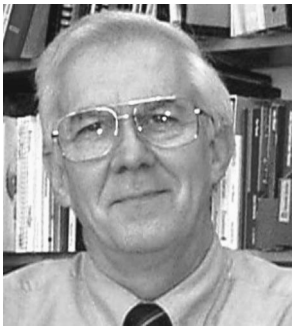

‘‘How do you explain curiosity?’’

The portrayal of scientists and engineers in the popular media tends to one of two stereotypes: the mad scientist or the nerd. But rarely in these reports is there ever a depiction of the processes of experimentation, search, and discovery that many of us love and cherish. As Dave Wiley, a colleague here at Georgia Tech and retired Regents Professor, says, ‘‘I know how ballplayers feel when they get up in the morning. You look forward to playing your next game.’’ But the continual fascination we derive from our curiosity is difficult to transmit to the public.

This past summer there were two works of literature that managed to tell others something about what we do beyond frowning in front of a computer. One was a play, *Arcadia*, by Tom Stoppard; the other a book on deep-sea recovery, *Ship of Gold in the Deep Blue Sea,* by Gary Kinder (Vintage Books). Most people would not know Tom Stoppard but for the fact that he won an Oscar for the screenplay for *Shakespeare in Love.* Both that movie and *Arcadia* display Stoppard’s wonderful ability to wedge himself into a piece of history and explore the creative processes. In *Shakespeare in Love* Stoppard and producer Marc Norman make up a story about how Shakespeare wrote *Romeo and Juliet*. It shows Will gathering material, snitching ideas from different sources to finish a play within deadline on an already-spent budget.

Far more intriguing to me and, I would hope, to other researchers is Stoppard’s *Arcadia*. The play takes place in an English country house at two different times, 1809 and the present. Scene changes are marked only by the fact that the actors dress and speak differently. Within this sly construct, Stoppard manages to say interesting and important things about chaos theory, academic research, landscaping and the thrill of discovery.

One of the most engrossing elements of the play is that the audience observes the scene in 1809 as two modern day scholars try to tease out of the books and papers in the house what happened at the earlier time. It’s like watching an archeological dig with an x-ray machine. The other thread involves a young girl who discovers the use of recursion in calculations that leads to fractal behavior. The consequences are by turns sad, thrilling, and ironic. I know of no other work that exposes so many of the motivations for why we do science and engineering. Besides the appeal of curiosity, the play shows priority claims, fame, greed, and ruthlessness in the name of discovery. Most of all, this play celebrates intellectual inquiry, showing its complications and its worth.

So does *Ship of Gold* . . . . Interestingly enough, this book also intermixes two eras: the time of the California gold rush and modern day. The work describes the sinking of a ship laden with gold in a storm off the East Coast of the United States in 1857. The modern day enterprise concerns locating and retrieving the treasure onboard. Here the interplay between history and technology is much more intimate. Historical accounts of the wreck are examined and encoded. Times and location fixes are evaluated and rated. At the same time a technology is developed to enable deep-sea searches. Lack of illumination and high pressures determined that a remote-controlled platform would be required to explore the possible sites and bring back any treasure.

The driving force behind this project is Tommy Thompson, a civil engineer from Ohio State, who worked with a number of treasure hunters before striking out on his own. The book details the technical, legal, and social (financial) effort required to explore for the wreck. As with *Arcadia* the book depicts the process of intellectual inquiry needed to carry out this difficult search. My only quibble with the book is that as the story progresses, the presence of Tommy Thompson becomes more and more remote until he appears as if observed by one of his remote deep-sea platforms.

Our own descriptions of what we have found to be interesting are considerably more prosaic than the work

chronicled in the book. They appear in the pages of this journal. They cannot be shared as easily with a non-technical person as these two works. Still, the same motivations and emotions caused these pages to be created. If you would enjoy a well-told tale of technology, read the book and give it to your non-technical friends. And keep your eye out for a production of *Arcadia*.

Donald C. O'Shea
Editor

The ballots for the member vote on the merger of SPIE and OSA have been mailed to all members of SPIE. I have expressed my opinions on the merger in several editorials, so I will not repeat it here, except to say that I strongly favor the merger.

I urge all members to take the time to inform themselves on the details of the merger and to return their ballot by 20 September 1999.

DO'S

Rudolf Kingslake Medal and Prize

The Rudolf Kingslake Medal and Prize is awarded annually in recognition of the most noteworthy original paper to appear in *Optical Engineering* on theoretical or experimental aspects of optical engineering. The 1998 Rudolf Kingslake Medal and Prize is awarded to **Russell C. Hardie, Kenneth J. Barnard, John G. Bognar, Ernest E. Armstrong, and Edward A. Watson** for their paper entitled **''High resolution image reconstruction from a sequence of rotated and translated frames and its application to an infrared imaging system''** which appeared in the January 1998 issue. This paper was selected by the Kingslake Award Committee as a report on work that will lay the foundation for future systems combining both resolution enhancement and electronic stabilization. This work will have a profound long term impact on affordable high resolution electro-optical sensors.

Rudolf Kingslake Medal and Prize—Past Recipients

1974 Irving R. Abel and B. R. Reynolds
1975 J. M. Burch and C. Forno
1976 Richard E. Swing
1977 David B. Kay and Brian J. Thompson
1978 Norman J. Brown
1979 J. R. Fienup
1980 G. Ferrano and G. Hausler
1981 Robert A. Sprague and William D. Turner
1982 David M. Pepper
1983 James R. Palmer
1984 Gene R. Gindi and Arthur F. Gmitro
1985 Armand R. Tanguay, Jr.
1986 Arthur D. Fischer, Lai-Chang Ling, John N. Lee, and Robert C. Fukuda
1987 Chris P. Kirk
1988 Ares J. Rosakis, Alan T. Zehnder, and Ramaratnam Narasimhan
1989 Pochi Yeh, Arthur Chiou, John Hong, Paul H. Beckwith, Tallis Chang, and Monte Khoshnevisan
1990 Paul R. Prucnal and Philippe A. Perrier
1991 Brian E. Newman
1992 Aden B. Meinel and Marjorie P. Meinel
1993 Harvey M. Phillips and Roland A. Sauerbrey
1994 Jose M. Sasian
1995 Arnold Daniels, Glenn D. Boreman, Alfred D. Ducharme, and Eyal Sapir
1996 Pär Kierkegaard
1997 Gleb Vdovin, Simon Middlehoek, and Pasqualina M. Sarro