

# Almanac

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## \$2.6 Million Collaborative Grant: Philadelphia's Media Ecosystem

With increasing public attention focused on threats to the integrity of the news and communication systems, it is vital that the public take stock of Philadelphia's media ecosystem, assess its strengths and weaknesses and imagine how journalism can be reinvented for a stronger democracy.

To this end, the Media, Inequality and Change (MIC) Center—a joint project of the Annenberg School for Communication at the University of Pennsylvania and the School of Communication and Information at Rutgers University—along with Media Mobilizing Project and Free Press, have received a \$2.6 million collaborative grant from Independence Public Media.

There are many practices and structures that shape a media ecosystem: decisions about what is newsworthy, how reporters build and prioritize relationships with community organizations, how stories are told and by whom, the ownership and control of newsrooms and the metrics outlets use to determine a story's value, just to name a few.

With local newsroom numbers decimated and traditional advertising models continuing to fail, the MIC Center hopes to identify new models for media that enable communities to be engaged in shaping and lifting up narratives that better represent them and address important social problems.

The three-year collaborative project with Media Mobilizing Project and Free Press aims to address these issues by understanding how social change happens, the media's role in creating obstacles and opportunities for structural reform and what innovative, community-centered

media and media-making can and should look like in the Philadelphia region.

Led by co-directors Annenberg professor Victor Pickard, a Free Press board member, and Rutgers professor Todd Wolfson, a Media Mobilizing Project board member, the MIC Center will:

- provide a political economic analysis of Philadelphia's media ecosystem;
- assess how the city's media institutions develop influential narratives;
- seek to analyze and elevate community-driven narratives on inequality, violence, crime, safety and other important issues;
- help craft discursive strategies and practices that both Philadelphia newsrooms and communities can adopt and that can be replicated in other cities; and
- offer a forward-looking vision for how urban media can be reorganized and restructured in a moment of systemic failure.

The MIC Center and its partners aim to organize with both communities and newsrooms toward better serving local communication needs. Their hope is to create alternative models for how local news and information are produced. Moreover, they intend to collaborate and learn from researchers, practitioners and organizations engaged in similar work in other locations, both domestically and internationally.

Ultimately, this project's goal—and one of the MIC Center's guiding missions—is to outline a vision for remaking media in ways that reflect communities' information needs, especially around vitally important social issues such as inequality and criminal justice.

## Benjamin: First Baby Born as Part of Penn Medicine's Uterus Transplantation Trial

The birth of Benjamin Thomas Gobrecht defied both expectation and imagination: His mother, 33-year-old Jennifer Gobrecht, was born without a uterus. Benjamin, who arrived in November 2019 at the Hospital of the University of Pennsylvania, grew inside a womb Ms. Gobrecht received as part of an organ transplant research trial over a year earlier. Benjamin is the first baby born as part of Penn Medicine's ongoing Uterus Transplantation for Uterine Factor Infertility (UN-TIL) trial, which launched in 2017. He is the second baby in the nation to be born following transplantation of a uterus from a deceased donor. The UN-TIL trial is currently the only US uterus transplant trial that is actively enrolling patients.

"One of the hardest days of my life was when I was 17 years old and learned I would never be able to



Benjamin Gobrecht

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## Paul Cobb and Michael Kahana: Kahn Term Professors

Paul M. Cobb, professor and chair of Near Eastern Languages and Civilizations, and Michael J. Kahana, professor of psychology, have been named Edmund J. and Louise W. Kahn Term Professors.

Dr. Cobb studies the historical connections between the Islamic world and the West, particularly during the Middle Ages. Specific areas of his expertise include Islamic interactions with Europe, travel and exploration in premodern Eurasia, historiography and biography and Muslim-Christian-Jewish relations. He is a recipient of Guggenheim, Fulbright and National Endowment for the Humanities fellowships. Dr. Cobb's books include *White Banners: Contention in 'Abbasid Syria, 750-880*; a translation of Usama ibn Munqidh's *The Book of Contemplation: Islam and the Crusades*; and *The Race*



Paul Cobb

for *Paradise: An Islamic History of the Crusades*. He is currently at work on a book that follows the adventures and travels of Johannes Schiltberger, a German teenager who was captured in 1396 in Hungary while on crusade against the Turks.

