

CLEO '88 TO BE HELD IN ANAHEIM

The eighth Conference on Lasers and Electro-Optics will feature technical sessions on laser technologies and applications, awards and the year's largest exhibit of laser and electro-optical equipment.

The Optical Society of America and IEEE will cosponsor the 1988 Conference on Lasers and Electro-Optics at the Anaheim Convention Center and Anaheim Hilton and Towers in Anaheim, California, on 25-29 April. The meeting will be held in cooperation with the European Physical Society and the Japanese Quantum Electronics Joint Group, whose member societies are the Institute of Electronics and Communications Engineers of Japan, the Institute of Electrical Engineers of Japan, the Japan Society of Physics and the Laser Society of Japan.

Registration for the meeting will take place in the convention center on Sunday, 24 April, from 11 am until 8 pm, on Monday from 7:30 am until 5 pm, Tuesday through Thursday from 8 am until 4 pm and on Friday from 8 am until 11 am.

The technical program includes sessions on a wide variety of topics in laser technologies and science: gas, free-electron, solid-state, liquid and semiconductor-diode laser systems; nonlinear optics, phase conjugation and spectroscopy; optical materials and components; laser interactions with materials; ultrafast optics and electronics; atmospheric, space and ocean optics; optical signal processing, switching, bistability and storage devices; infrared technology; electro-optical instruments and devices; applications of lasers in industry, medicine and microelectronics; and optical communications. Poster sessions are scheduled for Tuesday, Wednesday and Thursday afternoons, and sessions for postdeadline papers are being planned.

The Laser Institute of America has organized five half-day courses and three full-day courses for Sunday. The topics are fundamentals of lasers, industrial and engineering laser applications, basic properties of optical materials, ultrafast optoelectronics, femtosecond pulse generation and measurement, diode lasers, optical phase conjugation, and semiconductor-laser-pumped solid-state lasers. All courses will be held at the Anaheim Hilton.

Awards

At the plenary session, which will take place in the Hilton on Monday afternoon, OSA will present its Charles Hard Townes Award to Arthur Ashkin (AT&T Bell Laboratories, Holmdel, New Jersey) for his "original and creative experimental

Arthur Ashkin



and theoretical work that initiated the study of laser radiation pressure, and for his continuing exceptional contributions." In the 1960s Ashkin conducted pioneering studies in nonlinear optics, including work on the fundamental optics of second-harmonic generation in crystals, continuous-wave second-harmonic generation using gas lasers, and nonlinear effects in optical fibers. He began his studies of optical radiation pressure in 1970, using laser beams to manipulate and trap dielectric spheres suspended in liquids. In 1986 Ashkin, Steven Chu, John Bjorkholm and Alex Cable (all at Bell Labs) succeeded in holding neutral sodium atoms in an optical dipole trap. (See PHYSICS TODAY, September 1986, page 17.) Ashkin and his collaborators have recently held microscopic living organisms, such as bacteria, yeast cells and even organelles within protozoa, in optical traps.

Ashkin received his AB from Columbia University in 1947 and his PhD in physics from Cornell University in 1952. From 1942 until 1946 he was a member of Columbia's Radiation Laboratory. He has been a member of the technical staff at Bell Labs since 1952; he served as head of the laser science department from 1963 until 1987.

Erich P. Ippen (MIT) will present the R. V. Pole Memorial Lecture, titled "Ultrafast Optics and Optoelectronics." Three other talks are scheduled for the session: Peter K. Runge (AT&T Bell Labs, Holmdel) will speak on TAT-8, the first transoceanic lightwave transmission system; Donald R. Scifres (Spectra Diode Labora-

tories, San Jose, California) will speak on frontiers of semiconductor laser research; and John H. Nuckolls and E. Michael Campbell (both at Lawrence Livermore National Laboratory) will speak on progress in laser fusion.

The IEEE Lasers and Electro-Optics Society will announce the winner of its Quantum Electronics Award at the plenary session. IEEE has also scheduled an awards banquet, open to all meeting attendees, members of the

IEEE Lasers and Electro-Optics Society and their guests, for Tuesday evening. Milton Chang (Newport Corporation, Fountain Valley, California) will be the guest speaker.

Exhibit

More than 260 manufacturers, publishers and international societies will participate in the annual technical exhibit. The show will be housed in the convention center, and will be open on Tuesday and Wednesday

from 10 am to 6 pm and on Thursday from 10 am to 5 pm. Attendees may enter daily drawings to win door prizes such as lasers, meters and cameras.

OSA and IEEE will operate a placement center at the convention center; it will be open from 8:30 am until 5 pm, Monday through Thursday. A press room will also be maintained at the convention center from 8 am to 5 pm, Monday through Thursday.

—MARGARET MARYNOWSKI ■

Invited Sessions and Papers

Monday

morning

Laser fusion and interaction. *S. Nakai, T. Yamanaka, H. Azechi, C. Yamanaka*
Single-frequency diode lasers. *Y. Suematsu*
Nonlinear optics. *R. W. Boyd*
Infrared space imaging applications. *J. B. Wellman*
Fusion laser technology. *T. Kessler, W. Castle, N. Sampat, S. Skupsky, D. Smith, S. Swales*
Dynamics and characteristics of diode lasers. *J. Bowers*
Infrared detectors and materials. *J. P. Rode, J. F. Scherzina*
Tunable laser systems. *C. R. Pollock*

afternoon

Plenary and awards session. *E. P. Ippen, P. K. Runge, D. R. Scifres, J. H. Nuckolls, E. M. Campbell*

