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Erwin Felix Lewy Bertaut Prize Announcement

The European Crystallography Association (ECA) and the European Neutron Scattering Association (ENSA) announce the creation of a prize in honor of the late Erwin Felix Lewy Bertaut, in memory of his scientific achievements, cornerstones in crystallography, and in neutron scattering.

The prize will be awarded to a young European scientist in recognition of notable experimental, theoretical, or methodological contributions in the field of analysis of matter using crystallographic or neutron scattering methods.

The amount of the prize is 2,000 Euros and the launch of the prize is sponsored by NMI3, the Neutron and Muon Integrated Infrastructure Initiative (http://neutron.neutron-eu.net). In the long term, ECA and ENSA aim to make equal contributions to the financing of the prize through donations, sponsors, etc. To maintain the prize ECA and ENSA will establish a dedicated fund.

The first call for nominations is open until February 28, 2007. Details for the procedure and guidelines for application are available on the Web sites of ECA (http://www.ecanews.org/) and ENSA (http://neutron.neutron-eu. net/n_ensa/). The first prize will be awarded at the European Conference for Neutron Scattering in Lund, Sweden, June 25-29, 2007 (http://www. ecns2007.org).

The 2007 Walter Hälg Prize Announcement

The Walter Hälg Prize was made available to the European Neutron Scattering Association (ENSA) by a donation from Professor Walter Hälg, who is the founder of neutron scattering in Switzerland. The prize is awarded biennially to a European scientist for outstanding, coherent work in neutron scattering with long-term impact on scientific and/or technical neutron scattering applications. The previous prizewinners were F. Mezei, J. Brown, R. Cowley, A. Furrer, and H.U. Güdel. The fifth award of the prize (10,000 CHF) will be made at a special ceremony and session at the 4th European Conference on Neutron Scattering (ECNS 2007), June 25-29, 2007, in Lund, Sweden.

Nominations for the prize will be considered by a selection committee, which consists of authorities representing the major scientific disciplines. It includes acknowledged experts both in neutron scattering and from outside the neutron scattering community. Membership in the selection committee is obtained by invitation extended by the ENSA Committee.

Nominations for the 2007 Walter Hälg Prize of the European Neutron Scattering Association (ENSA) may be submitted by European scientists as individuals or on behalf of a division, section or group. To establish a high standard, it is necessary that the committee receive proposals that represent the breadth and strength of European neutron scattering. Nominations should include the motivation for the award, a brief curriculum vitae of the nominee, and a short list of major publications. Letters of support from authorities in the field, which outline the importance of the work, would also be helpful. Nominations for the prize will be treated in confidence and although they will be acknowledged there will be no further communication. Previous nominations have to be updated and resubmitted. Nominations should be submitted before March 2, 2007 to the chairman of the selection committee, preferably by electronic mail, in PDF format. Contact Dr. Peter Allenspach, ENSA Chairman, Paul Scherrer Institute, CH-5232 Villigen PSI, Switzerland. Tel: +41 56 310 2527. Fax: +41 56 310 2939. E-mail: peter.allenspach@psi.ch

James D. Jorgensen (1948-2006)

Jim Jorgensen, a pioneer in the use of pulsed neutrons for diffraction and a scientist with a remarkable gift for penetrating to the heart of the physics of every material he studied, passed away on September 7, 2006, after a long battle with cancer. In spite of this illness, he never lost his enthusiasm for the science he loved, and he continued to be active until the very end, vigorously discussing new results and planning new research directions. His friends and colleagues at Argonne will long remember the dignity with which he conducted himself throughout his final year, never letting his struggle diminish his intellectual drive or sap his keen sense of humor. He will be sadly missed.