Research in Dr. Kahana's Computational Memory Lab aims to understand the mechanisms of human memory search using a combination of computational, behavioral and electrophysiological methods. He received the 2018 Howard Crosby Warren Medal from the Society of Experimental Psychologists, psychology's oldest and most prestigious award, "for his fundamental contributions to the formal modeling of retrieved context information in memory and his remarkable discoveries in the human neuroscience of memory." He is also a recipient of the Troland Re-



Michael Kahana

search Award from the National Academy of Sciences and the inaugural mid-career award from the Psychonomic Society. Dr. Kahana is author of *Foundations of Human Memory* and more than 175 peer reviewed publications.

The Edmund J. and Louise W. Kahn Endowed Term Chairs were established through a bequest by Edmund J. and Louise W. Kahn. Edmund Kahn was a 1925 Wharton graduate who had a highly successful career in the oil and natural gas industry. Louise Kahn, a graduate of Smith College, worked for *Newsweek* and owned an interior design firm. They supported many programs and projects at Penn, including Van Pelt Library, the Modern Languages Program in Gregory College House, and other initiatives in scholarship and the humanities.

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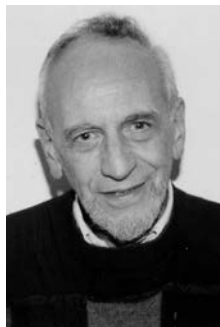
## Deaths

### Joel G. Flaks, Biochemistry

Joel Flaks, emeritus professor of biochemistry and biophysics at the University of Pennsylvania, died November 27. He was 92.

Dr. Flaks focused his research on biosynthesis and metabolism of purines. He graduated from City University of New York–Brooklyn College with a degree in chemistry in 1950 and earned his PhD from Penn in 1957. He began his teaching career here that same year as an instructor in biochemistry in the medical school. Later in 1957, he became faculty.

In 1962, Dr. Flaks was promoted to assistant professor in biochemistry and in 1973, he became full professor. He received funding in 1974 for *Metabolism of Normal and Bacterio-*



Joel Flaks

*phage-Infected E. Coli*. Together with Harvey Rubin, professor of medicine, microbiology and computer science, Dr. Flaks was awarded a Research Foundation Award in 1987 for *Regulation of DNA Synthesis in P. Falciparum* (*Almanac* May 12, 1987). He took an early retirement in 1994 and earned emeritus status at that time. In 1997 he was given the School of Medicine's Basic Science Teaching Award; as one of two directors of the biochemistry course, he "played a crucial role in creating this innovative course for medical students" (*Almanac* April 15, 1997).

#### To Report A Death

*Almanac* appreciates being informed of the deaths of current and former faculty and staff members, students and other members of the University community. Call (215) 898-5274 or email [almanac@upenn.edu](mailto:almanac@upenn.edu)

However, notices of alumni deaths should be directed to the Alumni Records Office at Suite 300, 2929 Walnut St., (215) 898-8136 or email [record@ben.dev.upenn.edu](mailto:record@ben.dev.upenn.edu)

## From the Office of the Secretary

### Agenda for University Council Meeting

Wednesday, January 29, 2020, 4 p.m.

Hall of Flags, Houston Hall

1. Approval of the minutes of December 4, 2019. 1 minute
2. Follow-up questions on Status Reports. 5 minutes
3. Presentation: How Penn Supports Research at Undergraduate and Graduate Levels. 30 minutes
4. New Business. 5 minutes
5. Adjournment.

### Call for Innovation MOOC Proposals: March 16

The Online Learning Initiative (OLI) seeks proposals for Provost-funded Innovation MOOCs from Penn faculty interested in experimentation in online teaching and learning.

