of Washington

Colorful

Wednesday, 10 August, 9–10:30 am

SESSION CHAIR:
Olga Sorkine
ETH Zürich

Color Compatibility From Large Datasets
Peter O'Donovan
University of Toronto

Aseem Agarwala
Adobe Systems Incorporated

Aaron Hertzmann
University of Toronto

Edge-Aware Color Appearance
Min H. Kim
Yale University

Tobias Ritschel
École d'Ingénieurs Télécom ParisTech

Jan Kautz
University College London

Example-Based Image Color and Tone Style Enhancement
Baoyuan Wang
Zhejiang University

Yizhou Yu
University of Illinois at Urbana-Champaign

Ying-Qing Xu
Microsoft Research Asia

Switchable Primaries Using Shiftable Layers of Color Filter Arrays
Behzad Sajadi
Aditi Majumder
University of California, Irvine

Kazuhiro Hiwada
MIT Media Lab

Atsuto Maki
Toshiba Research Europe, Ltd.

Ramesh Raskar
MIT Media Lab

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Surfaces

Wednesday, 10 August, 9–10:30 am

SESSION CHAIR:
Eugene Zhang
Oregon State University

Contributing Vertices-Based Minkowski Sum of a Nonconvex–Convex Pair of Polyhedra

Hichem Barki
Florence Denis
Florent Dupont
Université de Lyon

MeshFlow: Interactive Visualization of Mesh Construction Sequences

Jonathan D. Denning
William B. Kerr
Dartmouth College

Fabio Pellacini
Dartmouth College and Sapienza–Università di Roma

LR: Compact Connectivity Representation for Triangle Meshes

Topraj Gurung
Mark Luffel
Georgia Institute of Technology

Peter Lindstrom
Lawrence Livermore National Laboratory

Jarek Rossignac
Georgia Institute of Technology

On the Velocity of an Implicit Surface

Jos Stam
Ryan Schmidt
Autodesk, Inc.

Example-Based Simulation

Wednesday, 10 August, 10:45 am–12:15 pm

SESSION CHAIR:
Jernej Barbič
University of Southern California

Data-Driven Elastic Models for Cloth: Modeling and Measurement

Huamin Wang
James F. O'Brien
Ravi Ramamoorthi
University of California, Berkeley

Frame-Based Elastic Models

Benjamin Gilles
The University of British Columbia, INRIA

Guillaume Bousquet
François Faure
Université de Grenoble, LJK, INRIA

Dinesh K. Pai
The University of British Columbia

Example-Based Elastic Materials

Sebastian Martin
ETH Zürich

Bernhard Thomaszewski
Disney Research Zürich and ETH Zürich

Eitan Grinspun
Columbia University

Markus Gross
Disney Research Zürich and ETH Zürich

Sparse Meshless Models of Complex Deformable Solids

François Faure
Grenoble Universités, INRIA, LJK-CNRS

Benjamin Gilles
Tecnalia, INRIA, LJK-CNRS

Guillaume Bousquet
Grenoble Universités, INRIA, LJK-CNRS

Dinesh K. Pai
The University of British Columbia

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Image Processing

Wednesday, 10 August, 10:45 am–12:15 pm

SESSION CHAIR:
Aaron Hertzmann
University of Toronto

Antialiasing Recovery

Lei Yang
Pedro V. Sander
Hong Kong University of Science and Technology

Jason Lawrence
University of Virginia

Hugues Hoppe
Microsoft Research

Local Laplacian Filters: Edge-Aware Image Processing With a Laplacian Pyramid

Sylvain Paris
Adobe Systems Incorporated

Sam W. Hasinoff
Toyota Technological Institute at Chicago
and MIT CSAIL

Jan Kautz
University College London

Domain Transform for Edge-Aware Image and Video Processing

Eduardo S. L. Gastal
Manuel M. Oliveira
Universidade Federal do Rio Grande do Sul

Non-Rigid Dense Correspondence With Applications for Image Enhancement

Yoav Hacohen
The Hebrew University

Eli Shechtman
Dan B. Goldman
Adobe Systems Incorporated

Dani Lischinski
The Hebrew University

Facial Animation

Wednesday, 10 August, 2–3:30 pm

SESSION CHAIR:
Okan Arikan
Animeeple Inc.

