NUCLEAR APPLICATIONS & TECHNOLOGY

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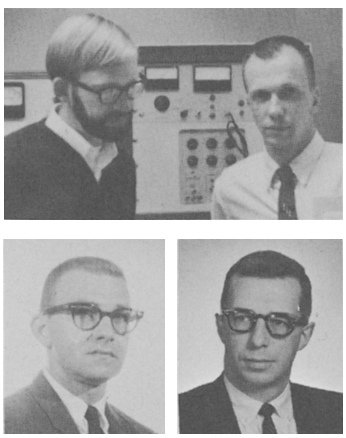
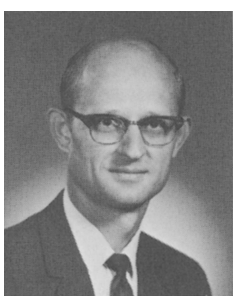
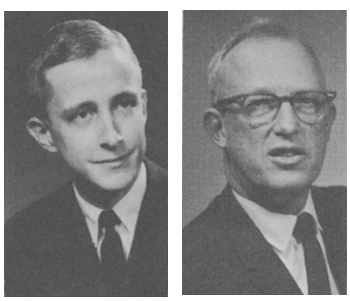
REACTORS



James M. Byrne (top left) (MS, mechanical engineering, University of Utah, 1969) worked on the fast compact reactor program at the National Reactor Testing Service (NRTS) in Idaho as his master's thesis project under an Association of Western Universities Fellowship. Jay F. Kunze (top right) (PhD, physics, Carnegie-Mellon University, 1959) is manager of the Low Power Test Facility at the NRTS. He is currently on partial leave as a visiting associate professor in mechanical engineering at the University of Utah. Farrel L. Sims (bottom left) (MS, physics, University of Idaho, 1962) was the principal reactor analysis engineer on the critical experiment work of the 710 Space Power Program. Robert E. Reid (bottom right) (MS, nuclear engineering, U.S. Air Force Institute of Technology, 1956) was the manager of Reactor Engineering for the overall 710 Program at Cincinnati, Ohio.

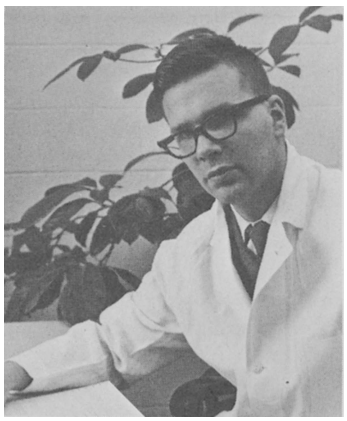


Emil E. Leitz (BS, mechanical engineering, Washington State University, 1953) is a senior engineer with Douglas United Nuclear, Inc., at the Hanford Atomic Products Operation in Richland, Washington. He has been at Hanford since 1955, working in the areas of nuclear safety studies and operations analysis.



W. A. Goodwin (left) (PhD, University of Illinois) has been with the Nuclear Power Department of Combustion Engineering since 1967. His work there has dealt mainly with space-time reactor dynamics and with the development of advanced reactor concepts. M. E. Wyman (PhD, University of Illinois, 1950) is a member of the faculty at the University of Illinois, Urbana, and is chairman of their graduate program in nuclear engineering. His research interests involve experimental reactor kinetics and fission physics.

FUELS



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Dwight W. Underhill

Dwight W. Underhill (BE, Yale, 1958; ScD, Harvard, 1967) is an assistant professor at the Harvard University School of Public Health where he holds appointments in the Department of Environmental Health Sciences and the Department of Physiology.

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H. O. Schad, A. A. Bishop

Since 1956, Al Bishop (left), advisory engineer, has been with the Westinghouse Nuclear Energy Division; first with Reactor Engineering of the Pressurized Water Reactor Division, and now with Licensing and Transient Analysis in the Advanced Reactors Division. During this time, Bishop has performed analyses and experiments related to thermofluids engineering and safety of reactor cores. Before coming to the Westinghouse Advanced Reactors Division in 1967, Otto Schad was a senior engineer involved in heat transfer and fluid dynamics test and analyses with Maschfnen fabrik-Augsburg-Nurnberg. Schad obtained a doctor-engineer degree from the University of Stuttgart in 1967. Both Bishop and Schad have specialized in two-phase flow and heat transfer related to reactor development.

