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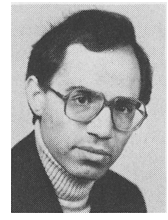
AUTHORS — JANUARY 1984

NUCLEAR SAFETY

ANALYSIS OF THE XENON FEEDBACK ON THE CORE DYNAMICS OF HIGH-TEMPERATURE REACTORS DURING HEAT REMOVAL TRANSIENTS WITHOUT REACTOR SHUTDOWN

Rahim Nabbi

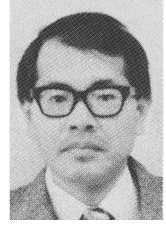


Rahim Nabbi [BSc, physics, University of Teheran, Iran; MS, radiation damage, 1976, and PhD, nuclear reactor physics, 1979, Technical University of Aachen, Federal Republic of Germany (FRG)] is involved in nuclear accident investigation for high-temperature gas-cooled reactors (HTGRs) at the Institute for Nuclear Safety Research at the Nuclear Research Center, Jülich (FRG). His work relates to the analysis of neutronics and dynamics of HTGR cores under transient conditions. His primary research interests include reactivity safety and investigation of anticipated transients without scram. Since 1983 he has been engaged in the study of beam losses in the linear accelerator of the neutron spallation source.

CHEMICAL PROCESSING

ACCUMULATION PROCESS OF PLUTONIUM THIRD PHASE IN MIXER-SETTLERS

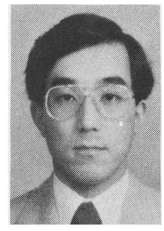
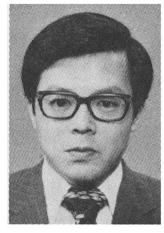
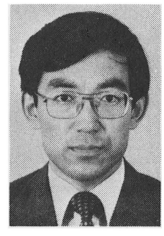
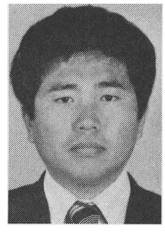
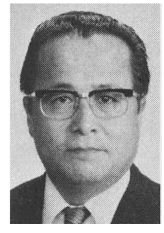
Kozo Gonda
Koichiro Oka



Kozo Gonda (top) (BS, chemistry, Nagoya University, 1959; PhD, nuclear chemistry, Tokyo Institute of Technology, 1969) is group leader of the Operation Testing Laboratory (OTL) Group in the Tokai Reprocessing Plant of the Power Reactor and Nuclear Fuel Development Corporation (PNC). He has been associated with PNC since 1961, working on the initial stage of chemical separation of uranium isotopes and on the solvent extraction process of the Tokai Reprocessing Plant for ten years. His current interests include the interfacial phenomenon of solvent extraction by the purex process. **Koichiro Oka** (BE, applied chemistry engineering, Waseda University, 1964) is a senior chemist. He joined the OTL Group in 1978 to develop the study of coprocessing. He has returned to research at Toray Industries, Inc.

A CONCEPTUAL DESIGN OF A FUEL BUNDLE FOR EXTENDED BURNUP IN BOILING WATER REACTORS

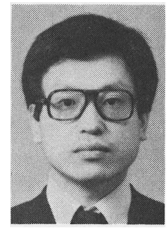
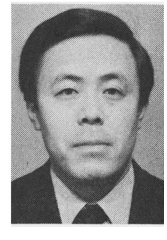
Motoo Aoyama
Sadao Uchikawa
Kazuyoshi Miki
Kazuo Hiramoto
Renzo Takeda

Motoo Aoyama (top right) (BS, 1977, and MS, 1979, nuclear engineering, Kyoto University) is a researcher at Energy Research Laboratory, Hitachi Ltd. His current interests include boiling water reactor (BWR) core design for fuel cycle improvement. **Sadao Uchikawa** (top left) (Dr. Eng., nuclear engineering, Tokyo University, 1982) is a member of the Nuclear Reactor System Design Section of the Energy Research Laboratory, Hitachi Ltd., and his current interests include core design of commercial BWRs and numerical simulation of nuclear and thermal-hydraulic phenomena. **Kazuyoshi Miki** (center right) (Dr. Eng., nuclear engineering, Kyoto University, 1981) is a researcher at Energy Research Laboratory, Hitachi Ltd. He studied thermal-hydraulic analysis at Argonne National Laboratory from September 1981 to August 1982. His current interests include computer-aided engineering for nuclear reactor cores. **Kazuo Hiramoto** (bottom left) (BS, 1976, and MS, 1978, electrical engineering, Kyoto University) is a researcher at Energy Research Laboratory, Hitachi Ltd., and his current interests include high burnup fuel design for BWRs. **Renzo Takeda** (bottom right) (PhD, nuclear engineering, Kyoto University, 1980) is a chief researcher at Energy Research Laboratory, Hitachi Ltd. He is currently interested in nuclear steam supply system design.

