



RESEARCH WEEK

HOME OF WORLD-CLASS RESEARCH

February 19-23, 2007

Oklahoma State University
Office of the Vice President for
Research and Technology
Transfer
203 Whitehurst
Stillwater, OK 74078

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INNOVATOR'S SHOWCASE

Innovation U: The More Engaged-than-Before University



Tornatzky

Louis Tornatzky, professor and area chair in the Orfaea College of Business, Cal Poly State University, San Luis Obispo, will present "Innovation U: The More-Engaged-than-

Before University" before the Patent Awards at 10 am on Tuesday, February 20 in the Student Union, Case Study 2.

Tornatzky has a national reputation for research and consulting on university-industry partnering in areas such as technology transfer and commercialization, cooperative research relationships and workforce development. He is currently associate vice president for Academic Liaison at Select University Technologies, Inc., a business accelerator in Costa Mesa, California.

Previously, he was vice president for research at the Tomas Rivera Policy Institute, where he focused on issues of minority students' transition into higher education and technology-based careers. Before that, as director of the Southern Technology Council in Research Triangle Park, he worked closely with political, corporate and economic development leadership in the South on policies and initiatives to enhance a high-wage, knowledge-based regional economy.

He conducted over eight years of outcomes and best practice benchmarking

research focused on research universities in the 15-state region.

During his 35-year career, he has held positions as center director at the Industrial Technology Institute in Ann Arbor, group leader of Innovation Processes Research at the National Science Foundation, and a tenured full professor of Urban Development and Psychology at Michigan State University. He has over 100 publications dealing with issues of

technological innovation, including his most recent book, **Innovation U: New University Roles in the Knowledge Economy**, on university engagement in regional economic development, and a study conducted with the National Business Incubation Association that benchmarked performance and best practices of technology business incubators.

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Patents & Licenses

PATENT AWARDS / JANUARY 2007

Patent No. 7,002,163
Issue Date February 21, 2006

Title Optically Stimulated Luminescence Radiation Dosimetry Method to Determine Integrated Doses and Dose Rates and a Method to Extend the Upper Limit of Measurable Absorbed Radiation Doses During Irradiation

OSU Inventors Jerimy C. Polf, Razvan Gaza, Stephen W.S. McKeever

Patent No. 7,045,087
Issue Date May 16, 2006

Title Assembly of Free-Standing Films Using a Layer-by-Layer Process

OSU Inventors Nicholas A. Kotov, Arif A. Mamedov

Patent No. PP16,801
Issue Date July 11, 2006
Title Patriot Turf Bermudagrass

OSU Inventors Charles M. Taliaferro, Dennis L. Martin, Jeffrey A. Anderson, Michael P. Anderson

Patent No. 7,144,580
Issue Date December 5, 2006

Title *M. haemolytica* Outer Membrane Protein PlpE as a Vaccine or Vaccine Component Against Shipping Fever
OSU Inventors Anthony W. Confer, Sahlu Ayalew, George L. Murphy, Karamjeet Pandher

LICENSE AWARDS / JANUARY 2007

Licensee FSTechnology, LLC

License Executed February 1, 2006

Title Antiballistic Garment
OSU Inventors Donna Branson, Semra Peksoz, Bert Jacobson, Diane Ricord

Licensee KW Industries, Inc.

License Executed July 14, 2006

Title Machine and Process for Forming Tapered or Cylindrical Utility Poles from Flat Sheet Metal

OSU Inventors Richard L. Lowery, Josh D. Inda, Tim M. Hoberock

Licensee Halliburton Energy Services, Inc.

License Executed August 7, 2006

Title High-Temperature Magnetoresistive Random Access Memory and A High Temperature VLSI Cell Library Technique

OSU Inventors Chriswell G. Hutchens, Chia-Ming Liu, Venkataraman Jeyaraman, Narendra Babu Kayathi

Licensee AgroSource, Inc.

License Executed September 12, 2006

Title Improved Methods for Producing the Phytohormone Coronatine and Its Use as an Abscission Agent

OSU Inventors Carol L. Bender, Alejandro Penaloza-Vazquez

Licensee Coskata, Inc.

License Executed December 4, 2006

Title Conversion of Synthesis Gas to Ethanol

OSU Inventors Raymond L. Huhnke, Randy S. Lewis

Research Week Kickoff — Collaborative Research: The Right Way

Ranga Komanduri, OSU Department of Mechanical & Aerospace Engineering, will kickoff Research Week with “Collaborative Research: The Right Way,” at 9 am on Monday, February 19 in the Student Union, Case Study 2.