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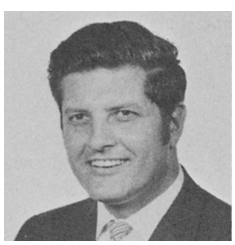
J. R. Hearst, R. C. Carlson

Joseph R. Hearst (right) has been on the staff of the Lawrence Radiation Laboratory at Livermore since 1959, and in K-Division (Plowshare) since 1963. He has been involved in both computer calculations and laboratory simulation of underground nuclear explosions, and is in charge of the geophysical measurements team. He has recently become project scientist for a nuclear experiment. Richard C. Carlson has been with the Lawrence Radiation Laboratory in Nevada and Livermore since 1963. He has been working primarily in geophysical measurements, and is also investigating long-range effects of underground nuclear explosions.

ANALYSIS

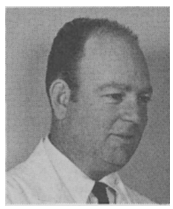


VOID-SPACE ANALYSIS BY USE OF THERMAL-NEUTRON IRRADIATED AIR (^{41}Ar) 283

Jerry B. F. Champlin

Jerry B. F. Champlin (MS, Georgia Institute of Technology, 1968) has been employed by the Nuclear Science Division, Engineering Experiment Station, Georgia Tech, since 1964. He is an interdisciplinarian concerned with the practical applications for radioisotopes and is presently completing his doctoral program at Georgia Tech.

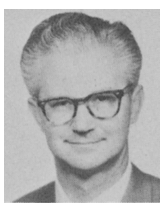
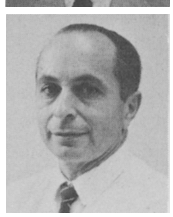



R. McAndrew (top right), J. Smathers (center right), and R. Wainerdi (top left) of Texas A&M University are interested in the biomedical application of nuclear energy. G. Harrison (bottom right) and R. Doggett (bottom left) of the Baylor School of Medicine are engaged in the study of cystic fibrosis.

TECHNIQUES

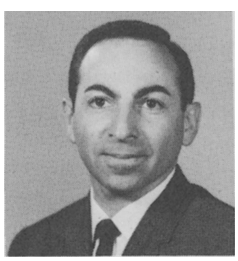
H. L. Dodds (left) (MS, University of Tennessee) is a graduate student in the Nuclear Engineering program at The University of Tennessee. He is presently completing the requirements for the PhD in the area of theoretical reactor kinetics. P. F. Pasqua (PhD, Northwestern University) is professor and head of the Nuclear Engineering Department at The University of Tennessee.

P. F. Rago (top left), N. Goldstein (bottom left), and E. Tochilin (right) were research physicists at the Naval Radiological Defense Laboratory. Tochilin headed the Radiological Physics Branch, which was actively engaged in research in the field of radiation dosimetry, and he is also an editor of the three volume publication entitled Radiation Dosimetry. Rago is presently a health physicist at Stanford University; Goldstein is a senior physicist with Physics International; and Tochilin is doing consulting on problems associated with radiation dosimetry.

NOTES

CHEMICAL PROCESSING



J. D. Ludwick (PhD, Purdue University, 1958) is a radiochemist at Battelle-Northwest with 12 years experience in atmospheric diffusion, tracer technology, health physics, and reactors. Ludwick was previously employed with the General Electric Company for 7 years.

Gerald M. Tolson (left) (BS, Purdue) is employed by Union Carbide Corporation, Nuclear Division, working at the Oak Ridge Gaseous Diffusion Plant where he heads the Reactor Components Group. His experience has been in the metallurgical engineering aspects of the design, construction, and operation of nuclear reactors and reactor tests. George R. Davis (BS, Pennsylvania State University) is vice president and marketing manager of Nuclear Components, Inc. He has been active in fabrication of control rods and other reactor internals since 1956.

DEPARTMENTS

Corrigenda

On November 25, 1969, W. E. Downs requested that we publish the following corrigendum that appeared in his article "Characteristics of a Continuous "On-Stream" Analysis System Using a Multikilocurie ^{124}Sb-Be Neutron Source" in the November issue.

Delete the following:

Page 468, Eq. (2), the term "g" which is not required when f_t is in g/cm^3.

Downs states that all the data and conclusions are correct since the proper equation was used in all calculations.

On December 8, 1969, W. B. Lewis requested that we publish the following corrigenda that appeared in his article "A Practical Approach to Nuclear Criticality Safety" in the December issue.

Correct the following:

Page 526, six lines from the bottom of column 2, which presently reads:

For RL,

$$J_1^- = T_1^2 J_1^+, J_2^- + T_2^2 J_2^+ \ .$$

should read:

For RL,

$$J_1^-(u_1) = T_1 J_1^-(-u_1),\ J_2^-(u_1) = T_2\, T_2^-(-u_1) \ .$$

Page 527, last line of second paragraph in column 2, which presently reads:

$$\omega_j = (1 - T_j^2/(1 + T_j^2) \ ,$$

should read:

$$\omega_j = (1 - T_j)/(1 + T_j) \ .$$