A THREE-DIMENSIONAL POTENTIAL FLOW MODEL FOR THE PREDICTION OF THE BEHAVIOR OF RADIOACTIVE PLUMES

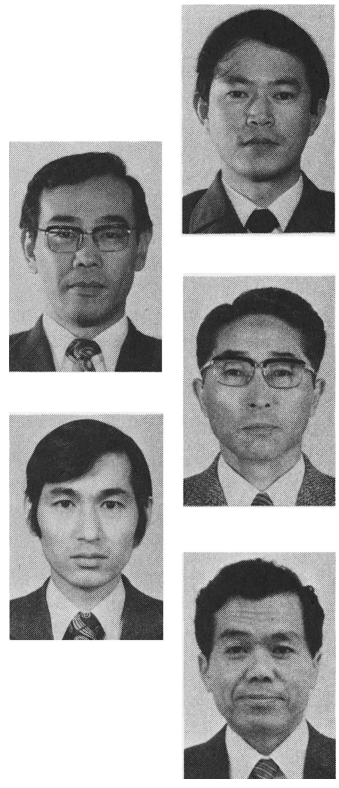
Yoichi Ichikawa
Hiroshi Shikata

Yoichi Ichikawa (top) (BS, 1975, and MS, 1977, sanitary engineering, Kyoto University) is employed at the Central Research Institute of Electric Power Industry (CRIEPI) where he has been engaged in research on atmospheric diffusion. His current interests include the emergency assessment and response system for the prediction of the consequences of an accidental atmospheric release from a nuclear power plant. **Hiroshi Shikata** (BS, mechanical engineering, Waseda University, 1964; MS, fluid mechanics, Waseda University, 1966) is employed at CRIEPI where he has been engaged in research on atmospheric dispersion phenomena of stack gas. His current interests include the emergency assessment and response system for the prediction of the consequences of an accidental atmospheric release from a nuclear power plant.

RADIATION BUILDUP ON STAINLESS STEEL IN A BOILING WATER REACTOR ENVIRONMENT

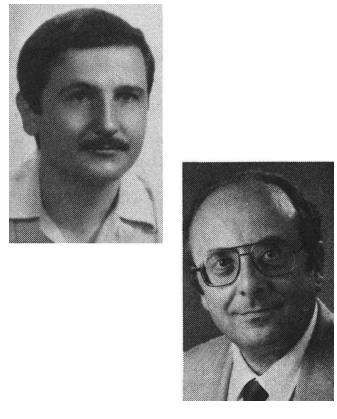
Takashi Honda
Masakiyo Izumiya
Akira Minato
Katsumi Ohsumi
Hideo Matsubayashi



Takashi Honda (top right) (BS, electrochemical engineering, Yokohama National University, 1973) is a researcher at Hitachi Research Laboratory (HRL), Hitachi, Ltd. Since 1973, his general field of interest has been the corrosion of metals. His recent interests include the water chemistry of nuclear power plants. **Masakiyo Izumiya** (top left) (Dr. Eng., applied chemistry, Hokaido University, 1973) is a senior researcher at HRL. He has been engaged in research on corrosion and protection of nuclear power systems and related problems. **Akira Minato** (center right) (BS, metallurgical engineering, Ibaraki University, 1953) is a senior researcher at HRL. Since 1970, he has been engaged in research on stress corrosion cracking of stainless steel and water chemistry of nuclear power systems. His current interests include the decontamination of nuclear plants. **Katsumi Ohsumi** (bottom left) (BS, nuclear engineering, Ohsaka University, 1970) is employed in the Nuclear Power Plant Engineering Department, Hitachi, Ltd. His current technical interests include the water chemistry and radiation buildup control of nuclear power plants. **Hideo Matsubayashi** (bottom right) (BS, electrical engineering, Hiroshima University, 1957) is an assistant superintendent at the Shimane Nuclear Power Plant, operated by the Chugoku Electric Power Company, Inc. His current interests include the water chemistry and safety of nuclear power systems.

