RSIC Newsletter

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*The (wo)man who graduates to-day and stops learning to-morrow is uneducated the
day after.—Newton D. Baker*

ANS Division Election Results

The election results for the following American Nuclear Society (ANS) Professional Divisions of interest to our readers are as follows:

! **Fuel Cycle and Waste Management Division**—*Lloyd W. McClure*, Chair; *A. Scott Dam*, Vice Chair; *Dillard B. Shipler*, Secretary/Treasurer; *Susan G. Bilhorn, Thomas R. Stevens*, and *David M. Dawson*, Executive Committee.

! **Fusion Energy Division**—*Donald J. Dudziak*, Chair; *Ralph W. Moir*, Vice Chair; *Paul J. Gierszewski*, Secretary/Treasurer; *David B. Harris, Wayne R. Meier*, and *M. Yousry A. Gohar*, Executive Committee.

! **Isotopes and Radiation Division**—*Edward A. Kamykowski*, Chair; *Robin P. Gardner*, Vice Chair; *Ahmed Badruzzaman*, Secretary; *Donald A. Becker*, Treasurer; *K. K. S. Pillay, Michael C. Stauber*, and *James T. Tanner*, Executive Committee.

! **Mathematics and Computation Division**—*I. K. Abu-Shumays*, Chair; *Bradley A. Clark*, Vice Chair; *Anil K. Prinja*, Secretary; *Jasmina L. Vujic*, Treasurer; *Elmer E. Lewis, James A. Rathkopf*, and *Richard Sanchez*, Executive

Committee.

! **Nuclear Criticality Safety Division**—*Richard E. Malenfant*, Chair; *Donna M. D'Aquila*, Vice Chair; *George H. Bidinger*, Secretary; *Robert D. Busch*, Treasurer; *Linda C. Dolan, John S. Pearson*, and *David J. Lindenschmidt*, Executive Committee.

! **Nuclear Reactor Safety Division**—*David A. Carlson*, Chair; *George F. Flanagan*, Vice Chair; *David Squarer*, Secretary/Treasurer; *C. Frederick Sears, Norman Weber*, and *John R. Ireland*, Executive Committee.

! **Radiation Protection and Shielding Division**—*Margaret B. Emmett*, Chair; *William T. Urban*, Vice Chair; *James H. Renken*, Secretary; *Bernadette L. Kirk*, Treasurer; *Robert W. Roussin, John W. Poston*, and *Gerald P. Lahti*, Executive Committee.

! **Reactor Physics Division**—*James A. Lake*, Chair; *Alberto L. Casadei*, Vice Chair; *Dimitrios Cokinos*, Secretary; *Dan G. Cacuci*, Treasurer;

Michaele C. Brady, John M. Ryskamp, and
William F. Naughton, Executive Committee.

CHANGES TO THE COMPUTER CODE COLLECTION

Six changes were made to the computer code collection during the month. Two new code systems were packaged and added to the collection, one existing code package was replaced with a newly frozen version, an existing code package was extended with an additional software version, and two code packages were updated. One change resulted from a foreign contribution.

CCC-430/EDMULT 3.11 MICRO

The Research Institute for Advanced Science and Technology, University of Osaka Prefecture, Sakai, Osaka, Japan, contributed a newly frozen version of this code system to evaluate electron depth-dose distributions in multilayer slab absorbers. EDMULT evaluates differential and integral depth dose distributions produced by plane-parallel electron beams normally incident on one-, two-, or three-layer slab absorbers. This version, designated EDMULT 3.11, is operable on the NEC PC-9801 and IBM personal computers. The plotting routines included run only on the NEC. The system was tested at RSIC using the Microsoft 4.01 compiler. One DS/HD diskette is required for transmittal. References: Informal Documentation (1987 and 1991), *Radiat. Phys. Chem.*, 35, 821–825, and RCOP Tr-8 (November 1987). Fortran 77; NEC PC-9801 and IBM PC.

CCC-547/TWODANT-SYS

Los Alamos National Laboratory, New Mexico, provided changes to the SUN version of this one- and two-dimensional, multigroup, discrete-ordinates transport code system. The changes are to the script file and to routine "more.c" for arithmetic exception handling under the Sun Fortran 1.4 compiler and are necessitated because of changes made by SUN. Users may request a list of these changes.

There are three major codes in TWODANT-SYS. ONEDANT solves the one dimensional multigroup transport equation in plane, cylindrical, spherical and two-angle plane geometries. TWODANT solves the two-dimensional multigroup transport equation in x-y, r-z, and r-theta geometries. TWOHEX solves the two-dimensional multigroup transport equation on equilateral triangular meshes in the x, y plane. ONEDANT and TWODANT use discrete ordinates approximation for treating the angular variation of the particle distributions.