Leveraging Motion Capture and 3D Scanning for High-Fidelity Facial Performance Acquisition

Haoda Huang
Microsoft Research Asia

Jinxiang Chai
Texas A&M University

Xin Tong
Hsiang-Tao Wu
Microsoft Research Asia

High-Quality Passive Facial Performance Capture Using Anchor Frames

Thabo Beeler
ETH Zürich and Disney Research Zürich

Fabian Hahn
Derek Bradley
Bernd Bickel
Paul Beardsley
Disney Research Zürich

Craig Gotsman
Technion-Israel Institute of Technology

Robert W. Sumner
Markus Gross
Disney Research Zürich

Interactive, Region-Based, Linear 3D Face Models

J. Rafael Tena
Disney Research Pittsburgh

Fernando De la Torre
Carnegie Mellon University

Iain Matthews
Disney Research Pittsburgh

Real-Time Performance-Based Facial Animation

Thibaut Weise
Sofien Bouaziz
Hao Li
Mark Pauly
École Polytechnique Fédérale de Lausanne

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Mapping & Warping Shapes

Wednesday, 10 August, 2–3:30 pm

SESSION CHAIR:
Mathieu Desbrun
California Institute of Technology

Bounded Biharmonic Weights for Real-Time Deformation

Alec Jacobson
New York University

Ilya Baran
Disney Research Zürich

Jovan Popović
Adobe Systems Incorporated

Olga Sorkine
New York University

Blended Intrinsic Maps

Vladimir G. Kim
Yaron Lipman
Thomas Funkhouser
Princeton University

Biharmonic Distance

Yaron Lipman
Princeton University

Raif M. Rustamov
Drew University

Thomas A. Funkhouser
Princeton University

Photo-Inspired, Model-Driven, 3D Object Modeling

Kai Xu
National University of Defense Technology and Simon Fraser University

Hanlin Zheng
Zhejiang University

Richard (Hao) Zhang
Simon Fraser University

Daniel Cohen-Or
Tel Aviv University

Ligang Liu
Zhejiang University

Yueshan Xiong
National University of Defense Technology

Fluid Simulation

Wednesday, 10 August, 3:45–5:35 pm

SESSION CHAIR:
Nils Thuerey
Scanline VFX

Two-Scale Particle Simulation

Barbara Solenthaler
Markus Gross
ETH Zürich

Real-Time, Eulerian Water Simulation Using a Restricted Tall Cell Grid

Nuttapong Chentanez
Matthias Müller-Fischer
NVIDIA PhysX Research

A PML-Based Nonreflective Boundary for Free Surface Fluid Animation

Andreas Söderström
Matts Karlsson
Linköpings universitet

Ken Museth
DreamWorks Animation

Guide Shapes for High-Resolution Naturalistic Liquid Simulation

Michael B. Nielsen
Weta Digital Ltd.

Robert Bridson
The University of British Columbia and Weta Digital Ltd.

Animating Fire With Sound

Jeffrey N. Chadwick
Doug L. James
Cornell University

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Procedural & Interactive Modeling

