

In memoriam: Tony Siegman, 1931–2011

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Anthony E. Siegman, laser pioneer and professor emeritus of electrical engineering and applied physics at Stanford, died at home on October 7, 2011. His 1,283 page text, *Lasers*, published in 1986, was one of the first major science textbooks published from start to finish using \TeX and instantly became a classic. Its acceptance and success established that \TeX was capable of producing books that were just as elegant and attractive as traditionally typeset books, at a fraction of the cost, and free of errors introduced by conventional production processes. The publication of *Lasers* helped change forever the way that scientific and technical books are published and Tony Siegman played a critical role in that revolution.

A Michigan native, Tony completed his AB degree Summa Cum Laude in three years as a National Merit Scholar at Harvard, where he played the clarinet in the Harvard Marching Band. After two years on a cooperative plan with UCLA and the Hughes Research Labs in Culver City, California, he moved north to Stanford. There he was appointed to the

Stanford faculty on an acting basis in 1956, and received his PhD degree in Electrical Engineering in 1957 with a dissertation on microwave noise in electron beams and traveling-wave tubes.

Tony was part of the program committee and an active participant in the historic first Quantum Electronics symposium at Shawanga Lodge, New York, in 1959. That marked the start of serious research into lasers. Thereafter, he rapidly began to move his research from microwaves and masers to optics and lasers. After 1960, his work evolved into a long research and teaching career in lasers and optics, during which he supervised some 40 PhD dissertations and published numerous scientific articles and three textbooks: *Microwave Solid-State Masers* (McGraw-Hill, 1964), *An Introduction to Lasers and Masers* (McGraw-Hill, 1972), and *Lasers* (University Science Books, 1986).

Tony's foremost technical contribution is probably his invention of the unstable resonator — a conceptual advance that made possible high-power lasers with high beam quality. He directed the Ginzton Laboratory at Stanford from 1978 to 1983 and again in 1998–99, and served on numerous academic committees and as a member of the Stanford Faculty Senate and its Steering Committee. He spent sabbaticals as Visiting Professor of Applied Physics at Harvard in 1965, Guggenheim Fellow at the IBM Research Labs in Zurich in 1969–70, and Humboldt Senior Scientist at the Max Planck Institute for Quantum Optics in Garching, Germany, in 1984–85.

He was regarded by many as a true patriarch in his field, and remembered with warmth and admiration by his students and colleagues alike. His professional colleagues have initiated an endowment fund to carry on, and now named in his honor, the Siegman International Summer Session on Lasers and Their Applications. The prototype in 2011 was the last of his life-long professional volunteer activities. For more about the project, or to make a contribution in his memory, please see <http://www.osa-foundation.org/Siegman>.

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