

PROGRAMMER



Model 5350

The Model 5350 Programmer is an electro-mechanical function generator, consisting of a digitally controlled servo-system driving a 10 turn potentiometer at a wide range of sweep rates. The Programmer finds application in the process control field with other instrumentation, whose output is controlled by a resistance or resistance ratio, such as powersupplies, magnetic generators, audio or RF oscillators as well as temperature, deposition-rate, vacuum and similar controllers.

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INSTRUMENTATION

1314 Hanley Industrial Court, St. Louis, Mo. 63144
(314) 968-4740

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CRYOGENIC Temperature Controller



Model 5301

Accurate temperature control in Research Dewars, Cryogenic Freezers, Tensile Cryostats for physics, chemistry, metallurgy and other scientific fields where the process, temperature and/or control requirements change frequently. System features control stability better than $.01^\circ\text{K}$ from below 0.3°K to 320°K with less than one micro-watt power dissipation in the sensor. Three mode control: Proportional, rate and reset with internal parameter controls, allowing to tune the controller to thermal characteristics of the system. 100 watts output, short circuit proof, DC for minimum interference to other low level instrumentation.

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we hear that

warth (University of Southern California), Arthur R. Kantrowitz (Avco Everett Research Laboratory), John Laufer (University of Southern California), Frederick F. Ling (Rensselaer Polytechnic Institute, Troy, N.Y.), Artur Mager (Aerospace Corp, El Segundo, Calif.), Stanford S. Penner (University of California, San Diego), Ronald F. Probst (MIT), Norman C. Rasmussen (MIT), Richard W. Roberts (General Electric Co., Fairfield, Conn.), Joseph E. Rowe (Case Western Reserve University, Cleveland, Ohio), John G. Trump (MIT), Arthur R. von Hippel (MIT), Paul B. Weisz (Mobil Research and Development Corp, Princeton, N.J.) and Dean E. Wooldridge (Santa Barbara, Calif.).

The following are among the recently elected foreign associates: Edward G. Bowen of Wales (West River, Md.), Leo Esaki of Japan (IBM Watson Research Center, Yorktown Heights, N.Y.), André Giraud of France (Atomic Energy Commissariat, Paris), Wolf Haelele of the Federal Republic of Germany (International Institute of Applied Systems Analysis, Laxenburg, Austria), Georgy V. Kurdyumov of the USSR (Academy of Sciences, Moscow) and Sir Michael J. Lighthill of England (University of Cambridge).

The Fannie and John Hertz Foundation Award in applied physical sciences has been presented to **Gregory H. Canavan** (Defense Advanced Research Projects Agency, Department of Defense, Arlington, Va.). The award includes a \$20 000 honorarium.

John H. Steele, deputy director of the marine laboratory of the Department of Agriculture and Fisheries (Scotland), has been named head of the Woods Hole Oceanographic Institution.

The first prize in the Gustav Ohaus-National Science Teachers Association award program for innovations in college-science teaching has been presented to **Lubna R. Ijaz**, adjunct assistant professor of physics at Virginia Polytechnic Institute and State University.

The W.R.G. Baker Award of the Institute of Electrical and Electronics Engineers has been presented to **Manfred R. Schroeder**, a physicist at Bell Laboratories, for his article "Models of Hearing," which was published in the September 1975 *Proceedings of the IEEE*.

Harry G. Drickamer, professor of chemical engineering and physical chemistry at the University of Illinois, has been named the first recipient of the P. W. Bridgman Award of the International Association for the Advancement of High Pressure Science and Technology.

As we announced in June (page 70), **Betsy Ancker-Johnson** has left the Department of Commerce to join Argonne National Laboratory; the post she has accepted is associate laboratory director for physical research.

obituaries

Paul Rood

Paul Rood, retired professor and head of the physics department at Western Michigan University, died 7 March at the age of 82. His tenure at Western Michigan University spanned 48 years, from 1916 to 1964.

Rood graduated from Albion College (Michigan) in 1916 and began teaching college physics, high-school physics and chemistry at Western Michigan University. He completed his master's at the University of Michigan in 1921. During 1925-26, Rood spent a year with the General Electric Co (Schenectady, N.Y.) where he did research on the photoelectric effect under the direction of W. R. Whitney, then the director of research. He spent a second sabbatical leave, 1932-33, doing graduate study at the California Institute of Technology. In 1938 he received his doctorate from the University of Michigan.

Rood became head of the department of physics in 1944, a post he held for 20 years. During the early 1960's, Rood actively built up the department through the addition of new staff and the planning of a new building complex for research and teaching. Spectroscopy was Rood's research interest; as a teacher, he devoted his time primarily to the development of demonstration equipment. His teaching assignments included atomic physics, optics, astronomy and general physics.

