



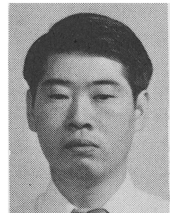
AUTHORS — JULY 1974

REACTORS

EXPERIMENTS OF ANOMALY DETECTION SYSTEM OF A REACTOR CORE

Y. Ohsawa (top) (PhD, Rikkyo University) is a member of the reactor control and instrumentation division staff of Hitachi Atomic Energy Research Laboratory. His interests include plant dynamics, and control and reactor diagnosis. K. Kato (center) (ME, nuclear engineering, Tokyo University, 1969) is a member of the reactor control and instrumentation division staff of Hitachi Atomic Energy Research Laboratory, engaged in development of a reactor anomaly system. R. Oyamada (bottom) (BE, Ibaraki University, 1959) of the Project Engineering Section staff of Japan Materials Testing Reactor has, in recent years, been engaged in nuclear calculation to choose the core (fuel element and capsules) configuration of the JMTR.

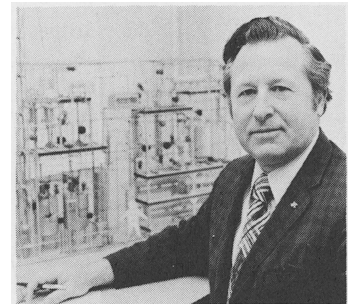
*Y. Ohsawa
K. Kato
R. Oyamada*



ANOMALIES OF CRITICALITY

E. D. Clayton (PhD, physics, University of Oregon, 1952) is Manager of Criticality Research at the Battelle-Pacific Northwest Laboratories, and research associate professor in the University of Washington's Department of Nuclear Engineering. Past chairman of the Nuclear Criticality Safety Division of the American Nuclear Society, a pioneer in criticality studies with plutonium, and since its inception in 1961, director of the Plutonium Critical Mass Laboratory of PNL, Clayton is currently chairman of work groups 10 and 12 within Subcommittee ANS-8. His current technical interests include most aspects of criticality measurements and studies.

E. D. Clayton

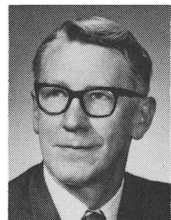
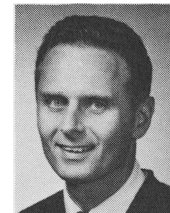


REACTOR SITING

EVALUATION OF AIR TRAFFIC HAZARDS AT NUCLEAR PLANTS

Karl Hornyk (top) (PhD, nuclear engineering, University of Illinois, 1965) is assistant professor of nuclear engineering at Oregon State University. He has been working with Portland General Electric on various problems concerning nuclear power plant siting and plant safety. John E. Grund (MS, nuclear engineering, North Carolina State University, 1957) is chief nuclear engineer for Portland General Electric Company. His areas of interest are nuclear safety and licensing. He has previously worked at the NRTS in Idaho on the SPERT project in the area of reactor kinetics.

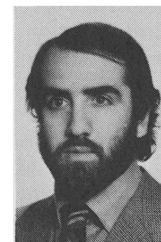
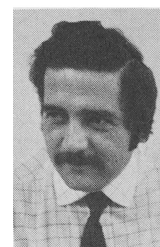
*Karl Hornyk
John E. Grund*



STATE-OF-THE-ART IN BWR ROD BUNDLE BURNOUT PREDICTIONS

D. Guarino (top) ("Perito Tecnico Industriale," Industrial Technical Institute of Naples, 1959) joined CNEN in 1960 and has worked primarily in the field of uranium compounds chemical analysis. He is presently engaged in the development of LWR fuel elements thermal hydraulics. V. Marinelli (center) (PhD, nuclear engineering, Politecnico di Torino, 1967), at CNEN since 1969, is leader of thermal hydraulic studies at Gruppo Progettazione e Sperimentazione of CNEN Plutonium Program. His main areas of interest are the development of LWR computer codes as well as the planning and analysis of experimental tests. L. Pastori (bottom) ("Perito Tecnico Industriale," Industrial Technical Institute for Nuclear Energy Enrico Fermi, Rome, 1962), at CNEN since 1962, is expert in computer software problems and is presently engaged in studies of core simulator computer codes.

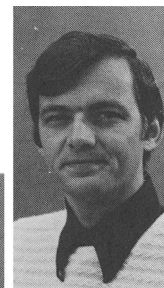
*D. Guarino
V. Marinelli
L. Pastori*



THE EFFECT OF CARBIDE PRECIPITATION ON FATIGUE CRACK PROPAGATION IN TYPE 316 STAINLESS STEEL

M. W. Mahoney (top) (BS, physical metallurgy, University of California, Berkeley) is currently enrolled in an MS program at UCLA. He is a member of the ASME Subcommittee on Elevated Temperature Fatigue and Fracture. He has previously worked in nuclear reactor materials development and is currently investigating fracture, creep, and stress corrosion at elevated temperatures in a variety of materials. The current research interests of N. E. Paton (MS, metallurgical engineering, University of Auckland, New Zealand; PhD, Massachusetts Institute of Technology) include stress corrosion, fracture, and mechanical properties of various materials.

*M. W. Mahoney
N. E. Paton*



INTERACTIONS BETWEEN STRESSED ZIRCONIUM ALLOYS AND IODINE AT 300°C

J. C. Wood (MSc, University of Bristol, 1967) has been a member of the Fuels and Materials Division at Atomic Energy of Canada Limited, Chalk River Nuclear Laboratories, since leaving the Central Electricity Generating Board in 1969. His present interests include fuel engineering and stress corrosion cracking.

J. C. Wood



COMPARISON OF GAMMA IRRADIATION PERFORMANCE OF THREE NEUTRON FISSION COUNTERS

L. D. Philipp (center) (BSEE, University of Colorado, 1963; MSEE, University of Washington, 1967; PhD, electrical engineering, University of New Mexico, 1971) has seven years experience in reactor instrumentation at Hanford where he has technical leadership responsibility for programs involving neutron flux instrumentation and insulator research and development. L. D. Muhlestein (right) (PhD, physics, Iowa State University, 1966; associate professor of physics, University of Missouri-Columbia, 1966-1973) is presently manager of the refueling and plant programs at Hanford Engineering Development Laboratory. M. R. Wood (left) (BSEE, University of Washington, 1947), presently a system engineer in the Westinghouse Hanford FFTF project, has worked in the nuclear reactor instrument field for 22 years.

*L. D. Philipp
L. D. Muhlestein
M. R. Wood*



FAST NEUTRON FLUX MEASUREMENT USING GAS-FLOW TECHNIQUES

Donald P. Brown (left) (MSEE, University of Washington, 1965), an advanced engineer with Westinghouse Hanford Company, has 16 years of experience in nuclear instrumentation. His recent efforts have been aimed at the development of thermal- and fast-neutron detectors for in-core application. Ward G. Spear (MSEE, University of Idaho, 1960), presently Manager of Reactor Instrument Development at Westinghouse Hanford Company, has been working in the nuclear field for 22 years, with emphasis on reactor instrumentation development for the past 14 years.

*D. P. Brown
W. G. Spear*

