

**SIGGRAPH 1991**  
**18th International Conference**  
**On Computer Graphics and**  
**Interactive Techniques**

**Las Vegas Convention Center**  
**28 July - 2 August**

# COURSE NOTES

# C4

**EDUCATION OF A**  
**COMPUTER ANIMATOR**

**Co-Chairs**  
**Scott E. Anderson**  
**Industrial Light and Magic**  
**Jonathan P. Luskin**  
**California Institute of the Arts**

**Lecturers**  
**John Lasseter**  
**PIXAR**  
**Nancy St. John**  
**Small Pond Productions**  
**Andy van Dam**  
**Brown University**

# Education of a Computer Animator

Course #4 - Siggraph 1991

*Scott E. Anderson  
Jonathan P. Luskin*

Course Co-Chairs  
Industrial Light & Magic  
A Division of LucasArts Entertainment

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## *Introduction*

The recent recovery and growth of the computer animation industry have increased the complexity and visibility of computer animation. With this greater visibility has come an increased interest from students, artists, animators and others wishing to enter the field. This course is designed to address two of the most popular questions asked of people in the production field: *What should I study?* and *How do I get a job in animation?* We will not answer these questions explicitly, as there is no *correct* answer to either one, but will address issues related to these questions.

*What are universities covering in the field of computer graphics?  
How have changes in the field of computer graphics changed the focus of  
university programs in computer graphics?  
What education programs are missing?  
How does a production team work?  
What are employers, specifically in the production community, looking for?  
How and why are varied backgrounds important to an animation team?*

This will be followed by speakers from the animation industry sharing their personal experiences and discussing what they do, how they do it, how they got there and where they want to go. The speakers will be presenting film and video from projects they consider important to either their personal development or to that of the industry.

## **Who should attend?**

Anyone interested in the field of computer graphics production. Filmmakers, art directors, and producers interested in working with computer animation. Educators interested in teaching the cross-disciplinary field of computer animation.

**Speakers**

**Scott E. Anderson, Jonathan P. Luskin, Nancy St. John, John Lasseter, Andries van Dam.**

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**Reference Materials**

- A.    Drawing Tutorials by Glenn Vilppu
- B.    Computer Graphics Career Handbook (selections)
- C.    Guidelines for Computer Graphics Curricula
- D.    Computer Graphics Arts Directory
- E.    Millimeter Production Buyer's Guide (selections)

## **Course Schedule**

**8:30 – Course Chair**  
Introduction

**8:45 – Nancy St. John**  
The World of Production.

**9:45 – Break**

**10:00 – Nancy St. John**

**10:30 – Andries van Dam**  
Technical Educations in Computer Graphics.

**11:15 – Questions**

**12:00 – Lunch**

**1:30 – Jonathan P. Luskin**  
Art and Animation Education for Technical People

**2:30 – Scott E. Anderson**  
Making use of your skills. Education through work.

**3:15 – Break**

**3:30 – John Lasseter**  
Traditional film skills as applied to animation.

**4:30 – Questions**

## Speaker Biographies

**Scott Anderson** is a senior technical director at Industrial Light & Magic, the special-effects production division of LucasArts Entertainment.

Since coming to ILM Scott's work includes underwater effects for *The Hunt for Red October*, and the pseudopod sequence from James Cameron's Academy Award winning film *The Abyss*. In addition he has worked on a number of television projects including commercials for *Diet Coke*, and *Star Tours*, as well as a segment for the PBS series *The Astronomers*. Scott has just finished working as a Sequence Supervisor on James Cameron's new film, *Terminator 2* and is currently working on *Star Trek VI*.

Prior to joining ILM as an animator, Scott was a member of Pacific Data Image's research and development team. Scott graduated with an A.B. in Semiotics and an Sc.B. in Computer Science from Brown University. While at Brown he was a member of the Computer Graphics Group directed by Andries van Dam, and three time captain of the Brown Wrestling Team.

**Jonathan Luskin** is currently enrolled in the character animation program at the California Institute of the Arts, where he has traded his computer for a box of blue pencils and a ream of punched paper.

Prior to attending CalArts, Jonathan worked as a senior technical director at Industrial Light & Magic. There he worked on a number of motion picture projects including *Star Trek IV*, *Willow*, *The Abyss*, *The Hunt for Red October*, and *Back to the Future II* as well as the *Body Wars* simulator ride at Disney's Epcot Center. In addition, he has worked on a number of television projects including *Star Trek: The Next Generation*, and commercials for *BP America* and *M&M Mars*.

Jonathan gained additional experience in computer graphics and animation as a founding member of Flying Moose Systems and Graphics, Ltd. (now Ithaca Software) and as a member of the computer animation department at R/Greenberg Associates. He graduated from Cornell University with degrees in Political Science and Electrical Engineering.

**Nancy St. John** has been involved in the production of computer graphics for feature, commercial, industrial and broadcast clients. For her work in the commercial field she has garnered many awards including CLIO, NCGA and Nicograph Association/Japan Awards. Most recently, Nancy guided the restructuring, growth and marketing of Industrial Light & Magic's Computer Graphics Department as Executive Producer and General Manager.

Nancy's experience includes the design and installation of a computer graphics and animation facility for use by scientists at the National Center for Supercomputing Applications and executive producing, producing and managing for ILM, Pacific Data Images, Robert Abel & Associates, Digital Productions and

### Vertigo Computer Imagery.

Nancy is currently president of Small Pond Productions, a consulting company covering all aspects of computer animation. Its clients include computer animation companies, special effects companies, hardware and software manufacturers, investors and advertising agencies.

**John Lasseter** is a Director/Animator at PIXAR. John won the 1988 Academy Award for Best Animated Short Film for *Tin Toy*, the first computer animated film to win an Oscar.

As a director and animator of computer animated films, John has helped create a number of short films and television commercials at Pixar: *Luxo Jr.*, *Red's Dream*, *Tin Toy* and most recently *Knickknack*. He also designed and animated the Stained Glass Knight in Steven Spielberg's *Young Sherlock Holmes*.

John joined Pixar in 1984 after five years as an animator at Walt Disney Studios, where he worked on *The fox and the Hound*, *Mickey's Christmas Carol* and the "Wild Things Computer Animation Test".

In 1986 John received the "Raoul Servais Animation Award" for his work in animation from the Genk International Animation Festival in Belgium. He received a BFA in Film from the California Institute of the Arts in 1979. At CalArts, he produced two animated films, each winners of the Student Academy Award for Animation, *Lady and the Lamp* and *Nitemare*. John also won \$15.00 from the Model Market in Whittier, CA for a crayon drawing of the Headless Horseman in 1962.

**Andries van Dam** was one of the founders and the first chairman of the computer science department at Brown University. He is currently professor of computer science at Brown, and senior consulting scientist at BLOC Development and Prime Computer. A member of the IEEE Computer Society and ACM, he is also cofounder of ACM Siggraph. Andy's research interests include hypermedia, electronic books, and high-performance workstations for teaching and research.

Andy is perhaps best known as coauthor of the widely used book *Fundamentals of Interactive Computer Graphics* with James Foley and of its successor *Computer Graphics - Principles and Practice* with James Foley, Steve Feiner and John Hughes. He is also known to a large body of former students as the person who got them started in the field of computer graphics.