Dempsey received his Master of Science and Doctor of Philosophy degrees in physics from UT in 1987 and 1991, respectively.

He was also awarded the prestigious 2007 Turin Award in which the lecture is named after Turin. The late Dr. Turin, was chair of the UT Department of Physics and Astronomy from 1942 to 1972 and dean of the Graduate School from 1969 to 1973.

### RADIATION ONCOLOGY FELLOWSHIP HIGHLIGHTS DISTINCTIVE PROGRAM AT UT MEDICAL CENTER



Dr. E. Ishmael Parsai in front of the medical linear accelerator, a device that uses radiation to treat cancer patients. For those growing up during the Cold War, radiation may not bring positive images to mind. But at The University of Toledo Medical Center, radiation can be a life-giving force, a disinfectant purging tumors and cancers from the body and giving hope to many dealing with dangerous afflictions.

Dr. Parsai, professor and director of the Medical Physics Program in the Department of Radiation Oncology, who has doctoral degrees in nuclear and medical physics, ultimately is responsible for maximizing damage to diseased tissue while sparing that which is healthy.

According to Parsai, UTMC is distinct in that few hospitals, regardless of size or prominence, offer the range of treatment modalities through its own medical physicist services. Those that do, however, are familiar with Parsai, as he is the chairman of the American College of Radiation Oncology (ARCO) Physics Commission, the accrediting agency that establishes and judges standards for hospitals' medical physics operations.

A few years prior to the UT-MUO merger, Parsai helped start a joint Ph.D. program in medical physics with the UT Department of Physics and Astronomy. He calls it a very popular degree program and estimates that nearly 40 medical physicists have graduated in the past 14 years; these professionals are now in prominent positions at some of the most prestigious institutions in the United States, Harvard, Fox Chase Cancer Center, M.D. Anderson, Stanford and many other academic sites around the country.

### UT SCIENTISTS STUDY NEW TECHNOLOGIES TO UNCOVER BIOLOGICAL, CHEMICAL, HAZARDOUS MATERIALS

(EXCERPTS FROM UT NEWS)

Eight UT researchers, including, from left, Dr. Alejandra Lukaszew, Dr. Ahalapitiya Jayatissa, Dr. John Kirchhoff, Dr. Xuefei Huang, Dr. Viranga Tillekeratne, Dr. Cyndee Gruden, are working together to develop sensors to detect hazardous materials in water and air.

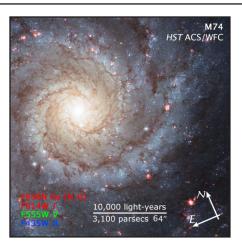
These eight scientists are combining their individual talents and skills to develop intricate sensors capable of sounding an early alarm about the presence of deadly biological and chemical agents in water and air.

Dr. Jon Kirchhoff, professor and associate chair of chemistry and principal investigator, leads the effort to harness UT research expertise across a range of disciplines — from chemistry and physics to civil and mechanical engineering — and apply that expertise to the development of tools and techniques to protect people's health and the environment. Funding for the \$970,000 project titled "Novel Sensors for Chemical and Bio-Defense" came from the Defense Advanced Research Projects Agency, a Department of Defense agency.



Co-principal investigators are Drs. Xuefei Huang, associate professor of chemistry; Ale Lukaszew, associate professor of physics and astronomy; Sanjay Khare, assistant professor of physics and astronomy; Richard Hudson, professor of medicinal and biological chemistry; Viranga Tillekeratne, associate professor of medicinal and biological chemistry; Cyndee Gruden, assistant professor of civil engineering; and Ahalapitiya Jayatissa, assistant professor of mechanical, industrial and manufacturing engineering. Dr. Bruno Ullrich, associate professor of physics and astronomy at Bowling Green State University, also is collaborating with the UT group.

### HUBBLE SPACE TELESCOPE FEATURES HOLIDAY WISHES IMAGE



A "holiday" news release by the Hubble Heritage Team at the Space Telescope Science Institute, which features a Hubble Space Telescope optical image of the beautiful spiral galaxy M74. Portions of the data for this image were obtained by our own Professor Rupali Chandar, as part of her studies of star clusters in galaxies, and she is acknowledged in the credits for this image. If you'd like to learn more, the release is available on the web at: http://hubblesite.org/newscenter/archive/releases/2007/41/

### EXTREMELY HOT PLANET, MAKES FIRST MAKES EXOPLANET WEATHER MAP

Astronomy Professor, Tom Megeath, helped take the temperature of a planet 60 light years away, revealing a world where weather is a mixture of hell and hurricane. He was part of a team using the space telescope named for Toledo-native and astrophysicist Lyman Spitzer to look at a planet in the constellation Vulpecula, or "little fox".

This is the first time they could actually start studying the atmosphere of an extra-solar planet in any detail. This gives an insight into planets that are very different from anything imagined before. It's a window on a very exotic system.

The full coverage is available in a news release on-line: http://www.spitzer.caltech.edu/Media/releases/ssc2007-09/index.shtml

# BREAKING NEWS OHIO GOVERNOR LAUDS UT RESEARCHERS FOR ENERGY WORK DURING VISIT



Dr. Xunming Deng, professor of physics, right, showed a solar panel fabricated by his team to Ohio Gov. Ted Strickland.

(Excerpts Courtesy of UT News by Jon Strunk)

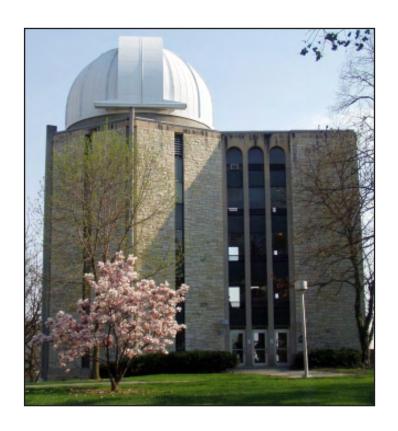
Choosing UT and its research into photovoltaics and other alternative energies as the backdrop for his Nov. 28 visit, Ohio Gov. Ted Strickland joined Congresswoman Marcy Kaptur and other University, business and elected leaders for a tour of a number of alternative energy-related startup businesses located in UT's incubator building at the corner of Westwood Avenue and Dorr Street.

Ohio should make a commitment that by 2025, 25 percent of the state's electricity would be generated from renewable and advanced energy resources, like solar power, Strickland told a crowd of about 50 following the tour.

## SAVE THE DATE

The University of Toledo

# Ritter Astrophysical Research Center Ritter Planetarium Brooks Observatory



### **40th Anniversary Celebration**

Tuesday, April 8, 2008 5:30pm

Dr. Nancy D. Morrison, Director

Department of Physics and Astronomy The University of Toledo Toledo, OH 43606-3390

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