

Spotlight Media Productions



21 SCIENTIFIC AND TECHNICAL ACHIEVEMENTS TO BE HONORED WITH ACADEMY AWARDS®

[Art](#) / [Celebrity](#) / [Entertainment](#)

Tags: [adrienne papp](#), [Alasdair Coull](#), [Allan Padelford](#), [Andre de Winter](#), [atlantic publicity](#), [Atlantic Publisher](#), [Ben Cole](#), [Bill Werner](#), [Bob Myers](#), [Brad Walker](#), [Brice Criswell](#), [Cary Phillips](#), [Chris King](#), [Colette Mullenhoff](#), [D. Scott Dewald](#), [Dan Piponi](#), [Eric Parker](#), [Erwin Coumans](#), [Frank Poradish](#), [George Borshukov](#), [Greg Croft](#), [Greg LaSalle](#), [Greg Pettitt](#), [Harold Milligan](#), [Ichiro Tsutsui](#), [James O'Brien](#), [Jeff Budsberg](#), [Jeff Cohen](#), [Jeff Cohen and Michael Fecik](#), [John Frederick](#), [Jonathan Gibbs](#), [Karl Rasche](#), [Ken Museth](#), [Ken Pearce](#), [Kim Libreri](#), [Iain Neil](#), [Magnus Wrenninge](#), [Marco Revelant](#), [Masahiro Take](#), [Michael Fecik](#), [Michael Sechrest](#), [Mihai Alden](#), [Mitsuru Asano](#), [Mitsuyasu Tamura](#), [Nafees Bin Zafar](#), [Nico Popravka](#), [Oscars 2015](#), [Peter Braun](#), [Peter Cucka](#), [Philip Peterson](#), [Reiner Doetzkies](#), [Robert Bridson](#), [Robert Nagle](#), [Roger van der Laan](#), [Ron Fedkiw](#), [Scott Peterson](#), [Shane Cooper](#), [Spotlight Media Productions](#), [Spotlight News Magazine](#), [Spotlight News Media](#), [Stephen Marshall](#), [Steven Krycho](#), [Steven Tiffen](#), [Tim Cotter](#), [Tom Lianza](#)

January 15, 2015 [0](#)



By Adrienne Papp

1

Tweet

David W. Gray to receive Gordon E. Sawyer Award

The Academy of Motion Picture Arts and Sciences today announced that 21 scientific and technical achievements represented by 58 individual award recipients will be honored at its annual Scientific and Technical Awards Presentation on Saturday, February 7, at the Beverly Wilshire in Beverly Hills.

In addition, veteran sound engineer and Dolby® Laboratories executive David W. Gray will receive the Gordon E. Sawyer Award (an Oscar® statuette), presented “to an individual in the motion picture

industry whose technological contributions have brought credit to the industry.” Gray’s career has encompassed the design, refinement and implementation of groundbreaking cinema sound technologies, including stereo optical soundtracks, digital sound on film and most recently, Dolby Atmos®. He has served for many years on the Academy’s Science and Technology Council and its Theater Standards Committee, among others, as well as chaired the audio study group of SMPTE’s pioneering DC28 technology committee, from which the first two SMPTE Digital Cinema standards were published.



“Our honorees represent an enormous range of technologies, from camera rigs to software systems, with names as colorful as ‘Biscuit Jr.,’ ‘Barbershop’ and ‘PhysBAM,’” said Richard Edlund, Academy Award®-winning visual effects artist and chair of the Scientific and Technical Awards Committee. “They exemplify the phenomenal creativity of professionals in the scientific and technical community, and the invaluable contributions they make to



what is arguably the most creative industry in the world.”

Unlike other Academy Awards to be presented this year, achievements receiving Scientific and Technical Awards need not have been developed and introduced during 2014. Rather, the achievements must demonstrate a proven record of contributing significant value to the process of making motion pictures.

The Academy Awards for scientific and technical achievements are:

TECHNICAL ACHIEVEMENT AWARDS (ACADEMY CERTIFICATES)

To **Peter Braun** for the concept and development of the MAT-Towercam Twin Peek, a portable, remote-controlled, telescoping column that smoothly positions a camera up to 24 feet vertically.

This small cross-section system from Mad About Technology can operate from above or below the camera, achieving nearly impossible shots with repeatable movements through openings no larger than the camera itself.

