

NEW CONGRESSIONAL FELLOWS BEGIN TERMS IN JANUARY 1989

Joan F. Cartier and Mark W. Pestak have been selected as the 1989 APS Congressional Scientist Fellows. The APS Congressional Scientist Fellowship program provides an opportunity for physicists to serve the public by working either in the office of a member of Congress or for a Congressional committee, providing information, analyses and recommendations on policy issues pertaining to science.

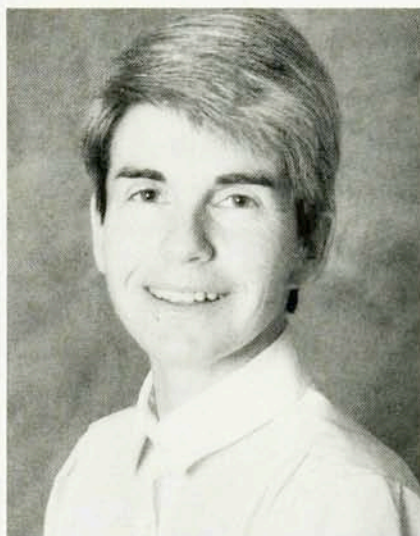
Cartier received her PhD in chemical physics from the University of Florida in 1983. Her dissertation developed a solution to the Schwinger-Dyson equations of quantum electrodynamics, and it involved extensive numerical procedures and computer programming. In her post-doctoral research at the Center for Particle Studies of the University of Texas at Austin, she studied developments in magnetic monopole theory and their relations with the established and unifying gauge theory of interactions.

In 1984 Cartier joined the Texas Research Institute, where she is now assistant head of the department of marine technology. In her work at TRI, which has been supported by the Navy's program to improve the reliability and performance of sonar devices, she has done analytical and computer modeling of the physical processes associated with the degradation of the acoustic signal in sonar transducers. She is coeditor of the reports TRI submits to the Navy.

Readers of *PHYSICS TODAY* may be familiar with another aspect of Cartier's work: her cartoons, which have appeared in this magazine and other science publications.

Cartier has expressed her desire to help, as a Congressional Fellow, maintain and strengthen communications between society at large and the scientific community.

Pestak received his PhD in 1983 from Pennsylvania State University for work in phase transitions and

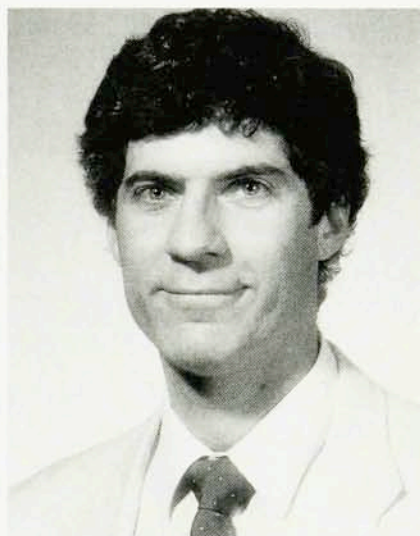


Joan F. Cartier

critical phenomena. He is currently a senior research physicist and project leader of the fluid properties group of BP America. Pestak initiated a corporate research program in miscible enhanced oil recovery, a technique whereby fluid is injected into porous rock and mixes with trapped oil, lowering its viscosity and permitting extraction. He built and tested an automated system for gathering data on potential miscible injectants.

Since 1985 Pestak has worked as a technical adviser to BP America's gas reserves group, which prepares and defends the company's technical position in negotiations with other major oil companies. Pestak developed a database of nonproprietary information to serve as a common point of departure for companies now seeking to determine how to allocate equitable shares of the Prudhoe Bay oil and gas field in Alaska. He represented his employer in the negotiations.

Pestak is a board member of the Commission on Catholic Community Action in Cleveland, and he works in the commission's program to feed the hungry and to solve problems that



Mark W. Pestak

cause hunger. Pestak helped the commission persuade Cleveland that a school funding levy was necessary to improve the city school system.

Pestak and Cartier were chosen by a selection committee on the basis of their applications, references and interviews conducted at the APS meeting in Baltimore last April. The committee is headed by APS vice president Eugen Merzbacher, of the University of North Carolina at Chapel Hill. The program is administered by Mary L. Shoaf of the Princeton Plasma Physics Laboratory.

APS Congressional Scientist Fellows are free to choose from among the Congressional offices that notify the American Association for the Advancement of Science that they are interested in having fellows join their staffs. The AAAS organizes an orientation program for new fellows and assists them in arranging interviews. A Congressional Fellow's one-year term begins in September, except in Presidential election years, when the term begins in January. The deadline for next year's applications is 12 February 1989.