

UDARF

UNIVERSITY OF DELAWARE ASSOCIATION OF RETIRED FACULTY



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QUARTERLY NEWSLETTER

Special delivery for fMRI device

The early morning hours of Tuesday, Jan. 12, brought a very special delivery to campus when a 14-ton magnet was hoisted into place at the University's new Multi-Modal Imaging Center on East Delaware Avenue.

Robert Simons, chair of the Department of Psychological and Brain Sciences, calls it a "game changer."

The Siemens-built fMRI (functional Magnetic Resonance Imaging) device is a powerful new resource for researchers campuswide, statewide and throughout the region, offering new interdisciplinary possibilities for those in health sciences, engineering, physics, biology, chemistry and many other fields.

It will be the only research-dedicated fMRI device in Delaware, Simons said. To do the kind of work this magnet makes possible, researchers often travel to the University of Pennsylvania in Philadelphia or to the University of Maryland in College Park. The cost, in money and time, is high.

UD's new magnet, built in Germany, has a 3-Tesla power rating, which makes it about twice as strong as most clinical MRI devices, and is designed to provide high-resolution images of everything from brain activity to muscles, discs, bones and organs, to name just a few applications.

In addition to its power for scientific purposes, the magnet has great potential to draw faculty and students to the University who need the technology and



would otherwise go elsewhere to pursue their research and studies.

The fMRI device will be the main attraction when the new Multi-Modal Imaging Center opens in mid-March.

The new center is supported by the University, the Unidel Foundation and the colleges of Arts and Sciences, Health Sciences and Engineering.

UDARF lunch: Make your reservation

The next UDARF luncheon, scheduled Tuesday, March 8, will feature Charles Elson, Edgar S. Woolard Jr. Chair in Corporate Governance and director of the John L. Weinberg Center for Corporate Governance.

The meeting is scheduled from 11:30 a.m.-1:30 p.m. in 120 Clayton Hall. Reservations may be made online at <http://sites.udel.edu/udarf/1033-2/> and the deadline is Tuesday, March 1. Registrants must pay their \$17

Dear UDARF Members,

There can be no doubt that we are in the middle of winter. Even a week after the "Great Blizzard of 2016," I see endless white outside my window with only a hint of grass peeping through. But it could have been worse. My son's house in northern Virginia had twice as much snow as we did in northern Delaware. Also, the blizzard could have hit us when all the UD students were in town, creating true gridlock. Surely the rest of winter must turn out better. Spring is March 20, just weeks away!

In my own case, being housebound has not been such a tragedy. I had open heart surgery on Jan. 5 at Christiana Hospital, thanks to a stress test that gave me warning of impending disaster unless surgery came quickly. It is a month later as I write, and the care of the nurses and visiting nurses was outstanding. I am now in full rehab mode with the usual treadmills and stationary bikes. I expect to be walking two miles daily very soon, which is necessary if I am to complete a long-scheduled tour of Cuba with my wife in late February. The tour director made it clear I must "shape up" or build my own raft to make it home. It's a tough group!

Our March 8 luncheon features Dr. Charles Elson, Director of the Center for Corporate Governance, who will likely fill us in on the current state of the economy and businesses' reaction to the volatile world economic situation. On April 7, we will be privileged to hear the Intellectual Journey of Barbara Gates, English department. And on May 3, we will end the academic year with a luncheon featuring, we hope, either outgoing UD President Targett or incoming President Assanis, depending on their schedules. In any case, we have several exciting speakers in the coming months and I hope that you will join us.

Best Wishes,
Bob Taggart, President

Jungck discuss STEAM approach to interdisciplinary learning



John Jungck discusses a “STEAM” approach to education, adding the art to STEM.

The University of Delaware’s John Jungck would like to see a greater appreciation of the arts in science, technology, engineering and mathematics (STEM) education.

Professor and director of the DuPont Interdisciplinary Science Learning Laboratories, the instructional wing of UD’s Harker Interdisciplinary Science and Engineering Laboratory, Jungck explained his views on valuing the arts in the sciences during a luncheon meeting of the University of Delaware Association of Retired Faculty held Tuesday, Dec. 1, in Clayton Hall.

A theoretical biologist specializing in molecular evolution, evolutionary bioinformatics, image analysis and mathematical biology education, Jungck favors the “STEAM” learning approach, which includes the arts in STEM studies.

