

*For 2006-2007, the Russ College reported \$14.7 million in research and sponsored programs. Highlights of recent awards, listed with the researcher name(s) and affiliation(s), are:*

**Khairul Alam** (Center for Advanced Materials Processing): \$416,924 from the University of Dayton to develop low-cost polymer nanocomposite tooling for agile manufacturing.

**Khairul Alam** (Center for Advanced Materials Processing): \$129,091 from Applied Sciences Inc., for the development of low-cost conducting polymer for electrostatic precipitators (phase II).

**Tom Arthur** (Avionics Engineering Center): \$146,891 from ITT Industries for antenna baseline and attitude measurement system feasibility study for the unmanned aerial vehicle.

**David Bayless** (Ohio Coal Research Center): \$70,000 from the U. S. Department of Energy for the adaptation of planar solid oxide fuel cells for use with solid fuel sources.

**David Bayless** (Ohio Coal Research Center): \$1.27 million from the Ohio Coal Research Consortium Management 2006-2007 for the Ohio Air Quality Development Authority.

**Kevin Berisso** (Industrial Technology): \$2,934 from Arjobex America for radio frequency identification moisture testing.

**Kevin Berisso** (Industrial Technology): \$9,880 from Alien Technology Corporation for testing radio frequency identification tags for their ability to function in -77 °C temperatures.

**Gerardine Botte** (Chemical and Bimolecular Engineering): \$41,182 from Hydra Fuel Cell Corporation for a scale-up of Ammonia Electrolytic Cell: 5W Prototype.

**Michael Braasch** (Avionics Engineering Center): \$80,000 from Rockwell Collins for multi-sensor integration for autonomous vehicle relative navigation.

**Michael Braasch** (Avionics Engineering Center): \$77,637 from L-3 Communications Corporation for the development of a radio frequency simulation capability.

**Kevin Crist** (Center for Air Quality): \$64,131 from the Ohio Air Quality Development Authority for the development of a fine grid urban airshed modeling tool for air quality planning and analysis.

**Kevin Crist** (Center for Air Quality): \$14,986 from the Northeast Ohio Areawide Coordinating Agency for the Northeast Ohio air quality online sustainability project.

**Mike DiBenedetto** (Avionics Engineering Center): \$288,696 from the Federal Aviation Administration for the refinement and development of flight inspection concepts and precision instrument approach procedure inspection requirements as supported by the Wide Area Augmentation System.

**Mike DiBenedetto** (Avionics Engineering Center): \$114,232 from Honeywell Inc. for preliminary high-level assessments to determine the threats to the Global Positioning System (GPS) position accuracy resulting from rotor blade and rotor craft airframe interference.

**Jeffrey Dill** (Avionics Engineering Center): \$150,000 from Rockwell-Collins for TTNT LPI/LPD waveform development.

**Jamie Edwards** (Avionics Engineering Center): \$25,875 from Landrum & Brown to analyze obstructions for a glide-slope facility at O'Hare International Airport.

**William Edwards** (Ohio Research Institute for Transportation and the Environment): \$193,787.44 from the Ohio Department of Transportation for forensic investigation of AC and PCC pavements with extended service life.

**Joseph Essman** (Electrical Engineering and Computer Science): \$63,508 from the Junior Engineering Technical Society for TEAMS test development.

**J. Ludwig Figueroa and Shad Sargand** (Ohio Research Institute for Transportation and the Environment): \$153,456 from the Ohio Department of Transportation for a performance assessment of warm mix asphalt pavements.

**Douglas Goetz** (Chemical and Bimolecular Engineering): \$100,000 from the American Heart Association to increase the understanding and development of new therapeutics for heart disease.

**Tingyue Gu** (Chemical and Bimolecular Engineering): \$3,500 from Amgen Inc for the creation of software modeling the ion-exchange chromatography for bioseparations.

**Tingyue Gu** (Institute for Corrosion and Multiphase Technology): \$38,464 from ARAMCO for hydrotesting of microbiologically induced corrosion.

**Kevin Johnson** (Avionics Engineering Center): \$15,167 from Athens Technology Inc. for a flight test using the center's Delfin L-29 jet.

**Robert Judd** (Center for Advanced Software Systems Integration): \$215,992 from General Electric Corporation for the continuation of a long-standing project to develop more accurate cost models of jet engines. All the Ohio-University developed models are in production use by GE engineers.

**Savas Kaya** (Electrical Engineering and Computer Science): \$15,000 from Wyle Laboratories Inc. for a feasibility study of reconfigurable mixed-signal circuits.

**Savas Kaya** (Electrical Engineering and Computer Science): \$120,000 from the National Science Foundation for a study of transmembrane proteins for bimolecular logic and storage.

**Sang-Soo Kim** (Ohio Research Institute for Transportation and the Environment): \$51,960 from the Ohio Department of Transportation for the creation of a simple test procedure for evaluating low-temperature crack resistance of asphalt concrete.

**Frank Kraft** (Mechanical Engineering): \$100,000 from the International Copper Association for the creation of a copper micro-channel tube for automotive climate-control and HVAC systems.

**Chang Liu** (Center for Intelligent, Distributed, and Dependable Systems): \$53,856 from EduTech for the Second Life Teen Grid Education Partnership Project, a partnership with Educational Technology to build a high school education island on the teen grid of the virtual online world Second Life.

**Chang Liu** (Center for Intelligent, Distributed, and Dependable Systems): \$2,000 from the Ohio Commission on Minority Health for the creation of two minority health month events to encourage healthy eating by getting the participants to play a virtual healthy eating game.

