

75 years of little change in physics teaching and scientific literacy

As part of celebrating its diamond anniversary at Syracuse University this summer, the American Association of Physics Teachers invited recipients of its most prestigious award, the Oersted Medal, to reflect on the lectures Oersted Medalists have given over the past seven decades. Named for Hans Christian Oersted, the Danish physics teacher who first discovered the magnetic effects of electric current, this award "recognizes notable contributions to the teaching of physics."

John S. Rigden of Washington University, the 2005 recipient of the Association's Millikan Medal, which "recognizes teachers who have made notable and creative contributions to the teaching of physics," found both uplift and depression in his survey of the Oersted lectures, the latter because the concerns of the past seven decades are still with us today.

Rigden noted that the late I. I. Rabi, Oersted Medalist from 1982, recognized that science depended on the appreciation of the public, a feeling echoed by many other Oersted Medalists. Yet Rigden lamented that the scientific illiteracy of the general public remains today, despite what many Oersted Medalists said could be done about it. For this Rigden faulted the introductory physics course -- for setting the bar so high that many students failed out, for aiming for "complete coverage" (a little bit about everything), and for a time-worn sequence of topics. The only change in textbooks, he rued, has been the addition of color, echoing a similar call that was reported in our Winter 1989 issue, and they contain nothing about current research. A. A. Knowlton in 1952 likened the general physics course to a tour of an art museum rather than a tour of the studios of the artists, Rigden said.