Wednesday, 10 August, 3:45–5:35 pm

SESSION CHAIR:
Niloy Mitra
King Abdullah University of Science and Technology

Converting 3D Furniture Models to Fabricatable Parts and Connectors

Manfred Lau
Japan Science and Technology Agency

Akira Ohgawara
The University of Tokyo and Japan Science and Technology Agency

Jun Mitani
University of Tsukuba and Japan Science and Technology

Takeo Igarashi
The University of Tokyo and Japan Science and Technology Agency

Make It Home: Automatic Optimization of Furniture Arrangement

Lap-Fai Yu
Sai-Kit Yeung
University of California, Los Angeles

Chi-Keung Tang
Hong Kong University of Science and Technology

Demetri Terzopoulos
University of California, Los Angeles

Tony F. Chan
Hong Kong University of Science and Technology

Stanley Osher
University of California, Los Angeles

Interactive Furniture Layout Using Interior Design Guidelines

Paul Merrell
Eric Schkufza
Zeyang Li
Stanford University

Maneesh Agrawala
University of California, Berkeley

Vladlen Koltun
Stanford University

Interactive Architectural Modeling With Procedural Extrusions

Tom Kelly
University of Glasgow

Peter Wonka
Arizona State University

Metropolis Procedural Modeling

Jerry O. Talton
Stanford University

Yu Lou
Steve Lesser
Jared Duke
Stanford University

Radomír Měch
Adobe Systems Incorporated

Vladlen Koltun
Stanford University

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Fast Simulation

Thursday, 11 August, 9–10:30 am

SESSION CHAIR:
Mark Meyer
Disney Research

Sensitive Couture for Interactive Garment Design

Nobuyuki Umetani
University of Tokyo

Danny M. Kaufman
Columbia University

Takeo Igarashi
University of Tokyo

Eitan Grinspun
Columbia University

Real-Time, Large-Deformation Substructuring

Jernej Barbič
Yili Zhao
University of Southern California

Solid Simulation With Oriented Particles

Matthias Müller-Fischer
Nuttapong Chentanez
NVIDIA PhysX Research

Physics-Inspired Upsampling for Cloth Simulation in Games

Ladislav Kavan
Disney Interactive Studios

Daniel Gerszewski
Adam W. Bargteil
University of Utah

Peter-Pike Sloan
Disney Interactive Studios

Video Resizing & Stabilization

Thursday, 11 August, 9–10:30 am

SESSION CHAIR:
Wolfgang Heidrich
The University of British Columbia

Image and Video Upscaling From Local Self-Examples

Gilad Feedman
Raanan Fattal
Hebrew University

Scalable and Coherent Video Resizing With Per-Frame Optimization

Yu-Shuen Wang
National Chiao Tung University

Jen-Hung Hsiao
National Cheng Kung University

Olga Sorkine
New York University and ETH Zürich

Tong-Yee Lee
National Cheng Kung University

Subspace Video Stabilization

Feng Liu
Portland State University

Michael Gleicher
University of Wisconsin-Madison

Jue Wang
Hailin Jin
Aseem Agarwala
Adobe Systems Incorporated

Tonal Stabilization of Video

Zeev Farbman
Dani Lischinski
The Hebrew University

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Fun With Shapes

Thursday, 11 August, 10:45 am–12:15 pm

SESSION CHAIR:
Eitan Grinspun
Columbia University

Making Burr Puzzles From 3D Models

Shiqing Xin
Chi-Fu Lai
Chi-Wing Fu
Nanyang Technological University

Tien-Tsin Wong
Chinese University of Hong Kong

Ying He
Nanyang Technological University

Daniel Cohen-Or
Tel Aviv University

A Geometric Study of V-Style Pop-Ups: Theories and Algorithms

Xianying Li
Yan Gu
Shimin Hu
Tsinghua University

Tao Ju
Washington University in St. Louis

Yan Gu
Shi-min Hu
Tsinghua University

Depixelizing Pixel Art

Johannes Kopf
Microsoft Research Redmond

Dani Lischinski
The Hebrew University

Digital Micrography

Ron Maharik
Mikhail Bessmeltsev
The University of British Columbia

Alla Sheffer
The University of British Columbia and
INRIA Rhône-Alpes

Ariel Shamir
Interdisciplinary Center (IDC) Herzliya

Nathan Carr
Adobe Systems Incorporated

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Stereo & Disparity

Thursday, 11 August, 10:45 am–12:15 pm

SESSION CHAIR:
Kari Pulli
Nokia Research Center

Computational Stereo Camera System With Programmable Control Loop

Simon Heinzle
Disney Research Zürich

Pierre Greisen
Disney Research Zürich and ETH Zürich

David Gallup
University of North Carolina

Christine Chen
Daniel Saner
ETH Zürich

Aljoscha Smolic
Disney Research Zürich

Andreas Peter Burg
ETH Zürich

Wojciech Matusik
Disney Research Zürich

Markus Gross
ETH Zürich and Disney Research Zürich

Highlighted Depth-of-Field Photography: Shining Light on Focus

Jaewon Kim
MIT Media Lab and Korea Institute of Science and Technology

Roarke Horstmeyer
MIT Media Lab

Ig-Jae Kim
MIT Media Lab and Korea Institute of Science and Technology

Ramesh Raskar
MIT Media Lab

Layered 3D: Tomographic Image Synthesis for Attenuation-Based Light Field and High Dynamic Range Displays

Gordon Wetzstein
The University of British Columbia

Douglas Lanman
MIT Media Lab

Wolfgang Heidrich
The University of British Columbia

Ramesh Raskar
MIT Media Lab

A Perceptual Model for Disparity

Piotr Didyk
Max-Planck-Institut für Informatik

Tobias Ritschel
Elmar Eisemann
École d'Ingénieurs Télécom ParisTech, and Intel Visual Computing Lab

Karol Myszkowski
Hans-Peter Seidel
Max-Planck-Institut für Informatik

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Discrete Differential Geometry

Thursday, 11 August, 2–3:30 pm

SESSION CHAIR:
Yaron Lipman
Princeton University

Circular Arc Structures

Pengbo Bo
University of Hong Kong and
Technische Universität Wien

Helmut Pottmann
King Abdullah University of Science and
Technology and Technische Universität Wien

Martin Kilian
Evolute and Technische Universität Wien

Wenping Wang
University of Hong Kong

Johannes Wallner
Technische Universität Graz and Technische
Universität Wien

Discrete Laplacians on General Polygonal Meshes

Marc Alexa
Technischen Universität Berlin

Max Wardetzky
Univeristät Göttingen

HOT: Hodge-Optimized Triangulations

Patrick Mullen
Pooran Memari
Fernando De Goes
Mathieu Desbrun
California Institute of Technology

Spin Transformations of Discrete Surfaces

Keenan Crane
California Institute of Technology

Ulrich Pinkall
Technischen Universität Berlin

Peter Schröder
California Institute of Technology

Interactive Image Editing

Thursday, 11 August, 2–3:30 pm

SESSION CHAIR:
Ariel Shamir
Interdisciplinary Center (IDC) Herzliya

Interactive Editing of Massive Imagery Made Simple: Turning Atlanta Into Atlantis