Komanduri

Komanduri will address how to develop successful collaborative research in a university environment. He will focus on the major role chemistry plays in the whole activity and the insignificant role money plays in most cases. He'll also discuss how difficult problems can be addressed successfully by teams of collaborative researchers with different expertise. The talk will be based on Komanduri's own successful and not so successful ventures in this area over the past three decades. He'll describe the role OSU can play in successfully nurturing interdisciplinary research activities.

Komanduri is Regents Professor and A.H. Nelson, Jr. Endowed Chair in Engineering. He joined OSU in 1989 as professor of Mechanical & Aerospace Engineering and MOST Chair in Intelligent Manufacturing.

His most recent and exciting collaborative research involves EKG signal analysis for identifying cardiac disorders with medical professors from OSU's Center for Health Sciences in Tulsa, and several professors from OSU-Stillwater.

The International Atomic Energy Agency: The Nobel Peace Prize 2005



González

Abel Julio González, senior advisor, Nuclear Regulatory Authority, Argentine Government, will give a public presentation on the role he played in the Nobel Peace Prize awarded to the International Atomic Energy Agency in 2005 on Thursday, February 22 at 7:30 pm in the Student Union Little Theatre.

For over two decades, González was director of Radiation Safety at the International Atomic Energy Agency, the United Nations' nuclear watchdog. As a senior officer, he shared the Nobel Peace Prize awarded to the Agency in 2005 for their efforts to prevent nuclear energy from being used for military purposes and to ensure that nuclear energy for peaceful purposes is used in the safest possible way.

González is an expert in the field of radiation protection, i.e. protecting people and their habitat against the detrimental effects of ionizing radiation, and safety and security of radiation sources. He is a member of the United Nations Scientific Committee on the Effects of Atomic Radiation, an apolitical technical body reporting to the United Nations General Assembly, which estimates the global levels and effects of exposure to ionizing radiation.

González is Commissioner of the International Commission on Radiological Protection, a non-profit academic charity founded in 1928 by the International Congress of Radiology, which issues global recommendations on radiological protection; Vice-President of the International Radiation Protection Association, which assembles and represents the radiation protection professionals around the world; and a member of the IAEA's Commission of Safety Standards, which is charged with establishing international standards on nuclear, radiation, waste and transport safety.

González will give a technical lecture for faculty and students titled, “2006 Scientific Progress in Radiation Protection: Protecting People and Their Habitat Against Atomic Radiation,” on Friday, February 23 at 2 pm in Room 106, Noble Research Center.

He will talk about the United Nations estimates on

the health effects of radiation exposure from a report by the United Nations Committee on the Effect of Atomic Radiation; the latest recommendations on radiation protection from the International Commission on Radiological Protection; developments in the protection of patients in radio-diagnosis and radio-therapy and outcomes from recent international conferences; an international assessment of the effects of the Chernobyl accident with results from the Chernobyl Forum; and protection against a terrorist attack with radioactive substances which includes current ICRP recommendations on terrorism.

2004 Nobel Laureate in Physics: The Universe is a Strange Place



Wilczek

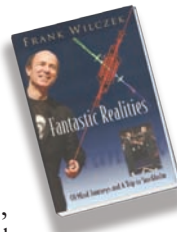
Frank Wilczek, Nobel prize winner and Herman Feshbach Professor of Physics, MIT, will give a public lecture on “*The Universe is a Strange Place*,” on Tuesday, February 20 at 8 pm in the Student Union Theatre.

Over the course of the twentieth century we have constructed a very successful fundamental theory of the behavior of matter. Viewed from this perspective, the world looks very different from our everyday reality. It is a very strange place and a beautiful one — in particular, we've come to understand that the building blocks of matter appear as notes in Music of the Void. He'll describe this using a combination of facts, pictures, and jokes. Finally, he'll discuss some recent discoveries indicating that the world is even stranger than we've understood so far, and how we're rising to the challenge.

Wilczek is considered one of the world's most eminent theoretical physicists. He has received many prizes for his work in physics, including the Nobel Prize of 2004 for work he did as a graduate student at Princeton University, when he was only 21 years old. He is known, among other things, for the discovery of asymptotic freedom, the development of quantum chromodynamics, axions and the discovery and exploitation of new forms of quantum statistics (anyons).