Three separate versions are available. The Cray version runs under UNICOS; the VAX version runs under VMS; and the SUN Sparcstation version runs UNIX. Versions (A) and (B) are available on 9-track magnetic tape. Version (C) for the SUN Sparcstation is available on a DC 6150 cartridge tape in tar format.

References: Informal notes (Feb. 1990), LA-9184-M (Dec. 1989), LA-10258-M (Dec. 1989), LA-10049-M (Feb. 1990). Fortran 77; Cray (A), VAX (B), and SUN Sparcstation (C).

PSR-155/DOGS

A new software version of this collection of routines for the graphical display of calculated data generated by discrete ordinates codes was contributed by Oak Ridge National Laboratory for Cray computers running UNICOS. The DOGS codes are tailored for minimum input requirements when used with discrete ordinates codes, such as CCC-254/ANISN-ORNL and CCC-429/DOT4.3, but include many options for alternate uses and flexible plot enhancements. Version 10 of the Integrated Software System Corporation's DISSPLA graphics package is required. The labeling will not work correctly with Version 11.0 under UNICOS. Versions (A) and (B) are available on 9-track magnetic tape, and the new UNICOS (C) release is available on one DS/HD diskette. References: ORNL/TM-7188 (March 1980) and Informal Notes (1987, 1983, 1981). Fortran 77, Assembler; IBM (A) and Fortran 77; Cray/CTSS (B) and Cray/UNICOS (C).

PSR-243/CGS

The SUN version of this general purpose graphics system was updated by the developers at Los

Alamos National Laboratory to run under the SUN SPARC architecture. CGS Version 10 is available for the VAX family of computers running both VMS and UNIX operating systems, Cray computers running CTSS and UNICOS and the Sun workstation running the UNIX operating system. Each version is transmitted on one DS/HD diskette, with the exception of the SUN version which is available in tar format on a DC 6150 cartridge tape. References: LANL GR801 (Dec. 1985), GR801.1 (July 1988), GR800 (Dec. 1985), GR800.1 (Oct. 1988), GR864 (Nov. 1985), GR805 (Oct. 1985) and informal documentation (1985 and 1979). Fortran 77 VAX/VMS (A), Cray/CTSS (B); Fortran 77 and C SUN/UNIX (C), VAX/UNIX (D) and Cray/UNICOS (E).

PSR-311/VIDEO-PC MICRO

Experimental and Mathematical Physics Consultants, Gaithersburg, Maryland, contributed this collection of super VGA primitives. These primitives are the lowest level routines needed to perform super VGA graphics on a PC. They were developed to implement super VGA graphics in Fortran on personal computers under DOS. Both Lahey and Microsoft Fortran have graphics libraries. However the libraries do not support 256 color graphics at resolutions greater than 320×200. The primitives bypass these libraries while still conforming to standard usage of BIOS. Both Lahey and Microsoft versions are provided. The Lahey F77L-EM/32 primitives require an 80386/387 or 80486 PC, a VGA graphics card, and a monitor. The Microsoft primitives are written in Fortran and Microsoft Macro Assembler and require the following: any PC (including 8086 and 80286), a VGA graphics card and a monitor. The package is distributed on one DS/HD diskette. References: Informal notes (1992). Fortran 77 and Assembler; IBM PC.

PSR-317/TRANSX-2

Los Alamos National Laboratory in New Mexico contributed this code system which reads NJOY91 (PSR-171) produced MATXS libraries and produces transport tables for use with discrete-ordinates (Sn) and diffusion codes. Tables can be produced for neutron, photon, charged-particle, or coupled transport. Options include adjoint tables, mixtures, homogeneous or heterogeneous self-shielding, group collapse, homogenization, thermal upscatter, prompt or steady-state fission, transport corrections, elastic removal corrections, and flexible response function edits. TRANSX-2 can be used to construct data for fusion reactors, fast fission reactors, thermal fission reactors, and shielding problems. Since only narrow-resonance self-shielding is available in this release, its main weakness is in computing resonance effects in thermal reactors. TRANSX-2 has been tested on Cray/CTSS and UNICOS, Sun/UNIX, and VAX/VMS computers. UPD, a portable version-control program is included to make machine-dependent changes. It is available on either a DC 6150 tape cartridge in tar format or a 2400-ft magnetic tape. References: LA-12312-MS (to be published July 1992) and LA-12057-MS (April 1991). Fortran 77; Cray, Sun, VAX.