Brian Summa
Giorgio Scorzelli
University of Utah

Ming Jiang
Peer-Timo Bremer
University of Utah and
Lawrence Livermore National Laboratory

Valerio Pascucci
University of Utah

Geodesic Image and Video Editing

Antonio Criminisi
Toby Sharp
Carsten Rother
Microsoft Research Cambridge

Patrick Perez
Technicolor Paris Research Center

Andrew Fitzgibbon
Microsoft Research Cambridge

Matting and Compositing of Transparent and Refractive Objects

Sai-Kit Yeung
University of California, Los Angeles and Hong Kong
University of Science and Technology

Chi-Keung Tang
Hong Kong University of Science and Technology

Michael Brown
National University of Singapore

Sing Bing Kang
Microsoft Research

Nonlinear Revision Control for Images

Hsiang-Ting Chen
National Tsing Hua University

Li-Yi Wei
Microsoft Research

Chun-Fa Chang
National Taiwan Normal University

TECHNICAL PAPERS

Full Conference Access #siggraph #techpapers

Real-Time Rendering Hardware

Thursday, 11 August, 3:45–5:15 pm

SESSION CHAIR:
Bill Mark
Intel Corporation

Clipless Dual-Space Bounds for Faster Stochastic Rasterization

Samuli Laine
Timo Aila
Tero Karras
Jaakko Lehtinen
NVIDIA Research

Decoupled Sampling for Graphics Pipelines

Jonathan Ragan-Kelley
Jaakko Lehtinen
Jiawen Chen
MIT CSAIL

Michael Doggett
Lunds universitet

Frédo Durand
MIT CSAIL

Spark: Modular, Composable Shaders for Graphics Hardware

Tim Foley
Intel Corporation and Stanford University

Pat Hanrahan
Stanford University

Physically Based, Real-Time Lens Flare Rendering

Matthias Hullin
Max-Planck-Institut für Informatik

Elmar Eisemann
École d'Ingénieurs Télécom ParisTech

Hans-Peter Seidel
Max-Planck-Institut für Informatik

Sungkil Lee
Sungkyunkwan University

EXHIBITOR TECH TALKS

Full Conference Access | Basic Access | Computer Animation Festival | #siggraph #techtalks

Comprehensive summaries of the latest technologies in computer graphics and interactive techniques. SIGGRAPH 2011 exhibitors demonstrate software, hardware, and systems; answer questions; and host one-on-one conversations about how their applications improve professional and technical performance.

NVIDIA'S EXHIBITOR SESSIONS

NVIDIA Corporation

Monday, 8 August, 9 am–5:30 pm West Building, Room 220

Explore the impact of GPUs on state-of-the-art CG and interactive design in NVIDIA's engaging panel discussions and technical deep dives into everything from advanced ray tracing and rendering to tessellation. Get an insider's view of today's most exciting applications, and a glimpse into the next generation of ground-breaking advancements.

TUESDAY, 9 AUGUST

Advanced Micro Devices, Inc.

Tuesday, 9 August, 11:15 am–12:15 pm

Video Processing With AMD FirePro Solutions

PC architecture and graphics-processing units have become ubiquitous in broadcast and post-production workflows. This talk reviews the types of processing and rendering that the GPU excels at and illuminates some of the emerging trends for tightening GPU integration into these workflows.

Alexis Mather
Senior Product Marketing Manager
AMD Professional Graphics

DigiPen Institute of Technology

Tuesday, 9 August, 2:15–3:15 pm

The Academic Infrastructure of Innovative and Successful Video Games

A detailed look at the academic infrastructure of interactive media technologies and the special emphasis placed on incorporating innovative game design and gameplay mechanics to make video games highly successful and marketable.

Ben Ellinger
DigiPen Institute of Technology

The Bakery

Tuesday, 9 August, 3:45–4:40 pm

Bakery Relight: Interactive Lighting, Shading, and Rendering for Pros

Designed for the high-end feature film, television, industrial, automotive, and architectural design industries, Bakery Relight is the first interactive, all-in-one lighting, shading, and rendering solution. Born out of years of hands-on experience on top-grossing feature films, Relight supports the lighters' and shaders' iterative process with full-resolution feedback in seconds.

www.bakery3d.com

Liz Tjostolvsen
The Bakery

EXHIBITOR TECH TALKS

#siggraph #techtalks

WEDNESDAY, 10 AUGUST

OPTIS

Wednesday, 10 August, 9:45–10:45 am

Physics-Based Virtual Reality

Thanks to their unique physics-based approach, OPTIS light-simulation specialists provide real-time, predictive visualization solutions based on measured physical properties of surfaces and materials. OPTIS solutions are used by engineers, ergonomists, and designers to optimize perceived quality and the visual ergonomics of HMIs.

