



**HOFSTADTER**

who has become professor at MIT.

Florida Technological University has named **Harvey N. Rexroad**, formerly at West Virginia University, department chairman. **John R. Bolte**, formerly with San Diego State Teachers College, has been named professor.

New appointments at the Environmental Science Services Administration Research Laboratories include **Robert W. Knecht** as deputy director, **C. Gordon Little** as director of the wave-propagation laboratory and **Ralph J. Slutz** acting director of the space-disturbances laboratory.

**Tunis Wentink Jr.**, on leave from Geophysics Corporation of America, has been appointed National Science Foundation visiting professor at the Geophysical Institute, University of Alaska, for the spring semester.

Promotions at the City College of New York include **Hiram Hart** to professor, and **Alvin Bachman**, **Philip Baumel** and **Myriam Sarachik** to associate professor. **Fred Rose** is retiring.

**Louis D. Roberts**, formerly at Oak Ridge National Laboratory, and **Charles S. Smith Jr.**, formerly with Case Western Reserve, have become professors at the University of North Carolina, Chapel Hill.

New appointments at Brown University include **Hendrik J. Gerritsen** from RCA Laboratories, Zürich and Princeton, and **Frank S. Levin** from Brookhaven and Harwell as associate professors, **Peder J. Z. Estrup** from the Bartol Research Foundation as associate professor jointly with the chemistry department, **Gerald S. Guralnik** from Rochester, **David Penn** from Chicago and Harwell and **Krishnan**

Nobel Prize physicist and Stanford professor **Robert Hofstadter** was appointed director of the high-energy physics laboratory at Stanford University. He replaces **Carlisle Barber**,

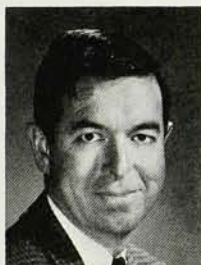
Raman from Syracuse as assistant professors, **Raymond A. Lyttleton** from Cambridge as visiting professor and **W. Noel Cottingham** from Birmingham as visiting associate professor. Promotions include **George Seidel** to professor, **Anthony Houghton** to associate professor and **C. Azeez Ul Haque**, **Joseph Rosen** and **Richard Murphy** to assistant professors.

**Courtland S. Randall** has been named chairman of the information and exhibits division of Oak Ridge Associated Universities and **Frederick P. Napp** has been appointed new assistant chairman.

**Russell G. Herron**, retired Navy commander, has joined Planning Research Corp as a senior associate in the space-systems department.

**James A. McLennan Jr.**, professor at Lehigh University, has been appointed acting department chairman in place of **Raymond J. Emrich**, who is on leave.

**George S. Benton**, director of research laboratories, Environmental Science Services Administration (ESSA), is president-elect for 1968 of the American Meteorological Society. Elected as councilors of the society are **Alfred K. Blackadar**, professor and head of the meteorology department, Pennsylvania State University; **Fred D. White**, head of the atmospheric-sciences section, National Science Foundation; **William H. Best Jr.**, United States Air Force, deputy chief of staff, operations, Hq. Air Weather Service; **David S. Johnson**, director, National Environmental Satellite Center, ESSA and **Robert D. Elliott**, president of North American Weather Consultants.



**HYDE**

can Institute of Physics, Hyde will assume his new position in June.

**W. Lewis Hyde**, director of the Institute of Optics, University of Rochester, has been appointed provost at the Bronx campus of New York University. A consultant to the American

Promoted to the senior staff at Argonne National Laboratory were **Malcolm Derrick** and **Kameshwar C. Wali**, both of the high-energy physics division and **Walter Y. Kato** of the reactor-physics division.

**John K. Hulm**, director of solid-state sciences at Westinghouse Electric Corp, has been appointed to the National Science Foundation Advisory Committee for Science Education.

**Walter Gilbert** will become professor of biophysics at Harvard in July. He is a member of the new biochemistry and molecular biology department as well as of the physics department.

Professor emeritus at Massachusetts Institute of Technology **Samuel C. Collins** has become a vice-president of 500 Incorporated.



**RAMSEY**

professor for the spring semester. He will also direct a special summer conference in physics in June 1969, on the Middlebury campus.