*What is an Innovation MOOC?*

OLI's Innovation MOOCs are fully-funded, standalone courses that promote experimentation in online learning by incorporating new pedagogical strategies, new technologies or new approaches to course content. Proposals should address one or more of the following approaches:

- Promotes interdisciplinary collaboration
- Incorporates active learning, authentic assessment and/or novel course design
- Strives for high social impact, activating and engaging a community (or communities)
- Employs emerging technologies

OLI provides assistance throughout the proposal process, including proposal preparation, online course design support and course production. Innovation MOOCs are fully-funded by the Office of the Provost and do not require school cost-sharing for faculty and teaching assistant stipends.

OLI supports the production of two Innovation MOOCs each fiscal year. OLI's Faculty Advisory Committee evaluates all the proposals and makes the final selection. If a proposal is selected, course design begins in early June 2020 with the expectation that the course will launch by May 2021.

In 2019, OLI's Faculty Advisory Committee selected two inaugural Innovation MOOCs:

*Do Good ... Feel Good*, lead instructor Femida Handy (SP2)

*Reflections: Modern Mirrors of Medieval Life*, lead instructors William Noel (Penn Libraries and SAS) and Dot Porter (Penn Libraries)

These MOOCs exemplify innovation by striving for high social impact, activating a community, promoting active learning and authentic assessment and promoting interdisciplinary collaboration.

Proposals are due no later than **March 16, 2020**. Please contact OLI at [onlinelearning@upenn.edu](mailto:onlinelearning@upenn.edu) to schedule a consultation to review the 2020 Innovation MOOC proposal form at least one month before the submission deadline. Only proposals that utilize this form can be considered.

Since 2012, the Online Learning Initiative (OLI) has supported the development of online learning across Penn. Provost-funded online projects, such as MOOCs, course series and microcredentials receive financial, design and production support for creating online learning experiences. The OLI team is always available to meet with faculty members and school online teams to discuss ideas, proposals and future projects. Email [onlinelearning@upenn.edu](mailto:onlinelearning@upenn.edu) if you would like more information or to schedule an individual consultation with the OLI team.

## Call for Presentations on Latin America and the Caribbean

Penn Global, in partnership with Penn in Latin America and the Caribbean (PLAC), will host the 5th Annual PLAC Symposium on *Friday, March 27* at Perry World House. They aim to positively highlight Penn work in Latin America and the Caribbean (LAC) and to foster interdisciplinary dialogue among stakeholders across campus to inform Penn's ongoing engagement in the region.

The main feature of the symposium will be blitz presentations and discussion of LAC-related research, education and practice at Penn. All members of the Penn community are invited to present LAC-related work at the symposium. Blitz presentations should last no more than five minutes and use no more than three PowerPoint slides. Presentations will be grouped into thematic panels to foster discussion and illuminate potential synergies across Penn. Those who would like to present should complete a brief form at <https://tinyurl.com/yxysu6tf>, which requires only a title and a 2-3 sentence description by *Monday, February 3*. Applicants will be notified by late February if their presentation has been accepted for the symposium.

For more information contact Catherine Barch, associate director of Latin American and Latino Studies, at [lals@sas.upenn.edu](mailto:lals@sas.upenn.edu) or [barch@sas.upenn.edu](mailto:barch@sas.upenn.edu)

## Vonage to Power Penn's Campus Communications

Vonage, a global leader in business cloud communications, has partnered with the University of Pennsylvania's Information Systems & Computing Department (ISC) to power communications for more than 14,000 faculty and staff. As a part of Penn's "Next Generation" initiative, ISC selected Vonage's fully integrated unified communications solution for an innovative approach to unifying communications across all departments on campus.

Following an RFP and proof of concept process, ISC chose Vonage as its cloud communications provider with an initial contract of five years and the anticipated rollout will commence in early 2020. Vonage's unified communications solution will provide the University with the tools and services to improve communications at Penn and improve productivity among staff. With messaging and presence capabilities, a mobile and desktop app, as well as audio and video conferencing, Vonage's solution will enhance the way users connect with each other, no matter where they are located.