Advanced Micro Devices, Inc.

Wednesday, 10 August, 11:15 am–12:15 pm

OpenCL and OpenGL/DirectX Interoperability

The computing power of GPUs is now accessible to improve the interactivity of 3D graphics. Leveraging this capability requires optimum interoperability between compute (OpenCL) and graphics APIs (OpenGL/DirectX). This talk demonstrates how to compute and update geometry with OpenCL on APUs, how to update VBO on discrete GPUs, and how to compute physics data on OpenCL and transfer those data to discrete GPUs.

Benjamin Coquelle
Senior Software Engineer
AMD Professional Graphics

Autodesk

Wednesday, 10 August, 12:45–1:45 pm

Multi-Threaded 2D Renderer Design

Rendering real-time high-quality 2D vector graphics through a 3D pipeline is a challenging task, requiring custom algorithms for shape tessellation, edge anti-aliasing and text rendering. For best performance, Scaleform 2D renderer includes optimizations such as multi-threaded rendering, mesh caching and draw-primitive batching.

Following a high-level design description, this talk dives into multi-threaded rendering, introducing a novel render tree design that allows the both threads to access scene graph nodes simultaneously, greatly reducing copy overhead. The strategy described is particularly effective when only a subset of nodes is modified every frame and can be applied to any real-time rendering engine.

Xsens

Wednesday, 10 August, 2:15–3:15 pm

How Much Animation Can You Do in a Day?

This talk shows how to speed up your pipeline with the Xsens MVN animation tool. It also explains how to record a motion, edit the motion, and insert it into a scene in no time, or even real-time, using the Xsens MVN system.

Patrick Runyon
Xsense Technologies B.V.

Organic Motion

Wednesday, 10 August, 3:45–4:40 pm

Organic Motion Unveils the Latest Developments in Next Generation Computer Vision

Preview the Building Blocks of Human Computer Interaction

EXHIBITOR LIST

Full Conference Access | Basic Access | Computer Animation Festival | #siggraph #exhibits

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

As of 1 July

3D Consortium
3D Systems
3D3 Solutions
3Dconnexion, Inc.
3dMD
3DTotal.com
3DVIA
4DDynamics
Aberdeen LLC
Academic Superstore
Academy of Art University
Addison-Wesley
AMD
Animation Magazine Inc.
ANIMATIONMENTOR.COM
ARM
ASC-American Cinematographer
Autodesk, Inc.
Avere Systems
Axceleon Inc.
B&H Photo, Video & Pro Audio
Beijing ENOCHVIEW Digital Art Co., Ltd.
Belfry Animation & Toys Ltd.
Blender Foundation
BlueArc Corporation
British Columbia Film Commission
Campbell River Creative Industries Council
Cap Digital Paris Region
Capilano University
Carnegie Mellon Entertainment Technology Center
cebas Visual Technology Inc.
Centre for Digital Media
CGWAVE Inc.
Champlain College
Chaos Software Ltd.
CLO Virtual Fashion, Inc.
Codeplay
Cogswell Polytechnical College
Computer Graphics World
Consulate of Costa Rica - Procomer
Crimson Forest Entertainment Group Limited
CRC Press / A K Peters
CyberGlove Systems
Digia Plc - Qt Commercial
DigiPen Institute of Technology
Digital Domain
Digital Media Professionals
Dimensional Imaging Ltd.
Drawiz, Inc.
Emily Carr University of Art + Design
EnvisionTEC
Eos Systems Inc.
FARO Technologies Inc.
Fixstars Corporation
Future Publishing/3D World
GI LLC
Google
Hardcore Processing
Hong Kong ACM SIGGRAPH Professional Chapter Ltd.
Hong Kong Trade Development Council
HUONE
IATSE
iDesign Solutions
IdN magazine
Imagination Technologies
Imagineer Systems Ltd.
IntegrityWare, Inc.
Intel Corporation
Isilon Systems, Inc.
John Wiley & Sons, Inc.
Khronos Group
King Abdullah University of Science and Technology
Lightcraft Technology
Lightspeed Design, Inc.
LightWork Design Ltd.
Louisiana State University, Center for Computation & Technology
Lumiscaphe
Luxion
MAXON Computer Inc.
Measurand Inc.

EXHIBITOR LIST

#siggraph #exhibits

Ministry of Tourism, Trade and Investment

Morgan Kaufmann/Focal Press

Motion Analysis Corporation

MPC

Muuun Technologies Inc.

NaturalPoint Inc.

NDI

Nelvana Studio

NewTek, Inc.

Next Limit Technologies

NorPix Inc.