Calendar

Your attention is directed to the following events of interest.

July 1992
*1992 Nuclear and Space Radiation Effects
Conference*, July 13–17, 1992, in New Orleans.

Visitors to RSIC

During the month the following person came for an orientation visit and/or to use RSIC facilities: *Masayuki Suzuki*, of Toyo Engineering Corp., Tokyo.

Contact: Nelson S. Saks, NSREC Technical Program Chairman, Naval Research Laboratory, Code 6813, 4555 Overlook Ave., Washington, DC 20375-5000 (phone 202-767-2534, Fax 202-767-0546).

Management and Disposal of Radioactive Wastes, July 13–17, 1992, Boston, Massachusetts, a short course offered by Harvard School of Public Health. Contact: Mary F. McPeak, Assoc. Dean for Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-432-1171; Fax 617-432-1969).

Techniques in Nuclear Radiation Shield Analysis, July 13–17, 1992, a course sponsored by the University of Texas at Austin. Contact: Continuing Engineering Studies, The University of Texas at Austin, College of Engineering, ECJ 10.324, Austin, TX 78712 (phone 512-471-3506, Fax 512-471-0831).

15th International Conference on High Energy Accelerators, July 20–24, 1992, Hamburg, Fed. Rep. of Germany. Contact: F. Willeke, Deutsches Elektronen-Synchrotron, Notkestrasse 85, 2000 Hamburg 52, FRG.

Advanced Workshop on Nuclear Emergency Planning, July 20–24, 1992, Boston, Massachusetts, a short course offered by Harvard School of Public Health. Contact: Mary F. McPeak, Assoc. Dean for Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-432-1171; Fax 617-432-1969).

August 1992

Modeling of Subsurface Flow and Pollution, Aug. 3–7, 1992, a short-course sponsored by the University of Cincinnati. Contact: University of Cincinnati, Groundwater Course, Groundwater Research Center, Cincinnati, OH 45221-0018.

SLOPOS5, 5th International Workshop on Slow-Positron Beam Techniques for Solids & Surfaces, Aug. 6–10, 1992, Jackson Hole, Wyoming, USA. Contact: Eric H. Ottewitte, Idaho National Engineering Laboratory, P.O. Box 1625, Idaho Falls, ID 83415-2114 USA (phone 208-526-1751; Fax 208-526-9267).

Basic Radiation Safety & Management, Aug. 13–14, 1992, Newport Beach, California, a seminar presented by Stan A. Huber Consultants, Inc. Contact: Stan A. Huber Consultants, Inc., 200 N. Cedar Road, New Lenox, IL 60451 (phone 815-485-6161; Fax 815-485-4433).

Nuclear Technologies for Space Exploration, Aug. 16–19, 1992, Jackson Hole, Wyoming. Contact: Dr. David Woodall, University of Idaho, College of Engineering, Moscow, ID 83843 (phone 208-885-6479).

Occupational and Environmental Radiation Protection, Aug. 17–21, 1992, Boston, Massachusetts, a short course offered by Harvard School of Public Health. Contact: Mary F. McPeak, Assoc. Dean for Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-432-1171; Fax 617-432-1969).

Tennessee Industries Week-27, Aug. 17–21, 1992, Knoxville, Tennessee. Contact: Nuclear Engineering Department, Pasqua Engineering Bldg., The University of Tennessee, Knoxville, TN 37996-2300.

Spectrum 92: ANS Topical Meeting on Nuclear and Hazardous Waste Management, Aug. 23–27, 1992, Boise, Idaho. Contact: Technical Program Chair Dieter Knecht, WINCO, P.O. Box 4000, MS-5213, Idaho Falls, ID 83403 (phone 208-526-3627).

September 1992

IRRMA '92, Topical Meeting on Industrial Radiation and Radioisotope Measurement Applications, Sept. 8–11, 1992, Raleigh, North Carolina. Contact: William F. Troxler, Troxler Electronic Laboratories, Inc., P.O. Box 12057, Research Triangle Park, NC 27709 (phone 919-549-8661).

Risk Analysis in Occupational & Environmental Health, Sept. 9–11, 1992, Boston, Massachusetts, a short course offered by Harvard School of Public Health. Contact: Mary F. McPeak, Assoc. Dean for Continuing

Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-432-1171; Fax 617-432-1969).

8th International Meeting on Radiation Processing, Sept. 14–19, 1992, Beijing, China, sponsored by the International Atomic Energy Agency. Contact: International Meeting on Radiation Processing, P.O. Box 1012 (30), Beijing 100 822, China.

