



## 89th Oscars Scientific & Technical Awards for 2016-17

### Description

Posted by Larry Gleason

Beverly Wilshire Hotel

Saturday, February 11, 2017

Hosts: John Cho and Leslie Mann



Hosts Leslie Mann, left, and John Cho

### Winners

#### TECHNICAL ACHIEVEMENT AWARDS (ACADEMY CERTIFICATES)

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To **Thomson Grass Valley** for the design and engineering of the pioneering Viper FilmStream digital camera system.

*The Viper camera enabled frame-based logarithmic encoding, which provided uncompressed camera output suitable for importing into existing digital intermediate workflows.*

To **Larry Gritz** for the design, implementation and dissemination of Open Shading Language (OSL).

*OSL is a highly optimized runtime architecture and language for programmable shading and texturing that has become a de facto industry standard. It enables artists at all levels of technical proficiency to create physically plausible materials for efficient production rendering.*

To **Carl Ludwig, Eugene Troubetzkoy and Maurice van Swaaij** for the pioneering development of the CGI Studio renderer at Blue Sky Studios.

*CGI Studio's groundbreaking ray-tracing and adaptive sampling techniques, coupled with streamlined artist controls, demonstrated the feasibility of ray-traced rendering for feature film production.*

To **Brian Whited** for the design and development of the Meander drawing system at Walt Disney Animation Studios.

*Meander's innovative curve-rendering method faithfully captures the artist's intent, resulting in a significant improvement in creative communication throughout the production pipeline.*

To **Mark Rappaport** for the concept, design and development, to **Scott Oshita** for the motion analysis and CAD design, to **Jeff Cruets** for the development of the faux-hair finish techniques, and to **Todd Minobe** for the character articulation and drive-train mechanisms, of the Creature Effects Animatronic Horse Puppet.

*The Animatronic Horse Puppet provides increased actor safety, close integration with live action, and improved realism for filmmakers.*

To **Glenn Sanders and Howard Stark** for the design and engineering of the Zaxcom Digital Wireless Microphone System.

*The Zaxcom system has advanced the state of wireless microphone technology by creating a fully digital modulation system with a rich feature set, which includes local recording capability within the belt pack and a wireless control scheme providing real-time transmitter control and time-code distribution.*

To **David Thomas, Lawrence E. Fisher and David Bundy** for the design, development and engineering of the Lectrosonics Digital Hybrid Wireless Microphone System.

*The Lectrosonics system has advanced the state of wireless microphone technology by means of an innovative digital predictive algorithm to realize full fidelity audio transmission over a conventional analog FM radio link, by reducing transmitter size, and by increasing power efficiency.*

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To **Parag Havaladar** for the development of expression-based facial performance-capture technology at Sony Pictures Imageworks.

*This pioneering system enabled large-scale use of animation rig-based facial performance-capture for motion pictures, combining solutions for tracking, stabilization, solving and animator-controllable curve editing.*

To **Nicholas Apostoloff** and **Geoff Wedig** for the design and development of animation rig-based facial performance-capture systems at ImageMovers Digital and Digital Domain.

*These systems evolved through independent, then combined, efforts at two different studios, resulting in an artist-controllable, editable, scalable solution for the high-fidelity transfer of facial performances to convincing digital characters.*

To **Kiran Bhat**, **Michael Koperwas**, **Brian Cantwell** and **Paige Warner** for the design and development of the ILM facial performance-capture solving system.

*This system enables high-fidelity facial performance transfer from actors to digital characters in large-scale productions while retaining full artistic control, and integrates stable rig-based solving and the resolution of secondary detail in a controllable pipeline.*

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## **SCIENTIFIC AND ENGINEERING AWARDS (ACADEMY PLAQUES)**

To **ARRI** for the pioneering design and engineering of the Super 35 format Alexa digital camera system.

*With an intuitive design and appealing image reproduction, achieved through close collaboration with filmmakers, ARRI's Alexa cameras were among the first digital cameras widely adopted by cinematographers.*

To **RED Digital Cinema** for the pioneering design and evolution of the RED Epic digital cinema cameras with upgradeable full-frame image sensors.

*RED's revolutionary design and innovative manufacturing process have helped facilitate the wide adoption of digital image capture in the motion picture industry.*

To **Sony** for the development of the F65 CineAlta camera with its pioneering high-resolution imaging sensor, excellent dynamic range, and full 4K output.

*Sony's unique photosite orientation and true RAW recording deliver exceptional image quality.*

To **Panavision** and **Sony** for the conception and development of the groundbreaking Genesis digital motion picture camera.

*Using a familiar form factor and accessories, the design features of the Genesis allowed it to become one of the first digital cameras to be adopted by cinematographers.*

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To **Marcos Fajardo** for the creative vision and original implementation of the Arnold Renderer, and to **Christopher Kulla, Alan King, Thiago Ize** and **Clifford Stein** for their highly optimized geometry engine and novel ray-tracing algorithms which unify the rendering of curves, surfaces, volumetrics and subsurface scattering as developed at Sony Pictures Imageworks and Solid Angle SL.

*Arnold's scalable and memory-efficient single-pass architecture for path tracing, its authors' publication of the underlying techniques, and its broad industry acceptance were instrumental in leading a widespread adoption of fully ray-traced rendering for motion pictures.*

To **Vladimir Koylazov** for the original concept, design and implementation of V-Ray from Chaos Group.

*V-Ray's efficient production-ready approach to ray-tracing and global illumination, its support for a wide variety of workflows, and its broad industry acceptance were instrumental in the widespread adoption of fully ray-traced rendering for motion pictures.*

To **Luca Fascione, J.P. Lewis** and **Iain Matthews** for the design, engineering, and development of the FACETS facial performance capture and solving system at Weta Digital.

*FACETS was one of the first reliable systems to demonstrate accurate facial tracking from an actor-mounted camera, combined with rig-based solving, in large-scale productions. This system enables animators to bring the nuance of the original live performances to a new level of fidelity for animated characters.*

To **Steven Rosenbluth, Joshua Barratt, Robert Nolty** and **Archie Te** for the engineering and development of the Concept Overdrive motion control system.

*This user-friendly hardware and software system creates and controls complex interactions of real and virtual motion in hard real-time, while safely adapting to the needs of on-set filmmakers.*

(Source: [oscars.org](https://www.oscars.org))

## Category

1. Oscar

## Tags

1. 89th Oscars Scientific & Technical Awards
2. Film
3. Filmmaking
4. The Academy of Motion Picture Arts and Sciences

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