The addition of Vonage's unified communications capabilities will also help to reduce the time needed for maintenance and streamline everyday tasks with automation capabilities, such as making changes to the account and adding new users and workflows. As the University continues to grow, building on its nearly 300-year history, Vonage solutions offer the institution the ability to scale and integrate additional Vonage services, such as its cloud-based contact center solution and communications APIs to enhance interactions with external stakeholders via embedded and contextual communications.

"Vonage shares the University of Pennsylvania's vision of a cloud first, next generation future," said James Roth, vice president, Applications Group East for Vonage. "We are thrilled to partner with Penn on their digital transformation journey, providing them with the tools and innovative solutions they need to support and serve not only their faculty and staff but also their students and the greater academic community."



## Benjamin: First Baby Born as Part of Penn Medicine's Uterus Transplantation Trial

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Photos courtesy of Penn Medicine



*Benjamin, who arrived in November 2019 at the Hospital of the University of Pennsylvania, grew inside a womb his mother received as part of an organ transplant research trial over a year earlier.*

carry my own child. My husband and I have always wanted to grow our family, but we knew the limited options meant it might never happen,” said Jennifer Gobrecht, who lives just outside of Philadelphia with her husband, Drew. “And now here we are, in spite of everything, holding our beautiful baby boy. Benjamin is a perfect miracle. It’s all thanks to a truly incredible team of doctors and nurses and the selfless donor who made my dream of motherhood come true. When I signed up for this trial, I hoped it would help my husband and me start a family, but I also strongly believe in helping others. My hope is that through this research, others with similar struggles will have the same opportunity.”

Ms. Gobrecht was born with a congenital condition called Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome, which means she has functional ovaries but does not have a fully formed uterus. MRKH affects approximately one out of every 4,500 females and makes it impossible for women to get pregnant or carry a child. It’s one example of uterine factor infertility (UFI), which is a previously irreversible form of female infertility that affects as many as five percent of reproductive-aged women worldwide. A person with UFI cannot carry a pregnancy either because she was born without a uterus, has had the organ surgically removed or has a uterus that does not function properly.

“For women with uterine factor infertility, uterus transplantation is potentially a new path to parenthood—outside of adoption and use of a gestational carrier—and it’s the only option which allows these women to carry and deliver their babies,” said Kathleen O’Neill, assistant professor of obstetrics and gynecology in Penn’s Perelman School of Medicine, and co-principal investigator of the UNTIL trial.

“While there are still many unknowns about uterus transplantation, we know now—as evidenced by Jen and baby Benjamin—that this is potentially a viable option for some women. Our collaboration with investigators at partnering institutions as well as with Jen and other brave patient pioneers in these clinical trials are helping us learn more about how to make uterus transplants safer, more effective and available to more women.”

Most of the other programs around the globe have focused on transplantation exclusively from living donors, and to date, there have been approximately 70 uterus transplants globally. However, Penn Medicine’s trial is one of a few to explore donation from both living or deceased donors—an approach which has the potential to expand the pool of organs available for

donation and allows investigators the opportunity to directly compare outcomes from the different types of donors.

The Gobrechts welcomed their son via cesarean section, attended to by a team of more than 20 specialists in high-risk obstetrics, transplant surgery, fertility, gynecologic surgery, neonatology, pediatrics, urology, nursing and anesthesiology.

The couple’s journey began more than two years ago, with an extensive evaluation by the clinical trial team including specialists in clinical research, bioethics, social work, psychology, pathology, obstetrics and gynecology, transplant and infectious disease, among others, before Ms. Gobrecht was enrolled in the trial. The couple had already undergone in vitro fertilization (IVF) while exploring the option of a gestational carrier and had cryopreserved embryos available for transfer into Ms. Gobrecht’s new uterus following successful transplant surgery.