Jim was born in Salina, Utah, in 1948, and graduated as valedictorian from the Brigham Young University College of Physical and Engineering Sciences in 1970. He was awarded the Outstanding Dissertation of the Brigham Young University Department of Physics and Astronomy in 1974. It was then that he joined Argonne National Laboratory in a

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post-doctoral position, beginning a productive association with the DOE laboratory that lasted for over thirty years. This was a particularly exciting period in neutron scattering at Argonne, with the construction of the first prototype pulsed neutron sources. After leading the high pressure neutron diffraction program at the CP-5 research reactor, Jim was quick to appreciate the advantages of the time-of-flight technique in high pressure studies, and he directed the design and construction of the first time-of-flight powder diffractometers at ZING-P′ and then IPNS, as well as adapting the Rietveld technique to time-of-flight data. The Special Environment Powder Diffractometer (SEPD) that he commissioned in 1981 continues to be an extremely productive instrument to this day, and was responsible for some of the most influential structural studies of the last twenty years. The new generation of powder diffractometers developed at ISIS and SNS are a testament to his vision and foresight.

However, Jim was best known in the condensed matter community not for his instrumental designs but for his scientific achievements. He wasn't interested in solving crystal structures *per se*, but in understanding the insights they gave into a material's properties. His systematic work in exploring the link between structure and the superconducting properties of the cuprates played a critical role in advancing the entire field of high temperature superconductivity, separating the essential from the merely incidental aspects of each system. Through this work, he became one of the 100 most cited physicists and was in constant demand as an invited speaker at international conferences, where the clarity of his presentations and the depth of his insights were much admired. He conducted equally penetrating investigations into magnetic superconductors, negative thermal expansion compounds, CMR manganites, ceramic membranes, and, most recently, the sodium cobaltates.

Amongst the many honors he received, Jim was awarded of the prestigious Bertram E. Warren Prize by the American Crystallographic Association, the Charles E. Barrett Award "for outstanding research contributions in powder diffraction," the U.S. Department of Energy Materials Sciences Research Competition Award for Sustained Outstanding Research in Solid State Physics (twice), and the University of Chicago Award for Distinguished Performance. He was a Fellow of the American Physical Society, a member of the IUCr Neutron Scattering Commission and vice president of the Neutron Scattering Society of America. Perhaps, more importantly, he was an inspiring mentor for the many young scientists who came from around the world to work in his group at Argonne. They will ensure that his skills and insights continue to be a vital part of the heritage of the scientific community in the United States and the world.

R. OSBORN
Argonne National Laboratory

Terry Sabine: The Passing of a Neutron Pioneer

Terrence Murray (Terry) Sabine, the pioneer of neutron scattering in Australia died, just as the new Australian reactor OPAL became operational at the Bragg Institute. Terry joined the Australian Atomic Energy Commission (AAEC) Lucas Heights Sydney as head of neutron scattering when the original Australian DIDO-type reactor HIFAR became operational in 1958. After two years at Harwell, he returned in 1960 to build the first instruments at Lucas Heights—a powder diffractometer and a single crystal machine. He published the first paper using HIFAR in *Nature* (1961) with Hugo Rietveld. Terry later coined the term "Rietveld refinement" to describe Rietveld's "profile refinement" technique for neutron powder diffraction. He claimed that "you couldn't refine a profile," to which I added that "Rietveld was already refined."

I first met Terry in 1961 when as a summer vacation student I was employed at Lucas Heights to calculate thermodynamic tables for crystals, under the supervision of Arthur Pryor, who had joined the group from the AAEC electronics group. Arthur and Terry used one of the early DEC-PDP computers with 4K of memory to control two single crystal diffractometers—a tour de force at the time! This work influenced instrument control at Harwell, which later influenced ILL Grenoble with the import of the D3-type machine by Jane Brown and Bruce Forsyth. In 1961 Terry was using cold neutrons to study radiation damage in BeO, which was being considered as a moderator for an Australian nuclear reactor program. With Arthur Pryor, Brian Hickman and DG (Terry) Walker, he received a David Syme Research Prize for this work. Terry was awarded a D.Sc. from the University of Melbourne in 1971. He maintained an interest in small angle scattering even after his retirement, and most recently in the USANS technique.

