we hear that

Crystal Technology of Palo Alto, Cal., has appointed **Edward V. Roos** as manager of its optical device department. Roos left Harris Corp., Melbourne, Florida, to take the new position.

The American Society of Testing and Materials has named **Arnold J. Lincoln** to receive a 1980 Award of Merit. Lincoln is a manager for the Englehard Industries Division of Englehard Minerals and Chemicals Corp., Newark, N.J.

obituaries

Leslie S. G. Kovasznay

Leslie Kovasznay died suddenly on 17 April 1980 at the age of 62. He was a world leader in turbulent flow research, best known for novel experimental techniques and crucial measurements, as well as significant contributions to theory.

Born in Budapest, 14 April 1918, Kovasznay earned his Dr. Tech. Sci. at the Royal Hungarian Institute of Technology in 1943; in the laboratory of E. Abody-Anderlik. After five years on that faculty (1941–46), he spent a year at Cambridge University's Cavendish Laboratory with Sir Geoffrey Taylor and then joined the new Aeronautics Department organized by Francis H. Clauser at The Johns Hopkins University, where he remained for more than 31 years. In December 1978 he resigned to become professor of mechanical engineering at The University of Houston.

The American Physical Society Councillor from the Division of Fluid Dynamics in recent years, he was an early and active member of the Division. He was a Fellow of the American Academy of Arts and Sciences, and a member of other technical and honorary societies.

Shortly after his arrival at Johns Hopkins, he became a consultant for the National Bureau of Standards, for which he designed an improved hotwire anemometry electronic system. As consultant for the Ballistics Research Laboratory, Aberdeen Proving Ground, he devised a condenser configuration that suppressed the troublesome "ringing" of microsecond spark discharge circuits used for short duration photographs. Meanwhile at Johns Hopkins he developed the first basis procedures for hot-wire anemometers in supersonic flows, procedures still in use. He was also one of the first to apply the statistical "information theory" of Claude Shannon to photographic measurements, treating the film graininess as the noise.

Kovasznay's other advances in experimental technique, many of them in collaboration with students, postdoctoral research associates and senior scholars, included the generalization of the hot-wire "length correction" to any

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three dimensional, non-uniform sensing device, the invention of a hot-wire array whose output is streamwise vorticity, the design of a modified hot-wire microphone for measuring surface pressure fluctuations and several other procedures for hot-wire measurements of turbulent velocities. Conditionally sampled data were the hallmark of his later experiments, not only in normally intermittent turbulent regions, but also in boundary layer transition to turbulence and in turbulent "spots," and in a "puffing" jet. In the 1970's he focussed also on aerodynamic sound generation and interactions of sound and turbulence.

Kovasznay's theoretical contributions relevant to turbulence began with the simplest plausible turbulence spectrum, and included the categorization of gas-dynamic fluctuations into vorticity, sound and entropy "modes" and the analysis of the lowest order non-linear interactions. After work on laminar instability and magneto-fluid dynamic fluctuations, he introduced a practical turbulent shear equation closure model. That was followed with partially deterministic turbulence models.

In his prepared lectures, Kovasznay was enthusiastic and illuminating. And at Johns Hopkins he offered courses in both theoretical and experimental fluid mechanics. His outstanding didactic effort was a sophomore-level course on experimental procedures in engineering science. The research spirit it conveyed contrasted sharply with most elementary laboratory courses.

He was a premier teacher of research students, and a lively listener to anyone seeking advice—he often asked new and interesting questions. This was one of many reasons that he was a welcome visitor at fluid dynamics research centers all over the world.

In fact, travel was one of Kovasznay's enduring enthusiasms. He rarely declined an invitation to lecture at another university or a conference, and made several extended visits to France and to Japan. In France his deepest involvement was with Alexandre Favre and his Institut de Mecanique Statisque de la Turbulence, Université d'Aix-Marseille. One principal result was their 1976 monograph on turbulent flow, co-authored with Aix-Marseilles colleagues. In Japan his initial host and guide was Itiro Tani of the University of Tokyo, and he eventually collaborated with researchers at several universities, especially during two years as scientific officer at the new ONR Tokyo liaison group 1975–77. As early as 1956 he had been awarded a Medal of the Université Libre of Brussels.

At the University of Houston, his new colleague A. K. M. Fazle Hussain had already developed a lively turbulence laboratory and Kovasznay was optimistically designing a neighboring one.

Kovasznay was gregarious and affable, a raconteur, a man who treasured friends all over the world. He took his hobbies seriously, and was a collector of bizarre and entertaining information, particularly about human foibles and appetites of all kinds. He was a gourmet cook, and a creative artist in several media.

Leslie Kovasznay was a key member of world fluid dynamics. He is already seriously missed.

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Aleksander Jabłoński

Aleksander Jabłoński, a distinguished Polish physicist, died on 10 September 1980 at the age of 82. His passing brings to an end an era in Polish science and he leaves behind him a rich heritage of scientific accomplishment as well as an abundance of pupils, many of whom now occupy university chairs of their own.

Jabłoński's scientific career began in 1925 at the University of Warsaw. He spent the years 1932–34 in Germany on a Rockefeller Postdoctorate Fellowship. In 1938 was appointed professor