Pourdeyhimi’s research focuses on technologies to improve water purification, air filtration, biomanufacturing, drug delivery systems, agricultural production and protective materials for military and civilian applications. Pourdeyhimi, associate dean for industry research and extension in the College of Textiles, holds more than 80 U.S. and international patents and has been instrumental in launching three startup companies.

As director of NC State’s Nonwovens Institute, Pourdeyhimi has his finger on the pulse of the industry. The institute unites experts from industry, government and academia to create next-generation engineered fabrics. North Carolina has attracted more than $720 million in investment.
Kudos

D A C:

M e:

D R e:

T H:

J apan, Agriculture and Life Sciences, chairs the new N.C. Food Manufacturing Task Force.

• ed to her in the White House.

from nonwovens companies in the state.

15 years are now transforming the industry. More than 45 Ph.D. students are currently being funded thanks to Pourdeyhimi’s work, which includes basic and applied research worth more than $30 million.

Pourdeyhimi is the 30th professor from NC State to win the Gardner award, given annually to one faculty member from the UNC system for significant contributions to the welfare of the human race.

PARRY RECEIVES PRESIDENTIAL AWARD

Elizabeth Parry, a partnership coordinator for the Engineering Place, an NC State education and outreach program in the College of Engineering, is one of 14 individuals selected to receive the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring.

The White House gives the award to individuals and organizations to recognize the crucial role that mentoring plays in the academic and personal development of students studying science and engineering — particularly those who belong to groups that are underrepresented in these fields. By offering expertise and encouragement, mentors help prepare the next generation of scientists and engineers while ensuring that tomorrow’s innovators represent a diverse pool of science, technology, engineering and mathematics talent.

Their mentoring can involve students at any grade level from elementary through graduate school and professional development mentoring of early-career scientists. In addition to being honored at the White House, recipients receive $10,000 from the National Science Foundation.

“These educators are helping to cultivate America’s future scientists, engineers and mathematicians,” President Obama said. “They open new worlds to their students and give them the encouragement they need to learn, discover and innovate. That’s transforming those students’ futures, and our nation’s future, too.”

LINTON LEADS N.C. FOOD MANUFACTURING TASK FORCE

Richard Linton, dean of NC State’s College of Agriculture and Life Sciences, has been named chair of the new North Carolina Food Manufacturing Task Force. In June, Gov. Pat McCrory announced the task force, which also will have leadership from Dan Forest, lieutenant governor; John Skvarla, secretary of commerce; and Steve Troxler, commissioner of agriculture and consumer services.

The 30 members, with experience in all aspects of food manufacturing, including farming, transportation, packaging, processing and economic development, will develop a strategic business plan to leverage existing activities in food processing and manufacturing; establish a statewide food processing and manufacturing organization; and create a plan to develop a proactive industrial-recruitment campaign for new business development. The panel also will foster the growth of food-manufacturing entrepreneurial endeavors, enhance development of innovative food products and processes, and identify sector-specific regulatory training and outreach.

FIVE FACULTY NAMED AAAS FELLOWS

Five NC State University faculty members have been elected as fellows of the American Association for the Advancement of Science (AAAS).
CVM THIRD IN NATION

NC State’s College of Veterinary Medicine is ranked third among the nation’s 30 colleges of veterinary medicine in the 2015 higher education rankings issued by U.S. News and World Report.

According to the magazine’s stated methodology, the rankings are based solely on the results of peer assessment surveys sent to deans, other administrators and faculty at accredited degree programs or schools in each discipline. Respondents rated the academic quality of programs on a five-point scale.

• Nancy L. Allbritton, professor and chair of biomedical engineering, elected for invention and implementation of new tools for biomedical research and for development of miniaturized devices to enable more accurate disease diagnosis.

• David C. Dorman, professor of toxicology, elected for distinguished contributions to the field of toxicology, particularly research investigating the neurotoxicity of environmental chemicals.

• Justin Schwartz, Kobe Steel Distinguished Professor and head of NC State’s materials science and engineering department, elected for outstanding contributions to the field of applied superconductivity, particularly for developing materials for use in superconducting devices, the advancement of high magnetic fields and the integration of experiment and computation.

• Bruce A. Sherwood, professor emeritus of physics, elected for far-reaching insights and contributions to both applied and computational physics, particularly for tools demonstrating the value of computation in undergraduate physics.