In parallel with the Australian Atomic Energy Commission (AAEC) group of Terry, Arthur, Margaret

Kevan Harder, Terry Sabine, and Laurie Aldridge with ANSTO's AUSANS small angle neutron scattering instrument in 1998.

Elcombe, David Browne, and Sue Hogg, the Australian Institute for Nuclear Science and Engineering (AINSE) had been set up in 1958 as the first "university user organization" for Lucas Heights facilities. Terry was always keen to encourage students from both Australia and the Asian region and I was myself awarded a grant from AINSE for my doctoral thesis in lattice dynamics. Harwell apparently modeled their university user operation on that of AINSE, and later ILL used that model to prepare ILL as a "user institute." Terry was very early to push for international instrumental comparison, with gold foils and standard samples being shipped from AAEC to laboratories around the world.

For a time AAEC and AINSE worked well together, but in 1972, ANSTO support for neutron scattering was slashed, and Terry left to become head of the School of Physics and Materials at the New South Wales Institute of Technology, though he still worked part-time with ANSTO. Neutron scattering at Lucas Heights was left mainly to the user organization AINSE, with only Chris Howard still working for ANSTO. It was not until the early 1980s that Lucas Heights realized that neutron scattering, which they had pioneered and then neglected, was of real interest to the user community, and from that time, the idea of new investment, and eventually a new reactor, slowly grew.

Terry had meanwhile taken up his new job at NSWIT with his usual enthusiasm, promoting solar and nuclear power as well as neutron scattering. Australia has, of course, an abundance of both sunshine and uranium. In many ways Terry was ahead of his time, and therefore out of step with the politics of the day. He famously crusaded for Australian enrichment of uranium, arguing that it was more profitable to sell a treated product than to sell the raw uranium ore. This was at the time of a strong anti-nuclear movement in Australia. Even more provocatively he argued that Australia should not only enrich uranium, but should take back the spent U235 fuel and bury it in the vast desert in the middle of the country. Australia could then profit at both ends of the uranium cycle.

Although these proposals were met with fierce opposition at the time, Australia did later undertake significant enrichment research, in which Arthur Pryor played an important role, and Australian scientists also investigated how radioactive isotopes could be trapped in artificial hollandite-type minerals (SYNROC) instead of glass, the structure of which was known to decay with time. Terry lived long enough to see not only the construction of a new research reactor, but a statement by Australian and British prime ministers that nuclear power might play a larger part in a global-warming future.

Terry contributed to a wide range of subjects in neutron scattering: cold neutrons, small angle scattering and USANS, powder diffraction and "total profile refinement," extinction theories in single crystal diffraction, building some of the first diffractometers, etc. He was a founding member of the "Bush Crystallographers," later incorporated as the Society of Crystallographers in Australia. He was its president from 1983-1985 and was active in promoting neutron and synchrotron scattering in Asia, including building the Australian "BigDiff" machine at the Tsukuba synchrotron, in representing Australia in numerous organizations and meetings including the IAEA, and in the IUCr (Commission on Neutron Diffraction). A Google search for "T.M.Sabine" finds almost 500 references, including hundreds of scientific publications.

Terry loved the scientific life. He was an early "suitcase scientist," traveling to big facilities to do his experiments, attending conferences, collaborating with many to produce his research results. He was also a keen sportsman with particular loves for golf and cricket. An important point in deciding a conference venue was the proximity of the local golf club, and there were many heated team room and even colloquium discussions on the mathematics and finer arts of spinning cricket balls.

Terry was also famous for his fast driving and powers of persuasion. At a conference overseas he would call up the local embassy and persuade them to put on a party for the "distinguished visiting Australian scientists." He was also famous for the negligible effect alcohol had on him. Once on an extended trip to India he persuaded the local customs that a case of whisky he had had shipped to him was "for medicinal purposes only."

It is sad that Terry has gone, but I am very happy to have known him, and suppose that he would have met death with his usual calmly enthusiastic curiosity.

ALAN HEWAT
ILL
(with contributions from Chris Howard [ANSTO], Margaret Elcombe [ANSTO], and Suzanne Hogg [UTS])