



AUDIO ENGINEERING: As an engineer, Mark Bocko has developed ways to improve audio technology for applications like flat-screen displays.

SHOWCASING ROCHESTER

Light, Sound... Interactivity. Action!

Drawing on deep expertise in light, music, and optics, a new initiative aims to showcase Rochester's leadership in the growing fields of imaging and audio technologies.

By Bob Marcotte

Rochester has the ingredients to create its own Silicon Valley in emerging imaging and audio technologies.

The pieces are in place to establish Rochester as a leader—and the next step is to make sure the community realizes that and then to let the world know it, too.

That's the vision of the organizers of Light and Sound Interactive. The new conference and expo, which takes place September 12 to 14, will feature three days of presentations, panel discussions, demonstrations, trade show exhibits, and networking opportunities to showcase how Rochester can play a leading role in such growing fields as augmented and virtual reality (AR/VR), and interactive games and media.

"We want to help Rochester move up the value chain," says Mark Bocko, director of the Center for Emerging and Innovative Sciences (CEIS) and one of the conference organizers. "Historically, companies like

What Rochester offers

- The largest cluster of optics, imaging and photonics companies in the nation.
- Two major universities (University of Rochester and RIT) with world-class expertise and innovative programs in vision science, optics, music, audio engineering, cinema, animation, and many other related fields.
- A rich heritage of innovation and entrepreneurship.

Kodak had a direct connection to consumers. Everyone knew the Kodak brand, and everyone knew the enterprise. We want to spur the growth of high-value enterprises in our region with direct connections to consumers."

A partnership between the University and the Rochester Institute of Technology, along with area businesses, trade, and civic organizations, and other groups, the conference is designed to highlight the range and depth of the expertise and talent in

the Rochester region. The conference also serves as a segue to the KeyBank Rochester Fringe Festival, an arts and cultural showcase that employs many of the technologies featured in Light and Sound Interactive.

Scheduled keynote speakers include Academy Award-winning director Ang Lee and Oscar-winning cinematographer Rob Legato. Jeff Lieberman, a scientist, artist, and host of the Discovery Channel series *Time Warp*, and Ainissa Ramirez, a science evangelist who is widely recognized for her campaigns to attract the next generation of scientists and technologists, are also special guests.

But the real "chemistry" of the event—the interactive part, says conference producer Paul Ballentine of CEIS—will occur at 67 panel discussions and workshops featuring researchers and entrepreneurs from the Rochester area and across the country. They will discuss work in seven key areas: virtual and augmented reality, games and interactive media, cinema, music

and audio, imaging, displays and lighting, health care, and optics and photonics.

“The presentations are designed to be accessible to students, technologists, scientists, entrepreneurs, and artists. And they are meant to be thought provoking,” says Bocko, who holds the title of Distinguished University Professor and is chair of the Department of Electrical and Computer Engineering.

“We want people to appreciate the vastness of the resources that we have in this community, and to get them excited about the potential this holds to build new businesses and enterprises in this area.”

Bocko and Ballentine say the inspiration for LSI came from South by Southwest Interactive in Austin, Texas, an offshoot of the renowned music and film festival. The interactive technology showcase there has helped drive the tech sector in that city.

“You go to Austin and the city is full of confidence, with major companies moving in and people of all descriptions starting companies,” Bocko says. “You go to Silicon Valley, and it’s the same ‘anything is possible’ kind of attitude.

“We want Rochester to be just as enthusiastic about its own future.”

For example, Rochester is uniquely positioned to take a leading role in AR/VR, and especially in applications such as health care, Bocko says.

- Many of Rochester’s 100-plus optics companies already provide components for major VR companies located around the country and the world.


- University scientists are world leaders in vision science, which is key to creating convincing VR experiences.

- The University’s Center for Freeform Optics is pioneering ways to design and make compact and efficient lenses and mirrors for applications like AR/VR glasses.

- Researchers at the Medical Center are exploring virtual reality as a way to enhance physical exams, for example, and to treat patients with dementia and vestibular disorders that cause vertigo and dizziness.

“When you look at the AR/VR universe,” Bocko says, “people have poured a lot of money into games and interactive media, but the field is looking for other high-value applications, and health care is clearly an area of tremendous interest.”

Bocko and Ballentine share the goal of helping Rochester build on its many capabilities and world-class industry base to grow high-value enterprises and brands with direct links to consumers.

“That’s the key to building lasting regional prosperity,” says Bocko. 



FILM AND TV STARS: Director Ang Lee (top), who won Oscars for *Life of Pi* and *Brokeback Mountain*, is scheduled to show excerpts from his newest film and to discuss his work. Jeff Lieberman (above), a roboticist who starred in the Discovery Channel’s *Time Warp* series, will present a keynote address



KEYNOTES: Science evangelist Ainissa Ramirez (left) and Academy Award-winning cinematographer Rob Legato are among the keynote speakers for the inaugural conference.