NVIDIA Corporation

Objet Geometries Ltd.

OC3 Entertainment, Inc.

OPTIS SAS

Organic Motion, Inc.

Parallels

Parsons The New School for Design

Peer 1 Hosting

PipelineFx, LLC

Pixar Animation Studios

Pixologic, Inc.

Planar Systems, Inc.

PNY Technologies

Point Grey Research Inc.

PO-MO Inc.

Pond5, Inc.

Prime Focus

Purdue University, Department of Computer Graphics Technology

Rainmaker Entertainment

Renderosity

Ringling College of Art and Design

Robert McNeel & Associates

Savannah College of Art and Design

Shapeways

Sheridan College

Shotgun Software, Inc.

Side Effects Software

Simon Fraser University

Southpaw Technology Inc.

SpeedTree

Spheron - VR AG

Springer

StereoVR

Stratasys 3D Printers & Production Systems

Tandent Vision Science, Inc.

Technology Joint Corporation

TechViz

The3DShop.com

The Bakery

The CGAL Project

The University of the Arts

Think Tank Training Centre

Tobii Technology Inc.

Toon Boom Animation Inc.

Topaz Labs

University of Central Florida - FIEA

VanArts–Vancouver Institute of Media Arts Ltd.

Vancouver Animation School

Vancouver Film School

Vancouver Motion Capture: Animatrik and Alastair Macleod

Vicon

Wacom Technology Services, Corp.

Waterloo Region–Canada's Technology Triangle

Web3D Consortium

WorldViz

Xsens Technologies B.V.

Z Corporation

Zygote Media Group, Inc.

GENERAL INFORMATION

Airline Reservations

NEW!: Exclusive airfare discounts for SIGGRAPH 2011 attendees.

SIGGRAPH 2011's official air-travel partner, UNIGLOBE Vision Travel, offers discounts of 5-30% on airfares to Vancouver.

Contact:
Uniglobe Vision Travel
1.888.221.5221 (toll free North America)
airdesk@uniglobevision.com

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 2011 speakers and award winners. To suggest books, CDs, or DVDs that should be available in the bookstore, contact:

Breakpoint Books
dave@breakpointbooks.com

Camera and Recording Policies

No cameras or recording devices are permitted at SIGGRAPH 2011. Abuse of this policy will result in the loss of the individual's registration credentials.

SIGGRAPH 2011 uses an official conference photographer and reserves the right to use all images that this photographer takes during the conference for publication and promotion of future ACM SIGGRAPH events.

Discount Ground Transportation From Vancouver International Airport

All SIGGRAPH 2011 attendees are eligible for a special 10% discount on ground transportation between the airport and conference hotels. To receive the discounted rated, print the coupon available at: www.siggraph.org/s2011and present it to Aerocar or Aeroshuttle when you arrive in Vancouver.

Hotel-Convention Center Shuttle Bus Service

SIGGRAPH 2011 provides complimentary shuttle service between many conference hotels and the Vancouver Convention Centre.

IMPORTANT NOTICE

Attendees who use the SIGGRAPH 2011 hotel reservation system to make reservations at hotels served by the SIGGRAPH 2011 shuttle buses will receive a shuttle wristband when they check in. Attendees who do not book through the SIGGRAPH 2011 reservation system and wish to use the shuttle service can purchase wristbands at the SIGGRAPH Store. Attendees without wristbands will not be allowed to use the shuttle service.

Luggage and Coat Check

Luggage and coat-check services ($5 per item) are available at the Vancouver Convention Centre from Sunday, 7 August through Thursday, 11 August.

Special Policies

Lost badges cannot be replaced. If you lose your badge, you must purchase a new registration. Technical materials included with your registration must be picked up at the SIGGRAPH 2011 Merchandise Pickup Center. Lost merchandise vouchers will not be replaced.

Reception and Computer Animation Festival Access

To be admitted to the Reception, you must have a ticket. Your badge does not provide access. Computer Animation Festival access comes with a Full Conference badge, or a Festival Pass.

Hotel Reservations

Visit the SIGGRAPH 2011 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/s2011

Or contact:
onPeak
SIGGRAPH 2011 Travel Partner
siggraph2011@onPeakevents.com

SIGGRAPH 2011 has negotiated discount rates for hotels in Vancouver. These discounts are available to SIGGRAPH 2011 attendees only. Please make your hotel reservation by 11 July 2011. Reservations made after 11 July will be based on availability only and rates may increase.

Vancouver Convention Centre

Accessibility

The convention center is handicap accessible. If you have special needs or requirements, please call Conference Management at: +1.312.673.4785.

Food Services

There are two cafes in the convention center within the East and West buildings for the convenience of SIGGRAPH 2011 attendees. All other food outlets are found in the adjoining food courts to both buildings, all within close walking distance.