ACCELERATED ONE-PHASE FLOW THROUGH PERFORATED PLATES

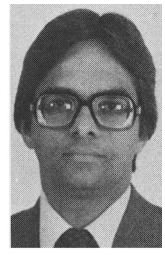
Folco Casadei
Mario Dalle Donne



Folco Casadei (top) (PhD, mechanical engineering, Bologna University, Italy, 1978) is currently at the Joint Research Centre, Ispra (Euratom), working on structural problems for reactor safety analysis. From 1979 to 1982 he worked on sodium bubble expansion and transient flow through perforated structures at Kernforschungszentrum Karlsruhe (KfK). **Mario Dalle Donne** (PhD, engineering science, Bologna University, Italy, 1956) worked at KfK from 1973 and since 1976 has been a professor at Karlsruhe University. He has worked in the field of gas-cooled, water, and liquid-metal-cooled reactors. His main technical interests are thermohydraulics, safety, and reactor assessment.

SENSOR FAULT ANALYSIS USING DECISION THEORY AND DATA-DRIVEN MODELING OF PRESSURIZED WATER REACTOR SUBSYSTEMS

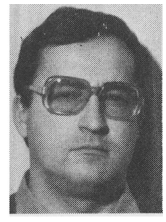
Belle R. Upadhyaya
Malgorzata Skorska



Belle R. Upadhyaya (top) (PhD, systems engineering, University of California, San Diego, 1975) has been with the Department of Nuclear Engineering, the University of Tennessee, Knoxville, since 1975. His current work includes research and development in data processing and systems analysis applied to nuclear power reactors. **Malgorzata Skorska** (MSc, electrical engineering, Warsaw Polytechnic School, Warsaw, 1976; PhD, nuclear engineering, University of Tennessee, Knoxville, 1983) has been engaged in the research of automatic control of drive systems, nuclear reactor dynamics, reactor diagnostics and safety, magnetohydrodynamics, and related computer applications. Her current interests are in the fields of stochastic processes, random noise analysis, and, in general, energy-related problems.

THE ACCURACY OF T(*d,n*)^{4}He NEUTRON ENERGY MEASUREMENTS USING AN NE-213 LIQUID SCINTILLATOR

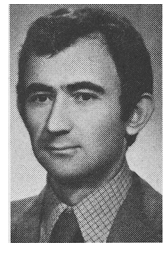
Alex Tsechanski
Gad Shani



Alex Tsechanski (top) (MSc, electrical engineering, 1967; PhD, nuclear engineering, Ben-Gurion University of the Negev, Beer-Sheva, Israel, 1981) is employed by the Nuclear Engineering Department of the Ben-Gurion University of the Negev, Beer-Sheva, Israel. His current interests include fast neutron spectra measurements and integral experiments for fusion reactor blanket design. **Gad Shani** (BSc, electrical engineering, 1964, and MSc, nuclear science, 1966, Technion, Israel; PhD, nuclear engineering, Cornell University, 1970) is currently associate professor of nuclear engineering at Ben-Gurion University of the Negev, Israel. He is engaged in the neutronics and first-wall interaction in fusion reactors. His past activities have been in the fields of neutron physics, experimental reactor physics, application of nuclear radiation, and nuclear instrumentation.

SELECTION AND BENCHMARKING OF COMPUTER CODES FOR RESEARCH REACTOR CORE CONVERSIONS

Emin Yilmaz
Barclay G. Jones



Emin Yilmaz (right) [BS and MS, mechanical engineering, Middle East Technical University (METU), Ankara; PhD, nuclear engineering, University of Michigan, 1974] is a visiting assistant professor of nuclear engineering at the University of Oklahoma on leave from METU. On various leaves he worked at the Karachi Nuclear Power Plant, at IRALCO Aluminum Plant, and at the University of Illinois. His main interests are in the areas of two-phase flow, nuclear reactor safety, nuclear power systems, and research reactors. A photograph and biography for **Barclay G. Jones** were not available at publication time.