The uterus transplantation done as part of this clinical trial is a complex investigational procedure that involves both surgical and medical management. More than 35 health care providers and clinical investigators are involved in each trial participant’s care over the course of a five- to 10-year research period, which spans IVF, transplantation and birth, to long-term follow-up after delivery and after the surgical removal of the organ after delivery. In addition to women with UFI seeking the opportunity to participate in the clinical trial, more than 70 women have expressed interest in donating their uterus so women with UFI may experience childbearing as they did.

### Year of the Nurse and Midwife

The World Health Organization (WHO) has declared 2020 the Year of the Nurse and Midwife. Penn Nursing is joining in on the celebration. The school wants to help the public—in the Commonwealth of Pennsylvania and beyond—better understand the impact these professions have on health and health care.

“WHO has never dedicated a year to any profession before so that makes the next 12 months especially exciting,” said Penn Nursing Dean Antonia Villarruel. “As part of our celebration, Penn Nursing will be sharing stories about nurses and midwives, hosting events at Fagin Hall and around Philadelphia, touring local schools with a pop-up exhibit, collecting and posting artwork about nurses and midwives and more. We hope you will join us and our partners, including Penn Medicine, in this celebration that highlights the unique role nursing has in our world.”

For more information, a listing of upcoming events and to see how you can participate in elevating, celebrating and advocating throughout 2020, visit the School’s Year of the Nurse and Midwife website at [www.2020nurseandmidwife.org](http://www.2020nurseandmidwife.org)

“The Penn Transplant Institute has been innovating in the field of transplantation for decades, and the team’s diverse experience now enters into the field of uterus transplantation. While this milestone comes early on in our clinical trial, we remain optimistic about what’s to come. We hope to one day expand the benefits of transplantation to serve more patients, not only as a way to save lives, but to enhance, and even create them,” said Paige Porrett, assistant professor of transplant surgery, and co-principal investigator on the UNTIL trial. “In addition to providing families like the Gobrechts with a new way to expand their family, the research implications for this trial hold great promise. This clinical trial is an outstanding and unique research opportunity to learn more about how pregnancy and transplantation work, and we are investigating many important research questions in these arenas.”

The UNTIL trial thus hopes to address a wide array of important biologic questions that persist in organ transplantation, female reproductive biology and pregnancy. The trial’s design, for example, gives researchers the ability to study women throughout pregnancy, not only ensuring the safety of mother and baby throughout their participation in the trial, but also allowing researchers to uncover new information about how cells from different individuals interact and impact pregnancy and even alter the maternal and fetal immune system. Researchers note this effort may help fill many of the knowledge gaps that affect women’s health overall, as much of the knowledge gained by this trial may be applicable to all women, including those who do not undergo uterus transplantation.

The Penn Medicine team caring for Ms. Gobrecht worked closely with their partners at the Gift of Life Donor Program to perform the 10-hour uterus transplant procedure using a uterus from a deceased donor in 2018.

“Gift of Life Donor Program was pleased to coordinate the donation for the UNTIL Trial with our partners at Penn Medicine that resulted in the birth of baby Benjamin. We look forward to working with Penn Medicine on future uterine transplant trials to support the advancement of this innovative area of donation and medical transplantation,” said Richard D. Hasz, vice president of clinical services, Gift of Life Donor Program. “We extend our deep appreciation to the selfless donor and her family for their role in saving three lives through organ donation and helping to bring new life into this world through uterine donation. Congratulations to Penn’s talented medical team and to the Gobrecht family.”

“Our family is extremely proud to support transplantation that will enable more women to experience the joy of childbirth. My daughter was the best mother I ever knew; nothing was more important to her than her children. What a beautiful and fitting legacy for her to help give the gift of motherhood to another woman,” said the mother of the donor. “Our hearts and prayers go out to my daughter’s recipients and their families.”