6th Annual INEL Computing Symposium, Sept. 22–24, 1992, Idaho Falls. Contact: Teri Williams, EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, ID 83415-2602 (phone 208-526-9728).

14th International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Sept. 30–Oct. 7, 1992, Wuerzburg, Germany, sponsored by the International Atomic Energy Agency. Contact: IAEA, Conference Service Section, P.O. Box 100, A-1400 Vienna, Austria.

October 1992
International Symposium on Nuclear Data Evaluation Methodology, Oct. 12–16, 1992, Upton, New York, sponsored by Brookhaven National Laboratory. Contact: C. L. Dunford, Brookhaven National Laboratory, NNDC/197D, Upton, New York 11973.

Selection and Preparation of Witnesses for Environmental Litigation, Oct. 22–23, 1992, a course sponsored by the University of Texas at Austin. Contact: Continuing Engineering Studies, The University of Texas at Austin, College of Engineering, ECJ 10.324, Austin, TX 78712 (phone 512-471-3506, Fax 512-471-0831).

November 1992
Radiation Physics Conference, Nov. 14–18, 1992, Kena, Egypt. Contact: Prof. A. H. El-Kamel, Vice President-Assit University, Kena Branch, Kena, Egypt (Fax 096-327-706).

1992 ANS/ENS International Meeting, Nov. 15–20, 1992, Chicago. Contact: General Chair James D. Shiffer, Pacific Gas & Electric Co., 77 Beale St., San Francisco, CA 94106 (phone 415-973-4684).

14th Low-Level Radioactive Waste Management Conference, Nov. 18–20, 1992, Phoenix, Arizona. Contact: Kathleen Asbell, EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, ID 83415-3960 (phone 208-526-8330; Fax 208-526-9165).

Basic Radiation Safety & Management, Nov. 19–20, 1992, Chicago, Illinois, a seminar presented by Stan A. Huber Consultants, Inc. Contact: Stan A. Huber Consultants, Inc., 200 N. Cedar Road, New Lenox, IL 60451 (phone 815-485-6161; Fax 815-485-4433).

February 1993
HEART, Feb. 1–5, 1993, Naval Training Center, Orlando, Florida, sponsored by the Department of Defense and the Department of Energy. Contact: Arne Kalma, S-Cubed, 3020 Callen Road, San Diego, CA 92121 (phone 619-450-2439).

April 1993
Joint International Conference on Mathematical Methods and Supercomputing in Nuclear Applications, Apr. 19–23, 1993, Karlsruhe, Germany. Contact: H. Kuesters, KFK/INR, Postfach 3640 D-W-7500 Karlsruhe 1, Germany, or W. Werner, GRS, D-W-8046 Garching, Germany.

International High-Level Radioactive Waste Management Conference, Apr. 25–29, 1993, Las Vegas, Nevada, sponsored by the ANS, the U.S. Dept. of Energy, and the American Society of Civil Engineers. Contact: Billy Cole, E. R. Johnson Assoc., 10461 White Granite Drive, Suite 204, Oakton, VA 22124 (phone 703-359-8355; Fax 703-359-0842).

4th Topical Symposium on Emergency Preparedness and Response, to be held April 26–29, 1993, in Long Island, New York. Contact: Brant Aidikoff, Technical Program Chairman, LIANS, Box 436, Upton, New York 11973 (phone 516-436-4256).

June 1993

Safewaste '93: The Final Disposal of Nuclear Waste, June 14–18, 1993, Avignon, France, sponsored by the ANS and the European Nuclear Society. Contact: Pierre Tanguy, EDF, Direction Generale 32, Rue de Monceau, 75384 Paris Cedex 08, France.

MAY ACCESSION OF LITERATURE

The following literature cited has been ordered for review, and that selected as suitable will be placed in the RSIC Information Storage and Retrieval Information System (SARIS). This early announcement is made as a service to the shielding community. Copies of the literature are not distributed by RSIC. They may generally be obtained from the author or from a documentation center such as the National Technical Information Service (NTIS), Department of Commerce, Springfield, Virginia 22161.

RSIC maintains a microfiche file of the literature entered into SARIS, and duplicate copies of out-of-print reports may be available on request. Naturally, we cannot fill requests for literature which is copyrighted (such as books or journal articles) or whose distribution is restricted.

This literature is on order. It is not in our system. Please order from NTIS or other available source as indicated.

RADIATION SHIELDING LITERATURE

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