Studies show that students learn more when they see that mathematics is not something boring or utilitarian but is beautiful, engaging, and addresses many important issues, Jungck noted.

“As a scientist, I like Picasso’s statement that ‘Every child is an artist.’ The problem is how to remain an artist once we grow up,” Jungck said, adding, “I’m interested in how life inspires design, whether it’s from an engineering or artistic perspective.”

One of many notable areas where the oral-visual culture helps shape the way scientists and artists view the natural world can be found in the work of Daina Taimina, who in 1997 discovered how to make physical models of the geometry known as hyperbolic space using the art of crochet.

While many mathematicians believed that it was impossible to construct such forms, it was found that nature had been embodying hyperbolic geometry in its anatomies, including organisms such as corals.

A hyperbolic crochet coral reef created by Margaret and Christine Wertheim of the Institute for Figuring was a popular display item during a Smithsonian Institution

exhibition held from October through April 2011.

“This hyperbolic environment has influenced a great deal of mathematics, and what can be done with this kind of structure,” Jungck said. “It is this conjuncture of art, science, mathematics, handicrafts and ecological activism that really inspires me about art and science to collaborate on some very interesting things.”

Seeing has the capacity to alter both the seer and the thing seen, as noted in the book *The Object Stares Back*, by author James

Elkins, and visualized in the 1977 short scientific film *The Powers of Ten*, directed by Charles and Ray Eames.

After Elkins stated “the world is flooded with light, and everything is available to be seen, and with the help of science, we can see galaxies, viruses and the inside of our own bodies. ... Seeing does not interfere with the world or take anything from it. It does not hunt, hurt or damage anything. It is detached, efficient and rational,” he added that, “The truth is more difficult. Each one of those ideas is completely wrong. Seeing is irrational, inconsistent, and undependable.”

Instead of looking for the universal, perfect archetype, Jungck remarked that today’s evolutionary biologists are involved with the measurement of messy, ephemeral phenomena.

“What 21st century mathematics allows us to do is to study that kind of variation, to do fuzzy logic and fractal geometry in a whole new way that lets us see the world in a whole new way,” Jungck said. “An appreciation of the arts in STEM education may give students a more expansive view of these areas and help them become more deeply involved in their education.”

Article by Jerry Rhodes
Photo by Kathy F. Atkinson

Posthumous honor for Richard Heck

The late Richard F. Heck has been named a fellow of the National Academy of Inventors (NAI).

Election to NAI fellow status is a high professional distinction accorded to academic inventors who “have demonstrated a 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.”

Fellows will be inducted on April 15, as part of the fifth annual Conference of the National Academy of Inventors at the United States Patent and Trademark Office in Alexandria, Virginia.

Heck, who was the Willis F. Harrington Professor Emeritus of Chemistry until his death in October 2015, was a 2010 recipient of the Nobel Prize in Chemistry “for palladium-catalyzed cross

couplings in organic synthesis.”

Norman J. Wagner, the Unidel Robert L. Pigford Chaired Professor of Chemical and Biomolecular Engineering, also was named a 2015 NAI fellow.

The National Academy of Inventors is a 501c3 non-profit organization composed of more than 200 U.S. and international universities and non-profit research institutes, with more than 3,000 individual academic inventor members and growing rapidly. It was founded in 2010 to recognize and encourage inventors with a patent 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.

Dennis Assanis of Stony Brook University named president

Dennis Assanis, provost and senior vice president for academic affairs at Stony Brook University, was elected the next president of the University of Delaware, after a vote by the Board of Trustees at a special meeting on Nov. 18.

“Dr. Assanis has an impressive record as an academic leader, a distinguished scholar and an inspiring educator,” John R. Cochran, chairman of the Board of Trustees, said. “I am confident that his personal commitment to the power of education and his extensive experience in the classroom and the laboratory will serve the University of Delaware well in the years to come.”

Trustees Terri Kelly and Don Puglisi, who co-chaired the Presidential Search Committee, said Assanis was the committee’s unanimous choice. “We were privileged to have a rich pool of top-level candidates for this position. Dennis Assanis’ combination of administrative experience and outstanding academic credentials clearly set him apart,” Kelly said. “Dr. Assanis is deeply concerned with the issues facing higher education today, including affordability, diversity and the future of research innovation,” Puglisi said.