Internet Access

Free wireless access is available in all conference locations within the Vancouver Convention Centre (except the Exhibit Hall).

Parking

SIGGRAPH 2011 attendees can park at the Vancouver Convention Centre parking lot for:

Vancouver Convention Centre East—
999 Canada Place; +1.866.856.8080

Vancouver Convention Centre, West—
1055 Canada Place; +1.604.681.7311

For additional parking information, visit:
http://www.vancouverconventioncentre.com/thecity/getting-here/

INCLUDED WITH YOUR REGISTRATION

Registration Categories

- Full Conference Access
- Basic Conference Pass
- Computer Animation Festival

■ ● ▲	**ACM SIGGRAPH Award Presentations**
■ ●	**ACM SIGGRAPH Award Talks**
■ ●	**Art Gallery**
■ ● ▲	**Birds of a Feather**
■ ▲	**Computer Animation Festival**
■	**Courses**
■ ●	**Emerging Technologies**
■ ● ▲	**Exhibition**
■ ● ▲	**Exhibitor Tech Talks**
■ ●	**International Resources**
■ ● ▲	**Job Fair**
■ ● ▲	**Keynote Speaker**
■	**Panels**
■	**Papers: Technical, Art, Games, and Transactions on Graphics**
■ ●	**Posters**
■ ▲	**Real-Time Live!**
■	**Reception**
■ ● ▲	**SIGGRAPH Dailies!**
■ ● ▲	**Technical Papers Fast Forward**
■ ●	**The Sandbox**
■ ●	**The Studio**
■	**Talks**

SIGGRAPH Symposium: The Business Think Tank is NOT included with SIGGRAPH conference registration packages. This is an additional cost.

See page 64 for pricing information.

Technical Materials

The printed *ACM Transactions on Graphics* (Conference Proceedings Special Issue), which contains the Technical Papers and the ACM SIGGRAPH awards is NOT included with any registration category. The Proceedings is available for purchase at SIGGRAPH 2011.

■ Full Conference DVD-ROM

This digital publication contains the electronic version of the Technical Papers and Game Papers, including images and supplemental material; all of the course and tutorial notes, including auxiliary material (movies, source code, HTML presentations); and the permanent record of the Courses, Emerging Technologies, Posters, SIGGRAPH Dailies!, The Studio Presentations, Talks, and the permanent record of the Art Gallery and the Computer Animation Festival.

The DVD is included with all Full Conference registrations, and it is available for purchase at SIGGRAPH 2011. The content of the printed version of the *ACM Transactions on Graphics* (Conference Proceedings Special Issue) is included on the Full Conference DVD-ROM.

NOTE:
Full Conference registrants must pick up the Full Conference DVD-ROM included with registration at SIGGRAPH 2011 at the Merchandise Pickup Center located in West Building, Exhibit Hall Lobby.

Technical Materials are also available after the conference, contact:

ACM, Member Services
800.342.6626 (Continental US and Canada)
+1.212.626.0500 (International and New York Metro area)
+1.212.944.1318 fax
orders@acm.org

Basic Conference registration does not include any technical materials.

REGISTRATION FEES & INFORMATION

The printed *ACM Transactions on Graphics* (Conference Proceedings Special Issue) is not included in your registration and may be purchased separately.

Member rates refer to ACM SIGGRAPH membership.

Conference Registration Categories

- Full Conference Access
- Basic Conference Pass
- Computer Animation Festival

Full Conference Access

	On or Before 17 June	On or Before 18 July	At SIGGRAPH 2011
ACM SIGGRAPH Member	$895	$1,070	$1,170
Non-Member	$995	$1,145	$1,270
Student Member	$395	$445	$495

Includes admission to ALL conference programs and events, including the Exhibition (Tuesday-Thursday), Computer Animation Festival, Full Conference DVD-ROM, and reception ticket.
Add the SIGGRAPH Symposium: The Business Think Tank at a rate of: $75

Full Conference One-Day Pass

	On or Before 17 June	On or Before 18 July	At SIGGRAPH 2011
ACM SIGGRAPH Member	$325	$375	$425
Non-Member	$375	$425	$475
Student Member	$175	$200	$225

Includes admission to ALL conference programs and events, Computer Animation Festival for day(s) attending, and Exhibition (Tuesday-Thursday).
A Computer Animation Festival Full Festival Pass for ALL days can be added at the time of registration, at a discounted fee of $175.
Note: Does NOT include reception ticket or Full Conference DVD-ROM.

Basic Conference Access Pass

	On or Before 17 June	On or Before 18 July	At SIGGRAPH 2011
ACM SIGGRAPH Member	$95	$125	$150
Non-Member	$125	$150	$175

Includes admission to Art Gallery, Birds of a Feather, Exhibitor Tech Talks, Emerging Technologies, Keynote Speaker, International Resources, Job Fair, Posters, The Sandbox, SIGGRAPH Dailies!, The Studio, and Exhibition (Tuesday-Thursday).
A Computer Animation Festival Full Festival Pass for ALL days can be added at the time of registration, at a discounted fee of $175.

