

2013-14

VOICES OF DISCOVERY

The College of Arts and Sciences at Elon University is committed to engaging students and the community in the excitement and wonder of discovery. During the past two decades, scores of discoveries in molecular biology, atomic physics and computer technology have changed the face of science and brought dramatic changes to our world.

The Voices of Discovery speaker series brings to campus preeminent scientists and mathematicians who have left an indelible mark on the way we view the world. They share their remarkable experiences and perspectives with Elon students and the community. This series plays a fundamental role in the university's commitment to create a science-conscious community and to help students be informed citizens.

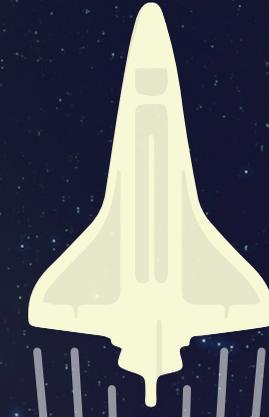
Voices of Discovery is just one element of Elon's program to provide outstanding science education. At the Dalton L. McMichael Sr. Science Center, students work in modern laboratories with cutting-edge research tools. They focus on discovery-based learning, undergraduate research and collaboration among the sciences, developing an appreciation for the scientific enterprise and how we acquire new knowledge.



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A Journey of Endeavor

THURSDAY, SEPTEMBER 19, 2013
MCCRARY THEATRE
7:30 P.M.

Paul S. Lockhart, M.S.

Colonel, USAF (ret.); NASA Astronaut // Senior Vice President, Aerospace Operations, QinetiQ North America

Following the Challenger disaster in 1986, the Endeavor was commissioned by Congress and became the fifth and last of the U.S. reusable spacecrafts known as shuttles or orbiters. Named for Captain Cook's exploratory HMS Endeavor of the 18th century, Endeavor continued the shuttle legacy – 30 years and 135 missions. Shuttle missions engaged the general public in the excitement of exploration and discovery as astronaut scientists studied materials science, space biology, repaired orbiting satellites and assisted with the construction of the international space station.

There have been exciting practical spinoffs from the shuttle years, such as insulating and thermal protection materials, but the greatest legacy lies in advances in basic astrophysics and planetary science. The positioning, upgrading and maintenance of the Hubble telescope and the delivery of the unmanned Galileo spacecraft and probe to study the Jupiter system have enhanced our understanding of the expanding universe and the processes of planet formation.

Retired U.S. Air Force Colonel Paul Lockhart piloted the Space Shuttle Endeavor on two missions to the International Space Station. These missions involved space station crew exchanges, delivery of supplies and research equipment and some maintenance work on the station. During the second mission, Lockhart coordinated the spacewalk activities.

Paul Lockhart's career in the Air Force included his time at NASA and a stint at the Pentagon. He retired from the Air Force in 2007 and is currently the Senior Vice President for Aerospace Operations at QinetiQ North America, a subsidiary of QinetiQ, Inc. a multinational defence technology company based in London. Paul Lockhart is the recipient of numerous honors and recognitions including the Defense Superior Service Medal, Air Force Aerial Achievement Medal and National Defense Service Medal.



Brave Genius: A Scientist's Journey from the French Resistance to the Nobel Prize

MONDAY, NOVEMBER 18, 2013
MCCRARY THEATRE
7:30 P.M.

Sean Carroll, Ph.D.

Professor of Molecular Biology and Genetics, University of Wisconsin // Vice President for Science Education, Howard Hughes Medical Institute

Sean Carroll, an internationally recognized geneticist, does cutting edge science in the emerging field of evolutionary developmental biology, known as Evo Devo. He is an award-winning science author and educator, adept at telling the story behind a great discovery – stories of scientific journeys and processes. Carroll's research focuses on identifying and understanding the few, surprisingly similar and highly conserved genes that regulate animal development and the relationship of these regulatory genes to phenotypic variation and evolutionary change.

He is an author or co-author of more than 100 scientific papers. Carroll tells stories of scientific discovery to educate and engage his readers in an ongoing dialog about some of the really big questions about the natural world. Books such as *Remarkable Creatures: Epic Adventures in the Search for the Origins of Species* and *Endless Forms Most Beautiful* have resulted in accolades from *U.S. News and World Report*, where Carroll was described "as the new, user-friendly public face of evolutionary science." Carroll has been featured in *TIME* magazine, writes regularly for the *New York Times*, is a consultant for NOVA on public television and was awarded the 2010 Stephen Jay Gould Prize for his work to promote public understanding of the story of evolution and evolutionary science.

Carroll received his Ph.D. in immunology from Tufts University School of Medicine, is currently a professor of molecular biology and genetics at the University of Wisconsin and was recently appointed vice president for science education at the Howard Hughes Medical Institute. He is a member of the National Academy of Sciences and a Fellow of the American Association for the Advancement of Science.



TMI: Information, Identity and Privacy

MONDAY, MARCH 3, 2014
MCCRARY THEATRE
7:30 P.M.

Edward W. Felten, Ph.D.

Professor, Computer Science and Public Affairs and Director, Center for Information Technology Policy, Princeton University

Internet technology plays a major role in communication, personal expression, recreation, banking, health-care delivery, energy management, voting and accessing government information as well as many other facets of daily life too numerous to mention or too subtle to recognize. Along with the increasing integration of information technology into the very fabric of our lives, many technology users also experience a dark side to this culture of information obsession: stolen identities, online financial information theft, online scams, harmful viruses and malware, electronic surveillance, restrictive licensing of hardware and software, privacy violations and the list goes on.

This is the world of Edward W. Felten – the places where information technology and public policy intersect. Felten received his Ph.D. in computer science and engineering in 1993. He has served as the founding director of Princeton University's Center for Information Technology Policy since 2005. The center's focus is on developing guidelines and technical solutions to address the use and potential misuse of electronic information.

Felten's personal research interests include computer security and privacy, and technology and the law. Felten is the author of more than 80 publications and several books covering topics such as web security, copy protection and electronic voting issues. He has testified in a number of high-profile government lawsuits involving the misuse of technology information and was appointed the chief technologist for the U.S. Federal Trade Commission in 2011. In 2004, he was named one of the 50 leading science and technology leaders in the world by *Scientific American*.