Following the lecture, Wilczek will sign his new book, *Fantastic Realities: 49 Mind Journeys and A Trip to Stockholm*. Profound ideas, presented with style: What could be better? Enjoy.

Wilczek will give the keynote address, “Frontiers of Science” at the OSU Research Symposium on Wednesday, February 21 at 9 am in the Student Union, Case Study 3.



2007 Kamm Lecture: Helping Higher Education Meet the Challenge

James Davis will give the keynote address, “Helping Higher Education Meet the Challenge,” on Wednesday, February 21 at 1:15 pm in the Willard Lecture Hall.



Davis

Davis currently serves as the Regional Representative for the United States Secretary of Education Margaret Spellings. In this capacity, he serves as an ombudsman to the Office of the Governor and legislative leadership, state education agencies, private schools, colleges and universities in federal support matters, which affect education in Arkansas, Oklahoma, Louisiana, New Mexico and Texas.

The 15th Robert B. Kamm Distinguished Lecture in Higher Education is sponsored by the OSU College of Education.

OSU Launches New High Performance Computing Center

A new High Performance Computing Center (HPCC) on campus will provide faculty and students with super-computing services and computational science expertise for a wide range of focused research, development and test activities. According to HPCC Director Mauricio A. Subieta, “The HPC Center puts advanced technology in the hands of the academic population quickly, less expensively and with greater certainty of success.”

The main objective of the HPCC is to promote research and teaching on campus by integrating state-of-the-art high performance computing technology for faculty, staff and students. The HPCC will provide consulting services to help researchers with their experimental software and hardware needs and training for faculty, staff and students in parallel computing theory and operations.

The HPCC also provides resources for system and technical support to clusters and HPC systems installed and deployed across campus. The HPCC currently manages a 128 3.2 GHz Xeon processor cluster divided in 64 nodes with an Infiniband network, with a total of 256 GB of distributed RAM and 6 TB of storage.

The HPCC will serve as a liaison between various groups and areas that are engaged in research in order to achieve synergistic results. The goal of the HPCC is to facilitate research and aid in educational advancement, providing high-performance computing to individuals and administrative units, as well as multidisciplinary units across campus.

For more information about the HPCC, contact Mauricio A. Subieta, Director, High Performance Computing Center, Information Technology, 102 Math Sciences, mauricio.subieta@okstate.edu

More ...

FEBRUARY 19-23, 2007

“Pictures at an Exhibition: Science, Patriotism and Civil Society in Imperial Russia,”

Joseph Bradley, Professor, Dept. of History, University of Tulsa, Monday, February 19, 3:30 pm, Edmon Low Library Browsing Room

Escherichia coli in the Tropics: An Example of Diversity and Possible Adaptation, Gary Toranzos, Professor, Dept. of Biology, University of Puerto Rico, Monday, February 19, 3:45 pm, 214 LSE

NSF Panel Tuesday, February 20, 1 pm, SU Case Study 2

OSU Research Symposium, Wednesday, February 21 through Friday, February 23

A record number of posters and papers — 226 total — will be presented during the three-day symposium

IACUC 101 Conference Wednesday, February 21, 7:30 am to 5 pm, OSU ConocoPhillips Alumni Center

Food and Agricultural Products Center/Institute of Food Technologies Oklahoma Research Symposium, Keynote Address: Chef John Matchuk, *The Role of a Chef in a Product Development Team*, 8 am to 4:15 pm, Thursday, February 22, 201 FAPC

OSU Center for Health Sciences Research Forum, Keynote Lecture: David Wright, Vice President of Research Ethics at Michigan State University, Friday, February 23, 10 am, Founder's

Hall and Room D-007, OSU-CHS, Tulsa

Communicating Science Knowledge Issues and Possible Solutions, Friday, February 23, 8 am to 6:30 pm, 4th Floor SU, www.cepd.okstate.edu

EXPLORING THE ARTS

OSU Bands — University Wind Ensemble, Concert Band and Symphonic Band, Tuesday, February 20, 8 pm, Sere-tean Concert Hall

Navigating the Mind: Psychological Themes in Work — from the Gardiner Art Gallery Permanent Collection, Wednesday, February 21 through Friday, February 23, 8 am to 5 pm, Gardiner Art Gallery

OSU Theatre — Julius Caesar, Wednesday, February 21 through Friday, February 23, 7:30 pm, Sere-tean Center