NATHAN L. NICHOLS
Western Michigan University

Katherine M. Chamberlain

Katherine M. Chamberlain, emeritus professor of physics at Wayne State University, died 9 January at the age of 84.

She attended the University of Michigan as an undergraduate and, following World War I, returned to earn her doctorate in 1924. She then took up a position as mathematics instructor at the City College of Detroit (which later evolved into Wayne State University) and spent a year's leave as a research student at the Cavendish Laboratory in Cambridge, England.

Chamberlain became associate professor of physics at Wayne State University in 1930 and later was promoted to full professor. For several years she pursued

studies in spectroscopy, thin-film evaporation and photomicrography in her own laboratory at the University of Michigan at the same time she participated in establishing research facilities at Wayne State University. She was also responsible for organizing courses in photography, industrial spectroscopy and geometrical optics at Wayne State.

Outspoken about her concern over the misuse of atomic energy, Chamberlain was a member of the United World Federalists and the Women's International League for Peace and Freedom. In 1951, she became the first woman appointed to the National Advisory Committee of the University of Michigan Phoenix Memorial Project, a research group on peaceful uses of atomic energy. She retired from teaching in 1960.

Joseph M. Geiger

Joseph M. Geiger, chairman of the department of physics at St Bonaventure University (Allegheny, N.Y.), died on 10 February after being struck by an automobile. He was 43 years old.

Geiger received his bachelor's degree in physics from Hofstra University in 1954. He then did graduate work at Syracuse University, which awarded him an MS in 1956 and PhD in 1960. His post-doctoral year was spent as a project associate at the University of Wisconsin. In 1960 he joined the physics department at St Bonaventure University as an assistant professor and became a full professor in 1969. In 1974 he was named department chairman, the position he held at the time of his death.

His research interests were in the areas of quantum mechanics and quantum field theory. In recent years he had developed several programs for student instruction in computer science and its applications.

T. Townsend Smith

T. Townsend Smith, retired professor of physics at the University of Nebraska, Lincoln, died 14 February 1977 at the age of 92.

Having received his PhD from Harvard University, he joined the physics department at the University of Kansas in 1913. After a leave of absence to do war-related research in optics at the National Bureau of Standards, he moved to Nebraska in 1919. He remained in the physics department there, except for another period with NBS in World War II, until his retirement in 1953. Following this, he spent five years as chairman of the physics department of Susquehanna University, Selinsgrove, Pa.

His research interests were primarily in physical optics and measurement techniques in electricity and magnetism. □

Research Associate Post in Computational Physics and Chemistry

The Computer Applications Group of the Daresbury Laboratory is initiating a research project on the continuum states of atoms and molecules with particular emphasis on those states which can be studied experimentally using the synchrotron radiation source at present under construction at the Laboratory. It is expected that this project will be carried out in collaboration with a number of University theoretical and computational physics/chemistry groups.

A post is offered for three years as a Research Associate; it is superannuable and in the salary range of £2901 to £5155 per annum plus £313 per annum pay supplement depending on age, qualifications and experience. Candidates, male or female, will be expected to have a good knowledge of current theories of atomic and molecular processes and to have had relevant experience on the implementation of these theories on a computer.

Closing date—29th July, 1977.

Applicants should preferably have or expect to obtain a PhD in Physics/Chemistry and should write (or telephone Warrington 65000, Ext. 467) for an application form quoting reference DL/593/BB to:

SCIENCE
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COUNCIL



DARESBURY LABORATORY

Personnel Officer
Science Research Council
Daresbury Laboratory
Daresbury
Warrington WA4 4AD



Technische Hogeschool Delft

A vacancy exists in the Faculty of Mechanical Engineering from 1 September 1977 onwards for a

professor of fluid dynamics

The associated teaching consists in particular of:

- a number of lectures, both at Bachelor's and Master's level, in the field of fluid dynamics. One of these relates to turbulent flows.
- the supervision of Master's students and joint supervision of students from other disciplines.

Besides teaching, there is an important research task, including:

- theoretical and experimental research in the field of fluid dynamics, in particular of turbulence.
- supporting the research of other disciplines.
- the operationalisation of the results of fundamental research in fluid mechanics, which is of great importance for the research in other disciplines. Great value is attached by the faculty to this aspect of the task.

The person appointed must have a broad and general experience and knowledge in the field of fluid dynamics and in particular in the field of turbulence. He must also have a particular interest in the operationalisation of fluid mechanics for technical applications. Experience as leader of a research team is desirable.

Organisational activities on behalf of the faculty will be expected of the candidate.

Those interested should apply, with curriculum vitae, to the dean of the faculty, Prof. ir. G. Prins, Delft University of Technology, Faculty of Mechanical Engineering, Mekelweg 2, Delft, The Netherlands. Information concerning the vacancy can also be obtained from him by telephone: Delft (15)—133222, ext. 5401 or 6595.

Suggestions regarding possible candidates are welcome.