• Mohammed A. Zikry, professor of mechanical and aerospace engineering, elected for distinguished contributions to the field of computational materials science and mechanics, particularly for predictions at scales ranging from the nano to the micro.

They are among 401 scientists to be honored this year by AAAS, the world’s largest scientific society and the publisher of the journal Science. Each year, the AAAS Council — the policymaking body of the society — elects members who have shown “scientifically or socially distinguished efforts to advance science or its applications.” Fellows are nominated by their peers and undergo an extensive review process.

ENGINEERING GRADUATE STUDENT WINS LEMELSON-MIT STUDENT PRIZE

Alexander Richter, a graduate student in NC State’s Department of Chemical and Biomolecular Engineering, has won a $15,000 Lemelson-MIT Student Prize for work to improve agricultural pest control that could bolster the global food supply. Richter won in the “Eat It” category for inventions that can improve food and agriculture.

Richter, a Ph.D. candidate working with Orlin Velev, is developing a novel approach to deliver antimicrobial and antifungal pest control agents via lignin-core environmentally benign nanoparticles. These biodegradable particles could be the basis for reduced-risk conventional pesticide products that have the potential to reduce the amount of chemicals used in plant protection by as much as 90 percent, save farmers more than 25 percent on pest-control initiatives and, in a world facing looming food shortages, help increase crop yields for more and better food.

The technology is being developed by BENANOVA Inc., a startup company founded by Richter and Velev that is based in the Technology Incubator on NC State’s Centennial Campus. Richter is the first student from a North Carolina university to win the honor. Founded by Jerome H. Lemelson and his wife, Dorothy, in 1994, the program is funded by the Lemelson Foundation and administered by the MIT College of Engineering.

PAUL’S CROSS SCORES AWARD, NEW FUNDING

During the Reformation, the open-air pulpit outside Old St. Paul’s Cathedral in London was the scene of radical Protestant preaching and more than one riot. Such was the enthusiasm inspired by some of history’s greatest orators in the shadow of England’s grandest cathedral.

Although the churchyard pulpit, Paul’s Cross, was destroyed in the English Civil War in 1643, it continues to attract a new generation of enthusiasts thanks to NC State’s Virtual Paul’s Cross Project. The multidisciplinary effort recreates the sights and sounds of the historic churchyard in the digital realm, and includes a reenactment of the
Gunpowder Day sermon delivered by poet and cleric John Donne in 1622.

The project — drawing on the work of an international team of scholars coordinated by English professor John Wall and architecture professor David Hill — recently won a 2014 Digital Humanities Award for best data visualization. Plus, the National Endowment for the Humanities has awarded the scholars $325,000 for the next phase of the project, which will extend the 3-D and acoustical models to encompass the interior of St. Paul’s Cathedral.

The multimedia project can be experienced online at the project’s website (http://vpcp.chass.ncsu.edu) as well as in the Teaching and Visualization Lab in the Hunt Library on Centennial Campus.

**NATIONAL ACADEMY OF INVENTORS SELECTS NEW FELLOWS**

Jay Narayan, John C.C. Fan Family Distinguished Chair of materials science and engineering, and Nancy Allbritton, Distinguished Professor of chemistry and professor and chair of the biomedical engineering department, have been named Fellows of the National Academy of Inventors (NAI).

NAI was founded in 2010 to recognize and encourage inventors with patents issued from the U.S. Patent and Trademark Office, enhance the visibility of academic technology and innovation, encourage the disclosure of intellectual property, educate and mentor innovative students, and translate the inventions of its members to benefit society.

Being named an NAI Fellow is a high professional honor for academic inventors who have "demonstrated a highly prolific spirit of innovation in creating or facilitating outstanding inventions that have made a tangible impact on quality of life, economic development and the welfare of society."

**FIVE FACULTY RECEIVE NSF CAREER AWARDS**

Five members of NC State’s world-leading faculty received Faculty Early Career Development Awards from the National Science Foundation (NSF). Also known as the NSF CAREER award, it provides funds over five years to support a research project. It is one of the highest awards the foundation bestows upon young faculty.

- **Joshua Pierce**, chemistry — “Novel Methods for the Stereoselective Synthesis of Nitrogen Containing Heterocycles.” The project will develop new and efficient ways to convert simple molecules to complex, highly functional molecules that could be used as building blocks in developing new drugs.
- **Ana-Maria Staicu**, statistics — “Next Generation Functional Methods for the Analysis of Emerging Repeated Measurements.” To gain more insights into the natural evolution of multiple sclerosis, the project will seek to develop new statistical methods for analyzing emerging data structures that are correlated because of their longitudinal design.
- **Kristy Boyer**, computer science — “Fostering Collaborative Dialogue for Rigorous Learning and Diverse Student Retention in Computer Science.” The project will gather data on collaborative learning in computer science classrooms; examine that data to determine which aspects of collaborative learning are effective; based on that data analysis, create theoretically informed models of collaborative dialogue; and implement and evaluate those models.

