
HOLOGRAPHY

Tribute to Tung H. Jeong (T.J.)



Dr. Tung H. Jeong—holographer, researcher, educator—who recently retired after more than three decades in holography. (Recent photo.)

Here we profile Tung H. Jeong (better known as T.J.): Professor Emeritus and Director of the Center for Photonics Studies at Lake Forest College, IL. We want to honor his many contributions to SPIE and the role he has played in disseminating holography and building cooperative ventures within the holography community. In January at the SPIE *Practical Holography: Materials and Applications* conference, T.J. announced his retirement as chair. All of us throughout the holographic community are familiar with, and have been greatly influenced by, his work over the years. His pioneering spirit in holography as researcher, innovator, consultant and—most significantly—educator, has spanned nearly four decades, and is of worldwide scope.

As a child, T.J. emigrated to the US from Kwangtung, China, 1948. Upon graduating from high school, he received a full scholarship to Yale University where he graduated with a B.S. in physics

and mathematics in 1957. He completed his Ph.D. in nuclear physics at the University of Minnesota in 1962. Shortly after this he joined the faculty of Lake Forest College, where he built an impressive set of structures that have helped to teach both his students, and the world, about holography.

An educator at heart, T.J. focused his early attention on science teachers. He explained, “in 1968, the Gaertner Corporation gave me a grant to design the first portable holography system—the *Gaertner-Jeong Holography System*—using magnetic bases. In the mid-80s, when Emmett Leith invited me to lecture to his class at the University of Michigan, I was very pleasantly surprised when he wheeled out my first model of this system he’d used for teaching his own students.”

In the early 1970s he undertook two tours of duty as a holography educator for the Chautauqua Pro-

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The Shearwater Foundation Archive

Now that the Shearwater Foundation has become part of holography history, its web site has been redesigned to provide an archive of its achievements. Full details of all grants given since 1987 are available there. It is hoped that this resource will be useful for researchers, historians, artists and scholars who have an interest in the development of creative holography and the support given to it by the Shearwater Foundation over two decades.

The Shearwater Foundation, of Florida, USA, gave out its first grants to artists in December 1987. Those pioneers each received an award of \$10,000.00, for attaining the highest level of artistic achievement and, as the Foundation announced in its first ever press release, providing a "standard of excellence for the entire field."

The Holography Program of the Shearwater Foundation was established and directed by Posy Jackson for its first ten years of operation. The Foundation appointed a new advisory group each year, to research the field and make rec-

ommendations to the Board for possible funding. From this list of names, a number of artists were then chosen to receive the prestigious Shearwater Foundation Holography Award. The Award was unique in that it provided a cash grant to the artist without requiring any accounting for the accomplishments resulting from the support.

In 1991, as creative holography developed, the Foundation responded to the needs of the field by offering grants to groups and organizations, as well as its awards to individual artists. These grants could be applied for (unlike the holography awards, which were only given to those artists who had received the highest recommendations from the Foundation's yearly advisory group). These institutional and project grants were used to support a wide variety of projects that actively promoted creative holography worldwide.

In 1998, Dr. Andrew Pepper took over the administration of the Holography Program from

Posy Jackson. Pepper continued to direct both the Holography Award and the expanding grants projects for the following seven years. One of the important additions Pepper made in the Program was the Holography Purchase Project. This provided public museums and collections with financial assistance to purchase creative holography for their collections. Several works were acquired for collections in the USA and UK through this project.

In November 2004, the Foundation ceased operations after the death of its last trustee. This marked the end of a 17-year program that had provided 128 grants and awards to artists and projects as diverse as symposia, publications, documentary videos, educational events, curated exhibitions and artist-in-residence programs.

The Shearwater Foundation Archive can be found at:

<http://www.ShearwaterFoundation.org>

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gram, where he trained nearly 600 physics professors from universities and colleges across the US to integrate holography into university curricula. "One of my long term goals," says T.J., "was to make holography a basic topic in science education, in textbooks, and in labs. I believe the Chautauqua program helped toward that end."

T.J. has been invited to lecture and teach seminars at over 500 universities, professional societies, and industrial sites in across Europe, China, Russia, and more. He has been a member of and in and served in many honorary and professional societies. He was a co-chairperson for SPIE international conferences in the Ukraine, Hungary, Bulgaria, Canada and Austria. In 1986 and 1987 he co-founded and chaired the initial SPIE *Practical Holography* conference at the meeting then known as OE/LASE.

In 1971 he instituted the annual summer *International Holography Workshops* at Lake Forest College. These were later accompanied by the triennial *International Symposia and Exhibitions on Display Holography*, held at Lake Forest in 1982, 1985, 1988, 1991, 1994. After moving to Europe in 1997, and then a break, this series is set to continue next year (see p. 5). The Lake Forest events were attended by scientists, educators, artists, business people, and amateurs from across the world. Noted artist holographer, Margaret Benyon commented, "T.J. has a very special and important place in the history of holography. Without his chairmanship of SPIE *Practical Holography*, and in par-

ticular his ISDH symposia at Lake Forest, it is hard to imagine how display holography could have blossomed in the way that it did."

For many people, his instructional motion picture, *Introduction to Holography* (funded by the Encyclopedia Britannica Educational Corp. in 1971), was their first contact with the field. Along with educators, interested parties could contact INTEGRAF: a company he formed in 1973 to disseminate instructions and holographic materials internationally.

Together with Dr. Hans Bjelkhagen, T.J. was instrumental in the realization of true-color holography. He is also credited with the cylindrical hologram and was the first to use fiber optics to reduce the cost and complexity of hologram production. He also helped to develop 3D moving holograms. His research has funded by grants from the National Science Foundation, Research Corporation, and ITW, to name a few. In the business world, T.J. serves as a worldwide consultant to corporations in various industries to develop holographic solutions to problems.

Professor Jeong has been honored repeatedly, both in the United States and abroad, in recognition of his achievements, his service to education, and his contributions to international relations. He has won the Robert Millikan Medal, the Saxby Medal of the Royal Photographic Society of Great Britain, and the International Holographic Manufacturers' Association Life Time Achievement Award. He has been given two Honorary Professorships of Physics (from Beijing Normal University and Kunming University). And he has also been honored by the American Association of Physics Teachers and

the National Science Teachers' Association.

T.J. says, "This may surprise most people: I am currently involved in helping more people than ever in getting started in holography. This year alone, forty five countries have bought my Holokits through Integraf, with me as its 'tech support'. On a daily basis, I answer e-mails from around the world, many from children as young as eight. So, I started by training college students and professors, then artists and other professionals, and finally end up teaching mostly young children. My biggest satisfaction is in this last group. It was a reason for me to retire from my other formal duties... I am glad to have switched from nuclear physics to holography. My main interest was to educate young people. Nuclear physics is too abstract, but holography is perfect for my goals."

Since Dr. Jeong announced his retirement, Hans I. Bjelkhagen and Roger A. Lessard were elected to co-run the *Practical Holography: Materials and Applications* conference in 2006. They say, "As a first task, we would like to thank him for his wonderful work that he did so enthusiastically for more than 20 years."

Thank you T.J., for your genuine warmth for students and colleagues alike: we wish you all the best in your future endeavors.

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Rebecca Deem is an artist, holographer, teacher and writer currently in Columbia, Missouri.

References

1. <http://www.holokits.com>