Basic Conference One-Day Pass

Purchased Before Or At SIGGRAPH 2011
$45

Includes admission to Art Gallery, Birds of a Feather, Exhibitor Tech Talks, Emerging Technologies, Keynote Speakers, International Resources, Job Fair, Posters, The Sandbox, SIGGRAPH Dailies!, The Studio for day(s) attending, and Exhibition (Tuesday-Thursday).

Computer Animation Festival

	Full Festival Pass	One-Day Pass
ACM SIGGRAPH Member	$175	$50
Non-Member	$200	$50
Student Member	$150	$50
Additional Guest	$200	$50

Full Festival Pass includes admission to the Computer Animation Festival for the full week, and Exhibition (Tuesday-Thursday).
The One-Day Pass includes admission to the Computer Animation Festival for the day(s) attending, and Exhibition (Tuesday-Thursday).

SIGGRAPH Symposium: The Business Think Tank

Purchase Before Or At SIGGRAPH 2011
$400 or $75 with the purchase of a Full Conference Week Pass

A full day of conversations, discussion groups, case studies and two enlightening keynote sessions intended to spark frank and honest interaction about our business in the 21st Century. **The SIGGRAPH Symposium: The Business Think Tank is NOT included with SIGGRAPH conference registration packages. This is an additional cost.**

SIGGRAPH 2011 CONFERENCE COMMITTEE

ACM SIGGRAPH is a diverse group of researchers, artists, developers, filmmakers, scientists, and other professionals, who share an interest in computer graphics and interactive techniques. The community values excellence, passion, integrity, volunteerism, and cross-disciplinary interaction.

SIGGRAPH 2011 Conference Chair
Pete Braccio
Monterey Bay Aquarium Research Institute

ACM SIGGRAPH Conference Chief Staff Executive
Bob Niehaus
Talley Management Group, Inc.

SIGGRAPH 2011 Conference Manager
Angela Anderson
Talley Management Group, Inc.

Art Gallery Chair
Mona Kasra

Art Papers Chair
Joanna Berzowska
Concordia University

Audio/Visual Support
Freeman AVS/AVW-TELAV

Computer Animation Festival Director
Joshua Grow
The Creative Cartel

Conference Administration
Talley Management Group, Inc.

Conference Management/ Marketing and Media
SmithBucklin Corporation

Courses Chair
Ann McNamara
Texas A&M University

Donation Chair
Megan Kreiner
DreamWorks Animation

Education Director
Mike Bailey
Oregon State University

Emerging Technologies Chair
Cole Krumbholz

Exhibition Management
Hall-Erickson, Inc.

Game Development Community Director
Naty Hoffman
Activision

Game Papers Chair
T.L. Taylor
IT-Universitetet i København

Games Chair
Drew Davidson
Carnegie Mellon University

General Services
Freeman Decorating Company

General Submissions Chair
Mark Elendt
Side Effects Software Inc.

Graphic Design/Editing/Web Site
Q LTD

GraphicsNet
Joe Cychosz
Network for Computational Nanotechnology, Purdue University

International Resources Co-Chairs
Sandro Alberti
Universidad de Guadalajara

Scott Lang
Bergen County Academies

Late Breaking Chair
Dan Wexler

Leonardo Coordinator
Elona Van Gent
University of Michigan

New Business Director
Jill Smolin
3ality Digital

Operations Director
Ryan Kuba
Technicolor Creative Services

Outreach Director
Sylvain Provencher

Publications
Stephen N. Spencer,
ACM SIGGRAPH Publications Committee Chair
University of Washington

Real-Time Live! Director
Jason RM Smith
LucasArts

SIGGRAPH 2011 Directors
Glenn Entis
Vanedge Capital

Mk Haley
Disney Research, Pittsburgh;
Carnegie Mellon University

Matthew Hollern
The Cleveland Institute of Art

SIGGRAPH 2010 Conference Chair
Terrence Masson
Northeastern University

SIGGRAPH 2012 Conference Chair
Rebecca Strzelec
Penn State Altoona

SIGGRAPH 2013 Conference Chair
Mk Haley
Disney Research, Pittsburgh;
Carnegie Mellon University

SIGGRAPH Dailies! Chair
Rajesh Sharma
Walt Disney Animation Studios

Student Volunteers Chair
Maya Karp

The Studio Chair
Chris Williams
JumpStart.com,
Knowledge Adventure

Technical Papers Chair
Hugues Hoppe
Microsoft Research

Web Programming
The OPAL Group