- **Rosangela Sozzani**, plant and microbial biology — “Modeling Emergent Behaviour of Gene Networks Controlling Plant Stem Cells.” To improve crop productivity, the project will identify the essential features that govern stem cell regulatory networks in developing roots and will develop mathematical models that describe the behavior of those networks.
- **Chase Beisel**, chemical and biomolecular engineering — “Harnessing Endogenous Defense Systems as Genetic Tools for Microbial Communities.” The project will harness the defense systems of microorganisms as a basis for developing genetic tools that could be used to improve crop health and combat insect crop pests.

**SCHOOL FUNDING EXPERT HONORED**

Education faculty member Kevin Brady won a national award for two decades of research and contributions to school finance equity. Brady accepted the 2015 National Education Finance Distinguished Research and Practice Fellows Award in March.

He studies financial, legal and...
VETERINARY PHARMACIST RECOGNIZED

NC State veterinary pharmacist Gigi Davidson has received the highest honor awarded by the U.S. Pharmacopeial Convention (USP), the Beal Award for Distinguished Volunteer Service. The award includes a $10,000 prize, which Davidson donated to the pharmacy residency program in the College of Veterinary Medicine.

Davidson, director of clinical pharmacy services in the college, recently completed a five-year term as chair of USP’s Compounding Expert Committee. Under her leadership, the committee developed a guidebook with compounding standards for use by practitioners and regulatory authorities.

USP is a nonprofit organization that sets standards for the identity, strength, quality and purity of medicines. Since 1820, the USP has relied on volunteer experts to develop programs and standards to ensure the quality of medicines and foods.

Recently, Davidson was appointed to represent USP on the U.S. Food and Drug Administration’s Pharmacy Compounding Advisory Committee, a group charged with implementing the compounding provisions of the Drug Quality and Security Act of 2013.

Davidson sits on numerous professional boards and committees, including the American College of Veterinary Pharmacists and the Pharmacy Compounding Accreditation Board Standards Committee.

JONES NAMED ACE FELLOW

The American Council on Education announced that Lisa Guion Jones, professor and assistant dean for diversity, outreach and engagement in the College of Agriculture and Life Sciences, will be an ACE Fellow in the 2015-16 academic year.

Under her leadership, the college has implemented initiatives and programs that have increased recruitment and retention of faculty, postdoctoral fellows and graduate students. Her transformational leadership of retention efforts targeted toward minority undergraduates has received widespread recognition. These and other strategic efforts have resulted in NC State being ranked ninth in the nation for graduating minority undergraduate students in agricultural disciplines in 2014, a significant increase from five years ago, when the university ranked 21st.

Jones will spend the year at another higher education institution working with senior leaders. The ACE Fellows program was established in 1965. Forty-seven fellows were selected this year.

RURAL SCHOOL PROGRAM EFFECTIVE

An NC State University program to train leaders for rural schools in northeastern North Carolina has received a national award for effectiveness — one of only two programs to receive the distinction.

The University Council for Educational Administration has given an Exemplary Educational Leadership Program Award to the Northeast Leadership Academy (NELA), a rigorous two-year program that prepares principals and assistant principals to work as turnaround specialists in high-need districts in northeastern North Carolina.

News of the award came just after NELA received an additional $2 million grant from the U.S. Department of Education through its Turnaround School Leaders Program. NELA also received a $4.7 million grant from the Department of Education in 2013.

“NC State is committed to serving the needs of North Carolina’s rural schools, which educate almost half of the state’s students,” said NC State education professor Bonnie Fusarelli, who directs the program. “NELA is based on research that demonstrates how school leaders retain effective teachers and create a school culture of achievement.”

To prepare for the challenge of leading schools with limited access to resources and training, NELA graduates complete a yearlong internship and work with a community agency. They earn a master’s degree in school administration and commit to take a leadership position in one of the participating counties for three years after completing the program. Training includes a summer institute and mentoring from executive coaches. The first-year placement rate for NELA is more than twice the national average, Fusarelli says.