“I am truly honored and thrilled to serve as the next president of the University of Delaware,” said Assanis. “UD is an amazing institution known for the quality of its students and the achievements of its faculty and staff. Together, I know we can build on this rich legacy. In our quest to fulfill our mission of cultivating learning, developing knowledge and fostering the free exchange of ideas, we will reaffirm our commitment to providing access to excellence in education, scholarly research and creative performances. In an inclusive intellectual environment where diversity is celebrated, we have a historic opportunity to seize the momentum that UD has built.”

Samuel L. Stanley Jr., president of Stony Brook, said, “The



University of Delaware is fortunate to have successfully recruited a leader with Dennis’ capabilities, and I have no doubt that he will lead UD to continued success.”

“My wife, Eleni, and I are looking forward to becoming part of the Blue Hen community and getting to know the students, faculty and staff of UD,” Assanis said.

Assanis will take office on July 1, 2016, and Nancy M. Targett will continue to serve as UD’s acting president until then.

After the Board of Trustees meeting, Assanis and his family attended a series of receptions across the campus for all faculty and staff, undergraduate students and graduate and international students.

About Dennis Assanis

Dennis Assanis is a distinguished educator with a wide range of academic leadership experience and a worldwide reputation as

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Nancy Targett named provost, vice president for academic affairs at UNH

Acting President Nancy Targett has been named provost and vice president for academic affairs at the University of New Hampshire. (UNH).

Her appointment, which is effective Sept. 1, was announced today by UNH President Mark Huddleston.

“Nancy brings an enormous breadth of experience to this role,” Huddleston said. “She recognizes the many challenges facing higher education across the country. I am confident she is the person to strengthen the quality of our academic and research programs as we enhance UNH’s profile as a top-tier research university.”

As UNH’s senior academic administrator, Targett will be responsible for the university’s academic priorities and the allocation of resources to support them. She will be working closely with academic deans, department heads, student services professionals, faculty and staff.

Targett said, “I am honored and excited at the opportunity to serve as provost and vice president for academic affairs at the University of New Hampshire. I am ready for new challenges and new adventures.

“At the same time this is a bittersweet moment for me, since I

have a deep affection for the University of Delaware and its people. You can be assured that I will give my full attention to serving UD until my departure in the summer of 2016,” she said.

John Cochran, chairman of UD’s Board of Trustees, said, “Nancy Targett’s distinguished tenure at the University—as a faculty member, dean, Sea Grant director and now acting president—has been marked by her dedication and commitment to UD’s mission and its people. Nancy has truly made a difference at Delaware. As she prepares for her new post at the University of New Hampshire, I know the entire University community will join me in extending congratulations to Nancy and thanking her for her service to UD.

“Nancy began serving as acting president just as I began as board chair,” he said, “and I have had the opportunity to observe her leadership, dedication and enthusiasm firsthand. I am truly grateful for all that she is doing to guide the University during this transition period... Job well done!”

A member of the UD faculty since 1984, Targett became acting president of the University in July 2015. Her term as acting president expires when Dennis Assanis becomes president on July 1.

IN BRIEF

Theodore E.D. Braun, professor emeritus of French and comparative literature, presented the paper "A Little Corner of Voltaire's Vast Correspondence" and organized and chaired a panel on "The Eighteenth-Century Version of Email and Social Networks" at the East-Central/American Society for Eighteenth-Century Studies, West Chester, Pennsylvania, Nov. 12-14. Also, he organized and chaired a panel on "Nation, Port and Family: Reading, Mapping and Censoring in the Ibero-American Enlightenment" at the International Society for Eighteenth-Century Studies, Rotterdam, July 27-31. He presented the paper "Le France de Pompignan, Scholar and Urban Planner" and organized and chaired the panel "Know Your Enemies – I (Society for Eighteenth-Century French Studies), American Society for Eighteenth-Century Studies, Los Angeles, March 19-21. Also, Braun presented the paper "Voltaire's Enemy: Le France de Pompignan: Intellectual, Urban Planner, Philanthropist" and organized and chaired a panel on "Why You Should Know Your Enemies" at the South-Central Society for Eighteenth-Century Studies, Point Clear, Alabama, Feb. 26-28. Braun also has written an article "Les Hymnes de Le Franc de Pompignan: Chansons sans Musique?" in *Jean-Jacques Lefranc de Pompignan. Un Homme de Cultures au Siècle des Lumières*, Actes du Colloque International de Toulouse-Montauban-Pompignan, 22-23 septembre, 2006, études réunies et présentées par Nathalie Dauvois (Paris: Eurédit, 2015), pp. 163-174.