To **Robert Nagle** and **Allan Padelford** for The Biscuit Jr. self-propelled, high-performance, drivable camera and vehicle platform

The Biscuit Jr. ’s unique chassis and portable driver pod enables traveling photography from a greater range of camera positions than previously possible, while keeping actors safe and the rig out of frame.



To **Harold Milligan, Steven Krycho and Reiner Doetzki**es for the implementation engineering in the development of the Texas Instruments DLP Cinema digital projection technology.

Texas Instruments' color-accurate, high-resolution, high-quality digital projection system has replaced most film-based projection systems in the theatrical environment.

To **Cary Phillips, Nico Popravka, Philip Peterson and Colette Mullenhoff** for the architecture, development and creation of the artist-driven interface of the ILM Shape Sculpting System.

This comprehensive system allows artists to quickly enhance and modify character animation and simulation performances. It has become a crucial part of ILM's production workflow over the past decade.

To **Tim Cotter, Roger van der Laan, Ken Pearce and Greg LaSalle** for the innovative design and development of the MOVA Facial Performance Capture system.

The MOVA system provides a robust way to capture highly detailed, topologically consistent, animated meshes of a deforming object. This technology is fundamental to the facial pipeline at many visual effects companies. It allows artists to create character animation of extremely high quality.

To **Dan Piponi, Kim Libreri and George Borshukov** for their pioneering work in the development of



Universal Capture at ESC Entertainment.

The Universal Capture system broke new ground in the creation of realistic human facial animation. This technology produced an animated, high-resolution, textured mesh driven by an actor's performance.

To **Marco Revelant** for the original concepts and artistic vision, and to **Alasdair Coull and Shane Cooper** for the original architectural and engineering design, of the Barbershop hair grooming system at Weta Digital.

Barbershop's unique architecture allows direct manipulation of full-density hair using an intuitive,

interactive and procedural toolset, resulting in greatly enhanced productivity with finer-grained artistic control than is possible with other existing systems.

To **Michael Sechrest** for the modeling design and implementation, **Chris King** for the real-time interactive engineering, and **Greg Croft** for the user interface design and implementation of SpeedTree Cinema.

This software substantially improves an artist's ability to create specifically designed trees and vegetation by combining a procedural building process with the flexibility of intuitive, direct manipulation of every detail.



To **Scott Peterson, Jeff Budsberg and Jonathan Gibbs** for the design and implementation of the DreamWorks Animation Foliage System.

This toolset has a hierarchical spline system, a core data format and an artist-driven modeling tool, which have been instrumental in creating art-directed vegetation in animated films for nearly two decades.

To **Erwin Coumans** for the development of the Bullet physics library, and to **Nafees Bin Zafar and Stephen Marshall** for the separate development of two large-scale destruction simulation systems based on Bullet.

These pioneering systems demonstrated that large numbers of constrained rigid bodies could be used to animate visually complex, believable destruction effects with minimal simulation time.

To **Brice Criswell and Ron Fedkiw** for the development of the ILM PhysBAM Destruction System.



This system incorporates innovative research on many algorithms that provide accurate methods for resolving contact, collision and stacking into a mature, robust and extensible production toolset. The

PhysBAM Destruction System was one of the earliest toolsets capable of depicting large-scale destruction with a high degree of design control.

To **Ben Cole** for the design of the Kali Destruction System, to **Eric Parker** for the development of the Digital Molecular Matter toolkit, and to **James O'Brien** for his influential research on the finite element methods that served as a foundation for these tools.

The combined innovations in Kali and DMM provide artists with an intuitive, art-directable system for the creation of scalable and realistic fracture and deformation simulations. These tools established finite element methods as a new reference point for believable on-screen destruction.

To **Magnus Wrenninge** for leading the design and development of Field3D.

Field3D provides a flexible and open framework for storing and accessing voxel data efficiently. This allows interchange between previously incompatible modeling, simulation and rendering software.



To **Robert Bridson** for early conceptualization of sparse-tiled voxel data structures and their application to modeling and simulation.

Robert Bridson's pioneering work on voxel data structures and its subsequent validation in fluid simulation tools have had a significant impact on the design of volumetric tools throughout the visual effects industry.

To **Ken Museth**, **Peter Cucka** and **Mihai Alden** for the creation of OpenVDB.

OpenVDB is a widely adopted, sparse hierarchical data structure that provides a fast and efficient mechanism for storing and manipulating voxels.