Cornell University has appointed **Carl Sagan**, formerly with Harvard, as associate professor in the astronomy department. Beginning in July he will work in the center for radiophysics and space research, which operates the Arecibo Ionospheric Observatory in Puerto Rico.

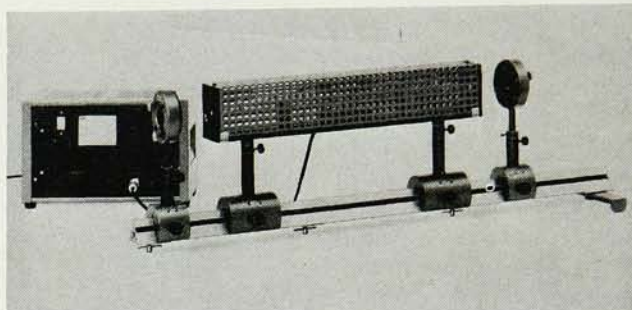
**Herbert C. Corben**, chief scientist of the physical research center, TRW Systems, is visiting professor at Queens College, N. Y.

Newly elected officers of the American Crystallographic Association for 1968 are **Sidney C. Abrahams** of Bell Laboratories, president, **Walter C. Hamilton** of Brookhaven, vice-president. **Robert A. Young**, professor at Georgia Institute of Technology, will succeed **Robinson D. Burbank** as treasurer



## HeNe-LASER 500

A LASER THAT MEETS THE KLINGER STANDARDS  
FOR RESEARCH AND INSTRUCTION



### Featuring . . . . .

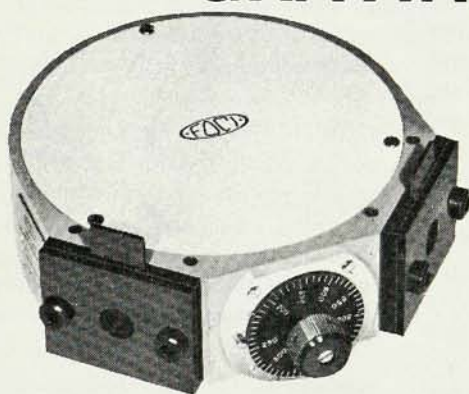
- External mirrors, adjustable and interchangeable
- Provisions for experimental set-ups within resonator area
- Variable resonator length
- Choice of confocal or hemispheric resonator systems
- Minimum continuous output: 1.5 mw at 632.8 nanometers

Just a few suggested applications: Reflectance characteristics of heated materials with the laser beam used as a monochromatic, high intensity probe easily visible against background • Scattering from hot plasma • Rayleigh scattering studies • Raman spectra studies • Chemical emission spectroscopy • Investigation of thermal conductivity • Initiation of photo-chemical reactions • Construction of Doppler-shift instruments • Twyman-Green and other types of interferometry • Holography • Laboratory demonstrations of optical phenomena and laws.

*Prices and literature on request without charge.*

**KLINGER SCIENTIFIC APPARATUS CORP., 83-45 Parsons Blvd., Jamaica, New York 11432**

## Just \$325\* buys the Farrand "Foci-Flex" GRATING MONOCHROMATOR



A low-cost, quality  
instrument ideally suited  
for systems operation,  
education and  
experimental uses.

\*14,440 lines per inch — \$325.; 28,800 lines per inch — \$385.

Featuring: 200-785 m $\mu$  wavelength range  
F/5.3 optical system  
Interchangeable slits  
1 m $\mu$  resolution capability

Accessories and attachments also  
available. Information on other grating  
monochromators on request.



A product of  
Farrand Optical Co., Inc., New York, N. Y.

Direct  
inquiries  
to:

**Farrand OPTICAL CO., INC.**  
Commercial Products Division  
535-PT So. 5th Avenue, Mt. Vernon, N. Y. 10550  
(914) 668-9393/Cable Address: FOCIUS NY



in June. **William L. Kehl** of Gulf Research and Development Co starts his second three-year term as secretary.

At New York Institute of Technology **Miriam Sidran**, formerly with the research department at Grumman Aircraft, has become associate professor and deputy department chairman, and **Robert Small**, also from Grumman, has become associate professor. New assistant professors are **Jack Lowenthal** from Upsala College, **James Kerwin** from St John's and **Lester Seigel** from Columbia.