Tuesday

morning

Advanced devices for infrared detection. *P. L. Richards, M. G. Stapelbroek*
Atmospheric LIDAR I. *M. Maeda, T. Shibata, G. Cecchi, P. Mazzinghi, L. Pantani*
Phase conjugation in BaTiO_4 . *J. Feinberg*
Fiber systems limitations. *R. W. Tkach*
Electro-optic switching. *R. S. Tucker, G. Eisenstein, S. K. Korotky*
Atmospheric LIDAR II. *H. Edner, G. W. Faris, A. Sunesson, S. Svanberg*

afternoon

Photorefractive effects. *D. M. Pepper, E. Voit, P. Amrhein, M. Backmann, P. Gunter*
XeF lasers. *R. Sauerbrey, W. L. Wilson Jr, F. K. Tittel, W. L. Nighan*
Interferometry. *T. Yoshino*
Low-dimensional semiconductor structures. *D. S. Chemla, D. A. B. Miller, S. Schmitt-Rink*
Blue and green ocean optics and LIDAR. *F. E. Hoge, G. C. Mooradian*
Integrated optoelectronics. *O. Wada*
Spectral- and time-resolved measurements. *D. F. Gray, F. Strumia*
Wave mixing in semiconductors. *B. Imbert, H. Rajbenbach, S. Mallick, J. P. Heriau, J. P. Huignard*
Space applications of LIDAR. *C. S. Gardner*

Wednesday

morning

Wavelength multiplexing. *C. A. Brackert*
High-power diode lasers. *G. R. Hadley, J. P. Hohimer, A. Owyong*
Laser acceleration and related phenomena. *C. Joshi*
High-power laser materials and films. *K. Vedam, S. Y. Kim*
Optical bistability and switching. *Y. Mori, J. Shibata, T. Kajiwara*
Laser materials processing. *C. Banas*
Laser arrays. *D. F. Welch*
Laser chemistry. *W. Hoheisel, K. Jungmann, M. Vollmer, R. Weidenauer, F. Trager*
Fibers and photoprocessing. *J. Y. Moisan*
Optical processing. *H. Nishihara, K. Wagner*

Lasers and techniques for laser processing. *D. R. Hall, H. J. Baker*

afternoon

Raman scattering. *W. K. Bischel*
Near-infrared gas lasers. *B. L. Wexler, A. Suda, J. E. Tucker, B. J. Feldman, K. Riley, G. A. Mesyats, V. F. Tarasenko*
Semiconductor optical nonlinearities and applications. *D. G. St reel, J. T. Remillard, H. Wang, M. D. Webb*
Diagnostics and deposition of electronic materials. *J. J. Zinck*
Microscopy. *Y. Horikawa, M. Yamamoto, K. Yamamoto*
Surfaces and monolayers. *R. Superfine, P. Guyot-Sionnest, J. H. Hunt, Y. R. Shen*
Properties of semiconductor lasers and amplifiers. *J. R. Shealy, D. P. Bour*
Optical nonlinearities of organic materials. *I. Ledoux, D. Jasse, R. Hierle, J. Zyss*
Surface reactions for semiconductor processing. *J. H. Brannon*
Electro-optical components. *D. Sesko, C. Wieman, A. R. Tanguay Jr*

Thursday

morning

Laser-diode-pumped solid-state lasers. *W. F. Krupke*
Diagnostics and sensing. *P. H. Paul, J. M. Seitzman, L. M. Cohen, B. K. McMillin, R. K. Hanson*
Ultrafast switching and shaping. *J. P. Heritage, A. M. Weiner, J. A. Salehi, M. Srem*
Laser ablative interactions for microelectronics. *T. Venkatesan, E. W. Chose, C. C. Chang, R. Kirchnavek, X. D. Wu, A. Inam, B. M. McWilliams, C. Y. Fu, F. Mirlitsky, K. H. Weiner*
Fiber lasers. *D. C. Hanna*
Epitaxial growth and thin film patterning. *A. Doi, T. Meguro, S. Iwai, Y. Aoyagi, S. Namba*
Ultrashort-pulse lasers. *Y. Ishida, T. Tokizaki, T. Yajima*
Laser ablation in polymers. *R. Srinivasan, E. Surcliffe, B. Braren*
Ophthalmic applications of lasers. *A. M. Razhev, V. V. Volkov, P. S. Avdeev, Yu. D. Berezin, A. F. Gatsu, Ya. L. Kulakov*

afternoon

Miscellaneous gas lasers. *A. Feitisch, T. Muller, H. Welling, B. Wellegehausen*
Growth and performance of diode lasers. *U. Koren, B. I. Miller*
Holographic and photorefractive optical processing. *B. Ya. Zel'dovich*
Ultrafast electrical pulses. *J. A. Valdmanis*
Miscellaneous medical applications. *F. Docchio, R. Ramponi, J. Marshall, R. Cubeddu*
Growth and performance of diode lasers. *M. Razezghi, D. Z. Garbusov, I. N. Arsenyev, A. V. Ovchinnikov, I. S. Tarasov*
Slab lasers. *Y. Fujii*
Lasers in biology. *L. M. Smith, K. O. Greulich, S. Monajembashi, G. Weber, N. Ponielis, R. Wiegand, J. Wolfrum*

Friday

morning

Free-electron lasers. *G. Darlot*
Lanthanide series lasers. *V. G. Ostroumov, A. M. Prokhorov, I. A. Shcherbakov*
Ultrashort pulse amplifiers. *S. Szatmari, F. P. Schafer*