Gary May, professor emeritus of history, entertained alumni, students and friends of the University with stories from his book *Bending Toward Justice: The Voting Rights Act and the Transformation of American Democracy* and his involvement with the Oscar-nominated film *Selma*, at the Delaware Diamonds Society's annual Authors Series on Nov. 2 in Philadelphia.

David P.M. Northmore, professor emeritus of psychological and brain sciences, gave a talk titled "Holding Attention for 400 Million Years: A Possible Midbrain Mechanism" on Nov. 11 at the Department of Biology, University of Santiago de Compostela, Spain, and on Dec. 1 at the Department of Anatomy, University College, London University, United Kingdom.

Jonathan Sharp, professor emeritus of oceanography in the College of Earth, Ocean, and Environment, has been named to the Association for the Sciences of Limnology and Oceanography's (ASLO) inaugural Class of Fellows. Initiated in 2015, the ASLO Fellows program honors members who have advanced the aquatic sciences via exceptional contributions that benefit the society and its publications, meetings and other activities. Sharp was named an ASLO Sustaining Fellow. The inaugural Class of Fellows will be honored at the association's annual meeting in Santa Fe, New Mexico, scheduled for June 5-10, 2016.

Robert Stark, professor emeritus of mathematical sciences and civil and environmental engineering,

co-authored (with Carla Morris) two new math books published by John Wiley: *Fundamentals of Calculus* (August 2015) and *Finite Mathematics: Models and Applications* (September 2015)

Richard Sylves, professor emeritus of political science and international relations, has published *Disaster Policy and Politics*, second edition, Sage CQ Press, Thousand Oaks, California, 2015.

Recognized for excellence, affordability

The University of Delaware has been recognized for academic excellence, affordability and value by two national college guides.

UD is included in the 2016 edition of the Princeton Review book *Colleges That Pay You Back: The 200 Schools That Give You the Best Bang for Your Tuition Buck* released Feb. 2.

Also, the February issue of *Kiplinger's Personal Finance* magazine listed UD among the 100 best values in public colleges.

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a scholar and expert in both fundamental and applied studies of internal combustion engines and energy systems.

Since 2011, Assanis has served as provost and senior vice president for academic affairs at Stony Brook University and as vice president for Brookhaven National Laboratory Affairs. At Stony Brook, he has spearheaded the development of a strategic plan for academic affairs and launched a number of initiatives strengthening the faculty, programs for undergraduate and graduate students, research and scholarly activities, and global engagement.

Before joining Stony Brook University, Assanis had a distinguished career at the University of Michigan for 17 years.

Assanis has an exceptional research record and has been at the leading edge in the field of internal combustion engines, fuels and energy for more than 25 years. He was inducted as a member of the National Academy of Engineers in 2008 for his scientific contributions to improving fuel economy and reducing emissions of internal combustion engines, and for promoting automotive engineering education. He holds five patents and has directed more than \$100 million in research grants and contracts.

A dedicated teacher and mentor, he has advised more than 60 doctoral students, 150 master's degree candidates and hundreds of undergraduates. He has introduced innovative teaching methods in his classes and has been a proponent of online education for more than 20 years.

Honored with numerous prestigious awards for his teaching and research, Assanis was named SUNY Distinguished Professor earlier this year and is a fellow of the American Association for the Advancement of Science (AAAS), the American Society of Mechanical Engineers (ASME) and the Society of Automotive Engineers (SAE).

Assanis earned an honors bachelor of science degree with distinction in marine engineering from Newcastle University in England in 1980 and four degrees from Massachusetts Institute of Technology: a master of science degree in naval architecture and marine engineering and a master of science in mechanical engineering, both in 1982, a master of science in management from the Sloan School of Management in 1986, and a doctorate in power and propulsion in 1985.

His wife, Eleni Assanis, is president of a consulting company, Assanis & Associates Inc. They have two adult sons, Nicholas and Dimitris.

About the search

The Board of Trustees appointed a 15-member committee to conduct a national search for the University's next president after Patrick T. Harker announced his resignation in March to become president and chief executive officer of the Federal Reserve Bank of Philadelphia.

The search committee included representatives from key University constituencies, including the board, faculty, staff, students, parents and alumni. Assanis was the search committee's unanimous recommendation.