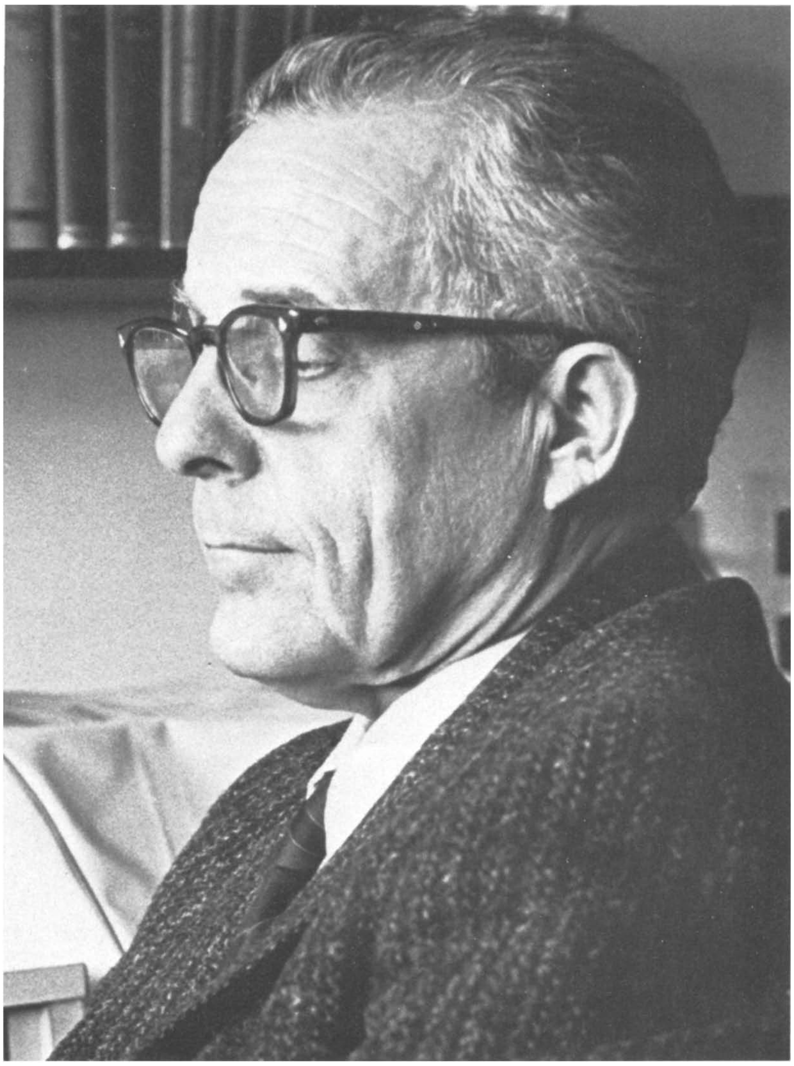
Meet your new AAPT president: Kenneth Davis



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AAPT President Kenneth E. Davis of Reed College has arrived at his post by a route well known in physics. Given impetus toward physics by his high school teacher, Mr. Small, at Lindblom High School on the south side of Chicago, he majored in this subject at Kalamazoo College. There the widely respected John W. Hornbeck, Oersted Medallist in 1950, became a definitive influence on Ken's career, just as he had on those of many other physicists. After graduating with a B.A. in physics in 1937, Kenneth Davis spent three years as a high school teacher of physics, chemistry, and mathematics. In 1940 he entered Syracuse University, completing a master's in physics two years later. Then he transferred to the University of Rochester, and after an interruption caused by World War II he completed his doctoral degree in 1948. He went straight to the feet of another giant in physics education, Professor A. A. Knowlton of Reed College. This former president of AAPT (1942) and Oersted Medallist (1951) was one of the architects of Reed's long supremacy as a productive undergraduate source of Ph.D.'s. In the unique Reed atmosphere Ken's career matured and developed the distinction that led to his selection to head our organization. The influence of dynamic teachers apparent throughout this recital is one bright invariant in the never-ending succession of educational transformations that will be proposed and tried as long as there is an AAPT.

