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technological innovation or practical applications.

The first Kistemaker prize has been awarded to W. Werner, of the Institute of Applied Physics in Delft. His work on diffraction gratings has seen applications in astronomy (for example, on IRAS), in energy research (tokamak diagnostics, for example) as well as in other practical applications of spectroscopy.

Chemical Society honors work in crystallography

The American Chemical Society has given the Garvan medal for 1984 to Martha L. Ludwig, of the biophysics research division at the University of Michigan. Ludwig's research has focused on the structure and action of electron-transport proteins. Her work in protein crystallography has elucidated the structural changes that accompany changes in oxidation state in flavodoxin. Her work has established firm reference points in discussions of flavin enzymology.

Ludwig received her education at Cornell (PhD in 1956) and joined the faculty at Michigan in 1967. At Michigan she established an independent program in protein crystallography.

in brief

The Polish Physical Society has presented Marian Smoluchowski medals to Adriano Gozzini of Pisa and Wladyslaw Opechowski of the University of British Columbia for their contributions to science and to international scientific cooperation.

Ken Thompson and Joe Condon, two members of the technical staff at Bell Labs in Murray Hill, N. J., have received a prize from the Fredkin Foundation for developing Belle, the first computer to be ranked a National Master rating in tournament chess.

The Tomalla foundation in Vaduz, Liechtenstein, has awarded its first two prizes for outstanding contributions in gravitation and cosmology to Subrahmanyan Chandrasekhar (University of Chicago) and Andrei Sakharov (Soviet Academy of Sciences).

Thomas H. Lee of the Massachusetts Institute of Technology has been appointed the Director of the International Institute for Applied Systems Analysis, effective 1 September. His predecessor, C. S. Holling, will return to the University of British Columbia at Vancouver, Canada. IIASA is a research organization supported by scien-

tific institutions from both East and West.

Lawrence Berkeley Laboratory has formed a computing division to centralize its several computing facilities. The director of the new division is **Leroy Kerth**.

The next Walter Schottky Visiting Professors at Stanford University will be **Peter Haasen** (Göttingen) and **Hermann Schmalzried** (Hanover). Haasen's research interest is in physical metallurgy; Schmalzried works on solid-state thermodynamics and chemical reactions. The visiting professorships are sponsored by the Volkswagen Foundation.

Taiji Yamanouchi, an assistant director at Fermilab, received the 1983 Nishina Memorial Prize at a ceremony in Tokyo on 6 December. This prize is given to Japanese physicists who have performed distinguished work in the field of atomic and nuclear physics. Yamanouchi was awarded the prize for his accomplishments in high-energy physics, including his contribution to the discovery of the *upsilon* particle at Fermilab.

Paul Roman, formerly Dean of the Graduate School of Drexel University, has accepted the position of Liaison Scientist (physical sciences) for Europe and the Middle East, US Office of Naval Research, and will be stationed for three years at the London, UK branch office of ONR.

James S. Trefil, professor of physics at the University of Virginia, has won an AAAS-Westinghouse Science Journalism Award for a two-part series on cosmogeny written for *Smithsonian* magazine. The articles, entitled "The Universe," describe the Big Bang theory and some theories on the ultimate evolution of the universe; they appeared in the May and June issues of *Smithsonian*.

Veljko Radeka, head of the Instrumentation Division at Brookhaven National Laboratory, and **Frederick Goulding** of the University of California at Berkeley have been jointly awarded the 1983 Merit Award of the Nuclear and Plasma Society of the IEEE.

Andrew Gabriel De Rocco, dean of faculty and college professor of natural sciences at Trinity College in Hartford, Connecticut, has been named president of Denison University. Prior to his 1979 appointment as Trinity's chief academic officer, De Rocco was professor of molecular physics at the Institute for Physical Science and Technology at the University of Maryland.

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Edsger W. Dijkstra, Professor Extraordinarius at the Eindhoven University of Technology in the Netherlands, has been appointed to the Schlumberger Centennial Chair in Computer Sciences in the University of Texas College of Natural Sciences, effective 1 September 1984.

Stuart Samuel, formerly at Columbia University, has joined the high-energy group at City College as associate professor of physics; he has recently been awarded a Sloan Fellowship.

Robert P. Bauman, professor of physics at the University of Alabama and former president of the AAPT, has been named as the first recipient of the Wright A. Gardener Award, given by the Alabama Academy of Science for outstanding achievement in science during residence in Alabama.

N. David Mermin is to succeed N. W. Ashcroft as director of Cornell's Laboratory of Atomic and Solid State Physics. This is not expected to delay the appearance of the undergraduate version of their classic solid-state physics text, which remains scheduled to appear in early 1988.

Ronald L. Snell, formerly senior postdoctoral fellow at the Five College Radio Observatory, and **Judith S. Young** have been appointed assistant professors of astronomy at the University of Massachusetts. Both will continue their current lines of research: Snell, on mass outflows from young stellar objects; and Young, on the molecular content of galaxies.

Stephen E. Strom has been named chairman of the Five College astronomy department, effective 1 July 1984. Strom joined the astronomy program in 1983, after spending eleven years on the staff of the Kitt Peak National Observatory. He plans to continue his research on the early evolution of stars.

Geoff Marcy, currently Carnegie Fellow at Caltech, and **Jeff Greensite**, currently assistant professor at the Niels Bohr Institute, have both been appointed associate professors for 1985-86 in the physics and astronomy department at San Francisco State University. **Guy Fogleman**, a post-doc at TRIUMF, joins the department as visiting assistant professor.

Garth D. Illingworth, an optical astronomer at Kitt Peak National Observatory, has been appointed Deputy Director of NASA's Space Telescope Science Institute, effective 1 November. Illingworth succeeds Donald N. B. Hall, who last spring became Director of the Institute for Astronomy at the University of Hawaii.