**Jundong Liu** (Electrical Engineering and Computer Science): \$26,000 from the University of Kentucky for the creation of advanced image segmentation and registration techniques.

**Teruhisa Masada** (Ohio Research Institute for Transportation and the Environment): \$188,164 from the Ohio Department of Transportation for the study of shear strength of clay and silt embankments.

**Dale Masel** (Center for Advanced Software Systems Integration): \$13,592 from General Electric Aircraft Engines for the revision of the forging cost model for rotating parts.

**Richard McFarland** (Avionics Engineering Center): \$14,997 from the Elizabeth City-Pasquotank County Airport Authority for the installation of a commissioned ILS at the Elizabeth City Airport in N.C.

**Srdjan Nesic** (Institute for Corrosion and Multiphase Technology): \$43,000 from Woodside Energy Ltd. to assess material resistance to general and localized corrosion.

**Srdjan Nesic** (Institute for Corrosion and Multiphase Technology): \$250,000 from EniServizi Corporation for a water-wetting joint industrial project.

**Simbo Odunaiya** (Avionics Engineering Center): \$5,000 from BPC Airport Partners Master Civil Engineering Team O'Hare for the creation of computer modeling for glide-slope reflecting planes for the O'Hare International Airport.

**Simbo Odunaiya** (Avionics Engineering Center): \$7,201 from National Renewable Energy Laboratory for an impact study on radar systems.

**Shawn Ostermann** (Electrical Engineering and Computer Science): \$49,307 from NASA-Glenn Research Center for supporting the NASA DTN code base.

**Hajrudin Pasic** (Center for Advanced Materials Processing): \$418,391 from the Ohio Air Quality Development Authority for pilot-testing of sieving electrostatic precipitator.

**David Quinet** (Avionics Engineering Center): \$38,407 from HNTB Corporation for a runway test at Los Angeles International Airport.

**David Quinet** (Avionics Engineering Center): \$18,000 from Robinson Aviation



Professor of Mechanical Engineering **Hajrudin Pasic** works with a graduate student in the Electrostatic Precipitator Lab on the development of a patent-protected sieving electrostatic precipitator.

Inc. for Instrument Landing System consulting for the U.S. Army in Wiesbaden, Germany.

**James Rankin** (Avionics Engineering Center): \$6,358 from Jerkens & Gilchrist for GPS-based aircraft surveillance technology.

**James Rankin** (Avionics Engineering Center): \$28,000 from Rockwell-Collins for an inertial technology assessment and market study.

**Shad Sargand** (Ohio Research Institute for Transportation and the Environment): \$147,130 from Washington State University for the Afghan Merit Scholars Program, which is supporting several Afghanistan-university faculty members as they earn master's degrees from the Russ College in civil, electrical, and mechanical engineering with the goal of returning to Afghanistan to help rebuild the infrastructure.

**Shad Sargand** (Ohio Research Institute for Transportation and the Environment): \$302,612 from the Ohio Department of Transportation to model and monitor pavement response and performance.

**Trent Skidmore** (Avionics Engineering Center): \$300,000 from Boeing for the Boeing Technical Assistance Contract.

**Andrey Soloviev** (Avionics Engineering Center): \$30,000 from Robert Bosch Corporation for the study of pedestrian navigation in urban environments.

**Janusz Starzyk** (Electrical Engineering and Computer Science): \$8,000 from General Dynamics Corporation for behavior learning analysis for simulated tactics.

**Eric Steinberg** (Ohio Research Institute for Transportation and the Environment): \$98,141 from the Ohio Department of

Transportation for a study of forces in wingwalls from the thermal expansion of skewed semi-integral bridges.

**Robert Thomas** (Avionics Engineering Center): \$21,924 from Defense Research Associates Inc. for information on how to see and avoid flight demonstration support.

**Robert Thomas** and **James Rankin** (Avionics Engineering Center): \$36,300 from ITT Corporation to characterize the low-altitude signal coverage of the Automatic Dependent Surveillance Broadcast Ground-based Transmitter at the Ohio University Airport.

**Maarten Uijt de Haag** (Avionics Engineering Center): \$150,000 from the Air Force Office of Scientific Research for the development of tightly-integrated LADAR/INS algorithm to support urban operations.

**Frank Van Graas** (Avionics Engineering Center): \$14,298 from Wyle Laboratories Inc. to study the feasibility of using synthetic aperture radar as an aid for navigation.

**Frank Van Graas** (Avionics Engineering Center): \$500,000 from the Federal Aviation Administration for local area augmentation system research and development.

**Gary Weckman** (Center for Advanced Software Systems Integration): \$41,109 from World Tek Inc. for the creation of Compatibility Tek, a tool for reduction of health care costs in manufacturing firms.

**Bob Williams** (Mechanical Engineering): \$51,900 from the Columbus Osteopathic Heritage Foundation for a five-year osteopathic training for the virtual haptic back.

**Aaron Wilson** (Avionics Engineering Center): \$141,660 from Trandes Corporation for the NAS Norfolk chambers field pre-installation support for the ILS.

**Valerie Young** (Center for Air Quality): \$50,400 from the U.S. Dept. of Agricultural Forest Service for a model of the dispersion of smoke from forest management burning to determine potential effects on endangered species.

**Helmut Zwahlen** (Ohio Research Institute for Transportation and the Environment): \$81,244 from the Ohio Department of Transportation for the creation of improved work zone design guidelines and enhanced model of traffic delays in work zones.