Ken's career has been graced by appointments and fellowships of several kinds. As a graduate student he served the usual stint as a teaching assistant, but for three World War II years at Rochester he combined an instructorship with a research assistantship in the Manhattan Project. Subsequently, he became a Dupont Predoctoral Fellow and a University Fellow. While at Reed he was a Ford Foundation Fellow in 1952-53, a National Science Foundation Senior Faculty Fellow in Birmingham, England in 1961-62 and a Fulbright Lecturer in Pedagogical Physics in the Royal Danish Teaching University in 1968-69.

The community of physics teachers has been well served by Ken. He has held a number of positions in the Oregon Section of AAPT, including a term as its president and a decade as its National Council representative. From 1962-66 he was a member of the Commission on College Physics. He has participated in the Visiting Scientists Program of the American Institute of Physics. He has been a United States representative to several international conferences held in a variety of sites in Europe.

Even prior to the inception of the PSSC project, Ken took an active interest in high school physics teaching by participating in and directing in-service and summer institutes. His activities on behalf of high school physics have continued unabated for a quarter century, and, in addition, from time to time he has turned his attention to projects aimed at helping college teachers. A particularly fruitful endeavor has been a series of semi-annual area meetings of high school teachers held at Reed College ever since the early days of PSSC. Ken quite reasonably feels a sense of pride in the continuity of the series and in its integrated impact.

Ken has had a long-standing interest in the subject of luminescence. He has carried out research in cathode luminescence and maintains an active interest in the electro— and uv photo-variations on the theme. He also has

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made a study of colorimetry, a murky topic on which he claims to be able to shed some light.

The depth of Ken's commitment to physics teaching was recognized in 1963 when AAPT awarded him a Distinguished Service Citation. Obviously, he did not rest on that laurel but has continued to carry forward the high tradition of his mentors. As president of AAPT in a time of uncertain public interest in education, especially in physics, he will find support in this tradition. AAPT needs the thoughtful, calm judgment he brings to all assignments. To be sure, his sense of proportion might have been shaken by the need to readjust from the millimicron to the nanometer, but those who have worked with Ken are aware of his rapid response time and know he is never far off the beam. We welcome and salute President Davis and congratulate ourselves as he takes office.

The Association is You
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strengthened the Association and promises much for the future. We must continue to have good communication with the individual members because we, as individuals, are the strength of our profession and, united in our efforts, can do far more than our officers or any one of us alone. We think our journals are very good indeed, and they are. They are widely circulated and read and they are fulfilling a primary need of the profession. This will be continued. Anywhere we fall short we must know about it and be helped to improve even more. Such effective feedback can only come from each of us acting on his or her own evaluations and from merging our efforts with our colleagues.

How highly do you value your work, your profession, and your commitment? Persuade your fellows of it and the past will have been merely prologue for what we can do.

would you believe . . . ?

Send examples of errors and misleading statements found in introductory physics educational material to Mario Iona, Dept. of Physics and Astronomy, University of Denver, Denver,Colorado 80210.

Life time in radioactivity

The average value of a distribution is the same as the most probable value in general only if the distribution is symmetrical and has a single peak. The distribution of life times of unstable particles is an exponential function with negative exponent, with some particles surviving for a long time, even if the average lifetime is very small. Using integral calculus, one can show that the average life is the value of τ in the decay equation $N = N_0 e^{-t/\tau}$. This equation is usually derived from the basic assumption that the rate of decay is proportional to the number of particles present, i.e., largest at time zero before any decay has taken place. Now here's a textbook question, which, at the very least, is misleading:

"An engineer wants to place a particle detector at the distance from the source where most particles will die. He knows the average lifetime of his particles is 10^{-10} seconds, and they move with a speed of 0.99 c. How far from the source will he place the detector?" The "source," presumably, is a target where an accelerator beam produces the unstable particles — perhaps K mesons. If the problem were placed in the chapter on radioactive decay, clearly it would be to test whether the student recognized that the greatest decay rate occurs at the source irrespective of the reference frame of coordinates.

To place the problem in the chapter on relativity tempts the nonscience major, for whom this book is intended, to infer erroneously that the greatest decay rate will occur at the average lifetime and simply translate this time into the observer's reference frame. Unfortunately, the answer, 21 cm as given ten pages later, proves that whoever included the problem fell into the same trap.

Quotes from: *An Introduction to the Meaning and Structure of Physics.* Leon N. Cooper. Harper & Row. (1968). p. 724.

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