**Karl G. Malmfors**, former head of the Research Institute for Physics at Stockholm, is National Science Foundation senior scientist and professor at Kansas State University. **Donald Lang** of Harwell and **Arie van Wijngaarden** of the University of Windsor have been named visiting associate professors.

Indiana State University has appointed **Torsten Alväger** as associate professor. He was formerly with the University of Stockholm and the Princeton-Pennsylvania Accelerator at Princeton.

**Frank Verbrugge**, professor of physics and acting dean of the University of Minnesota Institute of Technology, has become director of the university computer services. In this position he will have responsibility for the general-purpose computing facilities. **Warren B. Cheston**, director of the university space-science center, was named dean of the Institute of Technology.



VERBRUGGE

Stevens Institute of Technology has named **Eugene T. Booth** professor and dean-designate of graduate studies. Formerly scientific director and vice-president of Laser Inc, he will become dean in June. Other promotions include **Franklin Pollock** to professor and **Menasha Tausner** to associate professor.

**Stanislaw M. Ulam**, head of the department of mathematics at the University of Colorado, has been given a joint appointment as professor of biophysics in the CU School of Medicine.

Among the recipients of the National Medals of Science presented by President Johnson were **Kenneth S. Cole**, senior biophysicist at the National Institutes of Health, **Jesse W. Beams**, professor at the University of Virginia, and **Gregory Breit**, professor at Yale.

**Sanford B. Newman** has become chief of the materials-evaluation laboratory division at the National Bureau of Standards. **Bascom W. Birmingham** has been appointed executive officer of the NBS Boulder Laboratories. He will continue as chief of the cryogenics division.

Philco-Ford has made **John R. Welty** general manager of the microelectronics division and a vice-president of the corporation. Welty was formerly a vice-president of Motorola.

At Lake Forrest College **Tung Hon Jeong** has been promoted to associate professor.

### *Johnson Wins Armstrong Medal For 50 Years of Radio Study*

The Radio Club of America has presented the Edwin H. Armstrong medal to John B. Johnson. A memorial to the inventor of frequency modulation and superheterodyne circuits, the award is presented to persons contributing outstandingly to the art and science of radio.

Johnson, head of the instrument division at Thomas A. Edison Industries, won the medal in recognition of his discovery of the electromotive force due to thermal agitation in conductors—referred to by communications engineers as the "Johnson noise"—and for his productive career of more than 50 years. Active in early research on cathode-ray tubes, Johnson constructed the first modern oscilloscope tube. After finishing his studies at the University of North Dakota and Yale, he was associated with the Western Electric Co and Bell Laboratories for more than 25 years.

### *Watumull Foundation Award Conferred on N. S. Kapany*

A pioneer in fiber optics, **Narinder S. Kapany** has won the first Distinguished Achievement Award of the Watumull Foundation. The award, presented by the Prime Minister of India, recognizes Kapany's many research contributions that have had wide applications in optics. Kapany, president and director of research at Optics Technology,



KAPANY

has contributed to lens design, spectroscopy, hypersonic reconnaissance and lunar-probe instrumentation. He has applied fiber-optic technology to television, astronomy, refractometry and nuclear-particle tracking.

The Watumull Foundation was established in 1942 with the objective of promoting better understanding between India and the US, increasing India's national efficiency and supporting institutions in Hawaii.

### *Panetti Engineering Prize Goes to Clifford Truesdell*

The Academy of Science of Turin, Italy, has awarded the Modesto Panetti Prize in engineering to Clifford Truesdell, III. The prize carries a cash award of \$2500 and a gold medallion. Truesdell, professor at Johns Hopkins, is known for his work in rational mechanics.

### *IEEE Presents Medal of Honor to Gordon K. Teal*

The principal award of the Institute of Electrical and Electronics Engineers was presented to Gordon K. Teal, vice president and director of the science and technology office at Texas Instruments Inc. Teal received the IEEE Medal of Honor for his contributions to single-crystal germanium and silicon technology and the single-crystal growth-junction transistor.

### *Bloom Gets Steacie Prize For Molecular-Physics Work*

For his important work in molecular physics, Myer Bloom has received the 1967 Steacie Prize. Awarded annually for outstanding scientific work that has some connection with the Canadian scene, the prize consists of a \$1500 honorarium; it is named after the late Edgar W. R. Steacie, who was the president of the National Research