PHYSICS NEWS FLASH

Physics Faculty Associates Named UT-Battelle Corporate Fellows

May 12, 2005

Dr. Anthony Mezzacappa, Adjunct Professor of Physics, and Dr. Thomas Thundat, Research Professor, have been honored as UT-Battelle Corporate Fellows. The official ORNL News Release is below:

ORNL News Release
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Oak Ridge National Laboratory names UT-Battelle Corporate Fellows

OAK RIDGE, Tenn., May 12, 2005 — Three researchers at the Department of Energy's Oak Ridge National Laboratory have been named UT-Battelle Corporate Fellows. The appointees are Robert J. Harrison, Computer Science and Mathematics; Anthony Mezzacappa, Physics; and Thomas G. Thundat, Life Sciences.

"All three of these honorees are outstanding leaders in their respective scientific communities and have made extraordinary contributions in research," ORNL Director Jeff Wadsworth said. "While each has contributed in a different way, they collectively represent the scientific strength and research performance that is essential to ORNL as a world-leading laboratory."

Wadsworth said the Corporate Fellow designation is the highest level of recognition for career achievements in science and technology, performance and leadership. Awardees' contributions to international leadership in research, new and expanded research programs and mentoring of staff are vital to the success of the laboratory as a whole, he said.

Harrison joined ORNL in 2002 as group leader for Computational Chemical Sciences following a distinguished career at Pacific Northwest National Laboratory where he was a Battelle Fellow.

Widely recognized for his work in the electronic structure of molecules, computational chemistry and high performance algorithms and computing, Harrison is chief architect of NWChem, the world's leading computational chemistry code, now used at more than 1000 sites worldwide.

Harrison, who received his Ph.D. in 1984 from Churchill College, Cambridge, England, also has held research appointments at Argonne National Laboratory, Daresbury Laboratory, and the University of Florida. He is the 2002 recipient of the Sidney Fernbach Award of the IEEE, an R&D 100 Award, and Best Paper Awards at Supercomputing 1998 and IEEE High Performance Distributed Computing 1996. His research on computational chemistry and high-performance computing has been cited more than 3500 times.

Harrison holds a joint appointment with the University of Tennessee, where he is a professor in the chemistry department. He lives in Knoxville with his wife, Jody-Kate.

Mezzacappa, who heads the Theoretical Astrophysics Group in Physics, earned his Ph.D. in 1988 at the University of Texas at Austin. Before joining ORNL in 1996, he held positions at the University of Pennsylvania, the University of North Carolina at Chapel Hill, and UT, where he is currently adjunct professor in the Department of Physics and Astronomy.

A world leader in computational astrophysics and a pioneer in the field of supernova science, Mezzacappa was the first to implement Boltzmann kinetic theory to model neutrino transport during supernova explosions, a theoretical and numerical feat long thought impossible. Since joining ORNL in 1996, he has conceived, proposed and now leads the Terascale Supernova Initiative, a multi-million dollar, multiyear DOE initiative involving several dozen researchers at a dozen institutions around the world. TSI is one of the world's largest computational astrophysics initiatives.

Mezzacappa is a Fellow of the American Physical Society and received the Presidential Early Career Award in Science and Engineering in 1999. His extensive community outreach efforts include involvement in the Universe Knoxville project and the proposed downtown relocation and expansion of the East Tennessee Discovery Center.

Mezzacappa lives in Knoxville with his wife, Mary Ellen Johansen, and his three children, Hannah, Noah, and Isabel.

Trained as a physicist, Thundat leads the Nanoscale Science and Devices Group in Life Sciences. He came to ORNL in 1992 following completion of his Ph.D. at the State University of New York at Albany in 1987 and after holding research positions at the Arizona State University and at UT.

Thundat is a world leader in nanomechanical sensors. His work in biomedical engineering and biotechnology, micromechanical sensors, and nanoscale imaging and detection has been featured in Time Magazine. His numerous national and international honors include two R&D 100 Awards, three National Federal Consortium in Technology Transfer Awards, the Jesse Beams Award, the Discover Magazine Award, ASME Pioneer Award and the Scientific American Top 50 Technology Leaders Award.

The author of more than 170 scientific papers in refereed journals, Thundat has received 19 patents for nanomechanical sensor technologies ranging from medical instrumentation to land mine detection. Thundat is a Battelle Distinguished inventor and a Fellow of the American Physical Society. He is also a research professor of physics at UT and a visiting professor at the University of Burgundy, France. He lives in Knoxville with his wife Darilyn and three children, Rachel, Tess, and Jonah.

Oak Ridge National Laboratory is a multiprogram laboratory managed for the Department of Energy by UT-Battelle