SCIENTIFIC AND ENGINEERING AWARDS (ACADEMY PLAQUES)

To **Iain Neil** for the optical design, and to **Andre de Winter** for the mechanical design, of the Leica



Summilux-C series of lenses.

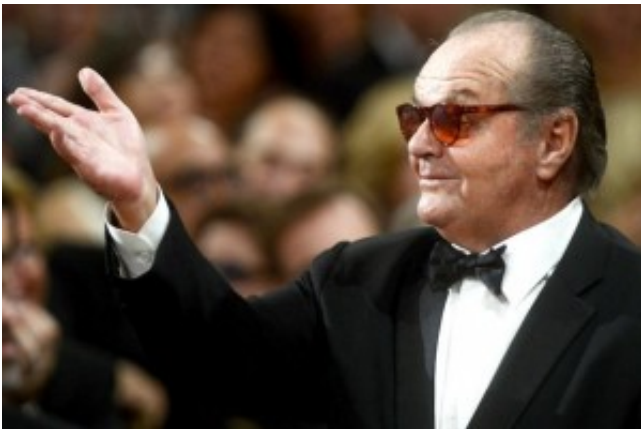
Incorporating novel telecentric multi-element aspherical optics, these camera lenses have delivered unprecedented optical and mechanical performance.

To **Brad Walker, D. Scott Dewald, Bill Werner, Greg Pettitt and Frank Poradish** for their contributions furthering the design and refinement of the Texas Instruments DLP Cinema projection technology, whose high level of performance enabled color-accurate digital intermediate preview and motion picture theatrical presentation.

Working in conjunction with the film industry, Texas Instruments created a high-resolution, high-quality digital projection system that has replaced most film-based projection systems in the theatrical environment.

To **Ichiro Tsutsui, Masahiro Take, Mitsuyasu Tamura and Mitsuru Asano** for the development of the Sony BVM-E Series Professional OLED Master Monitor.

These precise, wide-gamut monitors allow creative image decisions to be made on set with confidence that the desired images can be accurately reproduced in post-production.



To **John Frederick, Bob Myers, Karl Rasche and Tom Lianza** for the development of the HP DreamColor LP2480zx Professional Display.

This cost-effective display offered a stable, wide color gamut, allowing facility-wide adoption in feature animation and visual effects studios.

ACADEMY AWARD OF COMMENDATION (SPECIAL PLAQUE)

To **Steven Tiffen, Jeff Cohen and Michael Fecik** for their pioneering work in developing dye-based

filters that reduce IR contamination when neutral density filters are used with digital cameras.

The Tiffen Company identified the problem and rapidly engineered a series of absorptive filters that ameliorated infrared artifacts with lenses of all focal lengths. These widely adopted filters allow cinematographers to work as they have done with film-based technology.

ACADEMY AWARD OF MERIT (OSCAR STATUETTE)



To **Dr. Larry Hornbeck** for the invention of digital micromirror technology as used in DLP Cinema projection.

The Digital Micromirror Device (DMD) is the core technology that has enabled Texas Instruments' DLP Cinema projection to become the standard of the motion picture industry.

GORDON E. SAWYER AWARD (OSCAR STATUETTE)

c

Given to an individual in the motion picture industry whose technological contributions have brought credit to the industry.

Portions of the Scientific and Technical Awards Presentation will be included in the Oscar telecast.



Oscars® for outstanding film achievements of 2014 will be presented on Oscar Sunday, February 22, 2015, at the Dolby Theatre® at Hollywood & Highland Center® and televised live on the ABC Television Network at 7 p.m. ET/4 p.m. PT. The Oscars, produced by Craig Zadan and Neil Meron, also will be televised live in more than 225 countries and territories worldwide.

###

ABOUT THE ACADEMY

The Academy of Motion Picture Arts and Sciences is the world's preeminent movie-related organization, with a membership of more than 6,000 of the most accomplished men and women working in cinema. In addition to the annual Academy Awards—in which the members vote to select the nominees and winners — the Academy presents a diverse year-round slate of public programs, exhibitions and events; acts as a neutral advocate in the advancement of motion picture technology; and, through its Margaret Herrick Library and Academy Film Archive, collects, preserves, restores and provides access to movies and items related to their history. Through these and other activities the Academy serves students, historians, the entertainment industry and people everywhere who love movies.

