

# Schrieffer heads Theory Institute

On 1 September, Robert Schrieffer will succeed Walter Kohn as director of the Institute for Theoretical Physics in Santa Barbara. Schrieffer, who is well known for his work with John Bardeen and Leon Cooper in developing the so-called "BCS theory" of superconductivity, has concentrated in recent years primarily on polymer physics, in particular on solitons with fractional quantum numbers. Schrieffer served on an NSF advisory committee that recommended in 1977 the establishment of a theoretical physics institute and a second NSF panel that wrote guidelines for the institute in 1978. He was an original member of the Institute's advisory board, a 16-member panel of physicists around the country, and he was its chairman in 1980-81.

In April 1983, the National Science Board, which sets policy for NSF, approved the recommendation of a special panel headed by Peter Carruthers of Los Alamos National Laboratory that the agency should continue to sponsor the Institute for Theoretical Physics through 1989 at least (PHYSICS TODAY, August 1983, page 48). The Carruthers panel commended the facility and participants for developing a "unique atmosphere" of "special excitement" and "high expectations."

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**A discussion at the Institute for Theoretical Physics** involves (left to right) Walter Kohn, J. Robert Schrieffer and James Langer, one of the Institute's three permanent members.



## Education

### Physics bachelor's degrees on the rise

A 5% rise in the number of physics bachelor's degrees granted last year brought the figure to its highest level in ten years. In the academic year 1982-83, 4800 students earned physics bachelor's degrees in the US, according to the new AIP Manpower report, *Survey of Physics and Astronomy Bachelor's Degree Recipients*. The level has been climbing from a nadir of 4400 in 1978-79.

The survey also casts a new light on the "crisis in physics education." The severity of the crisis shows up in the increased number of physics bachelors who never took physics in high school. In 1983, 14% of respondents going on to graduate study in physics had had no high-school physics. Ten years ago the proportion was 9%. In the direction of a correction, the study finds that the number of physics bachelors going into high-school teaching continues a rise

begun two years ago. It was 4% last year, up from 2% two years ago. Even with recent increases, the percentage is one-third the level it was eight years ago. In addition, salaries for 1983 respondents entering high-school teaching have risen more than those in any other employment category, to a still paltry average of \$1130 monthly. Although that average is up 7.6%, it is far below the average for all new physics bachelors, \$1670.

Otherwise, salary figures are modestly higher than they were in 1982 for new physics bachelors. An overall decline of 2.3% results from a large increase in employment in the military, which, after educational institutions, is the lowest-paying type of employer for new graduates. Out of all new bachelors in physics, 8% entered military service. This percentage, rising consistently, has doubled over the

last ten years.

The survey makes fewer generalizations about astronomers, because their numbers are small enough that percentages lose statistical significance. The number of astronomy bachelors fell to 138, down from a recent peak of 181 recorded in 1982.

The report is available, free, from its author, Susanne D. Ellis, AIP, 335 East 45th Street, New York, N.Y. 10017.

### APS forms groups on instrument and materials

Responding to petitions, APS Council authorized the formation of two Topical Groups during its April meeting in New York. They are called "Instrument and Measurement Science" and "Materials Physics." APS members wishing to join a Group can use the application blanks that appear in the July/August issue of the *APS Bulletin*.

Topical Groups are intended to supplement areas of physics that are not encompassed by one of the Society's Divisions. Regulations governing the formation and operation of Topical Groups were adopted by the APS Council during its November 1983 meeting in San Francisco and were published in the April 1984 issue of the *APS Bulletin* (page 603).

The impetus for the formation of the Topical Group on Instrument and Measurement Science came from Lawrence Rubin (MIT), who submitted a petition requesting the establishment of a division for instrument and measurement science. Acting on the advice of a special ad hoc advisory panel, Council approved the formation of a Topical Group, rather than a division, on an experimental basis. The petition to form a Topical Group for Materials Physics, which was approved without modification, was submitted by Robb Thompson of the National Bureau of Standards.

### Newport Corporation funds electro-optics research grants

To encourage and support university research in lasers and electro-optics, the Newport Corporation is providing up to \$500 000 over the next five years for research grants.

Recipients will be doctoral candidates who are working on advancing or applying lasers and electro-optical technology. The Optical Society of America will select candidates and administer the grants, which will provide up to \$12 000 each. Grants given for one-year periods, will be renewable once.

The first awards will be made in the fall of this year. □