About the Author of This Article: [Dame Adrienne Papp](#) is a recognized journalist, economist and feature writer who has written for many publications including [Savoir](#); [The Westside Today Publications](#) ; such as [Beverly Hills 90210](#); [Malibu Beach](#); [Santa Monica Sun](#); [The Beverly Hills Times](#); [Brentwood News](#); [Bel-Air View](#) ; [Celebrity Society](#) ; [Celeb Staff](#); [It Magazine](#); [Chic Today](#); [LA2DAY](#); [West Side Today](#) among many others. She is the President and CEO of Los Angeles / New York-based publicity company, [Atlantic Publicity](#) and publishing house, [Atlantic Publisher](#). Adrienne writes about world trends, [Quantum Physics](#), entertainment and interviews celebrities, world leaders, inventors, philanthropists and entrepreneurs. She also owns [Atlantic United Films](#) that produces and finances true stories made for theatrical release or the silver screen. [Spotlight News Magazine](#) is owned by [Atlantic United, Inc.](#) [Adrienne Papp](#) is a member of the [International Press Academy](#).



Adrienne Papp

Share the knowledge!

You may also like:

How the Reality of
Death Motivated Steve
Jobs' Life

World Famous Dr.
Zein Obagi Changes
Skin Care Forever

The Remarkable
Woman, Pat Lynch,
Behind WomensRadio

The Best Documentary
in Years: Anvil! The
Story of Anvil

David Litell's
Cognition Ignition
Nutraceutical Scores
High

Can One Man Change
the World? By
Adrienne Papp

"The British have not
been well dressed since
1939" Hugh Grant By
Adrienne Papp

September, 2013

Be Sociable, Share!

+ MORE

Tweet 1

Like 1

g+1 0

Share 1

St

Share This Article:



Comments are closed.

• **Live Search:**

• RECENT STORIES

- [87TH OSCARS® NOMINATIONS ANNOUNCED](#)
- [21 SCIENTIFIC AND TECHNICAL ACHIEVEMENTS TO BE HONORED WITH ACADEMY AWARDS®](#)
- [Inside the 2015 Golden Globes](#)
- [New Film Makers in Los Angles, January 10th Film Festival, By Adrienne Papp](#)
- [OSCAR® NOMINATIONS IN ALL 24 CATEGORIES LIVE, By Adrienne Papp](#)

• Spotlight Media Productions

- [About Us](#)
- [All Articles](#)
- [Archives](#)
- [Contact Us](#)
- [Have you Got a Story For Adrienne?](#)
- [Privacy Policy](#)
- [Staff](#)
- [Terms of Use](#)
- [TWITTER](#)

• Archives

- [January 2015](#)
- [December 2014](#)
- [November 2014](#)
- [October 2014](#)
- [June 2014](#)
- [April 2014](#)
- [March 2014](#)
- [February 2014](#)
- [January 2014](#)
- [September 2013](#)
- [August 2013](#)
- [June 2013](#)
- [March 2013](#)
- [February 2013](#)
- [January 2013](#)
- [December 2012](#)
- [November 2012](#)
- [October 2012](#)
- [September 2012](#)
- [August 2012](#)
- [June 2012](#)
- [April 2012](#)
- [February 2012](#)

- [December 2011](#)
- [October 2011](#)
- [September 2011](#)
- [August 2011](#)
- [June 2011](#)
- [May 2011](#)
- [April 2011](#)
- [March 2011](#)
- [February 2011](#)
- [January 2011](#)
- [December 2010](#)
- [November 2010](#)
- [October 2010](#)
- [September 2010](#)
- [August 2010](#)
- [July 2010](#)
- [June 2010](#)
- [May 2010](#)
- [April 2010](#)
- [March 2010](#)
- [February 2010](#)
- [January 2010](#)
- [December 2009](#)
- [November 2009](#)
- [October 2009](#)
- [September 2009](#)
- [June 2009](#)
- [May 2009](#)
- [April 2009](#)
- [March 2009](#)
- [February 2009](#)
- [January 2009](#)
- [December 2008](#)
- [November 2008](#)
- [September 2008](#)
- [August 2008](#)
- [July 2008](#)
- [June 2008](#)
- [May 2008](#)
- [April 2008](#)
- [March 2008](#)

Spotlight Media Productions is proudly powered by [WordPress 4.0.1](#) | [Entries \(RSS\)](#) | [Comments \(RSS\)](#).

Built on [Equilibrium Theme](#) by [Atlantic Publicity](#).