### Uterus Transplant Program: Now Enrolling Living Donors

The UNTIL trial is now enrolling living donors. A woman between the ages of 30 and 50 years who is in good health overall, has had children and has completed her child bearing is eligible to be a living uterus donor. For more information, please visit the Women’s Health Clinical Research Center at <https://www.whcrc.upenn.edu/uterine-transplantation>

# Honors & Other Things

## Anita Allen: Honorary Doctorate

Henry R. Silverman Professor of Law and Professor of Philosophy **Anita L. Allen** has been awarded an honorary doctorate from the University of Tilburg in the Netherlands.

Law Professor of Regulation and Technology Bert Jaap Koop presented a statement called “Laudatio” explaining that Dr. Allen was chosen for the award for three reasons.

Dr. Koop said, “First, for your exceptional and interdisciplinary contributions to legal and philosophical scholarship, particularly in the field of privacy studies, in which you ask uneasy questions on legal protection and personal responsibility, freedom and paternalism, paying special attention to the needs of women and racial and sexual minorities. Second, for your active participation in societal debate and policy development. And third, because all of this makes you a role model for students and academics alike.”

Dr. Allen was invited to accept the honorary degree by Geert Vervaeke, dean of the Tilburg Law School. In a message to Dr. Allen, Dr. Vervaeke noted that the University of Tilburg’s Board of Promotions decided to bestow the honorary degree to her upon the nomination by Dr. Ronald Leenes on the basis of her “high standing academic work and scholarship together with [her] engagement to enhance society.”



Anita Allen

## Yu Cheng Chang: AAP Fellowship

Recognized for his commitment to teaching, **Yu Cheng Chang** (GD’15, GD’16, D’18), assistant professor of clinical periodontics, has been awarded an American Academy of Periodontology (AAP) Foundation Teaching Fellowship. The fellowship is awarded annually to two individuals nationwide.

AAP Teaching Fellowships are designed to support and encourage a career in academia by providing debt relief to qualified applicants. The \$50,000 fellowships are given to qualified faculty members within their first three years of teaching at a US periodontal training institution. The 2019 Fellowships were awarded during the AAP Annual Meeting, held November 2-5 in Chicago.

Dr. Chang joined the Penn Dental Medicine faculty in 2016 as an assistant professor of clinical periodontics and director of Predoctoral Periodontics, overseeing all the clinical and didactic courses for the School’s DMD students. He also does clinical instruction of both predoctoral and postdoctoral periodontics students. Dr. Chang is a diplomate of the American Board of Periodontology, and he has been active in scholarly endeavors, conducting research and publishing in peer-reviewed journals and textbooks.

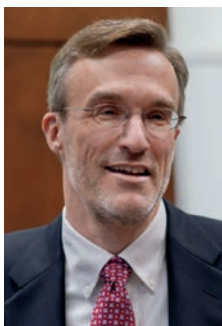
Since joining the School’s faculty, Dr. Chang’s role as an educator has also been recognized with the Outstanding Teaching and Mentoring in Periodontics Educator Award from The American Academy of Periodontology, and three teaching awards from Penn Dental Medicine.

## Cary Coglianese, Sarah Hammer: ALI Election

Penn Law’s **Cary Coglianese**, Edward B. Shils Professor of Law and Professor of Political Science, and director of the Penn Program on Regulation, has been named one of the 50 lawyers, judges and law professors recently elected to the American Law Institute (ALI). He also serves as the faculty advisor to the Program on Regulation’s widely read daily publication, *The Regulatory Review*. The ALI is an independent organization that produces scholarly work to clarify, modernize and improve the law. The ALI publishes model and uniform codes, principles of law and Restatements of Law that are used extensively by courts, legislatures and legal educators.

Dr. Coglianese also created, leads and teaches in a four-day executive education program offered at Penn Law on Regulatory Analysis and Decision-Making. He has played a key leadership role in various institutional innovations at the law school, such as in the establishment of the Quattrone Center for the Fair Administration of Justice and the Leo Model Foundation Government Service and Public Affairs Initiative. He has provided vision and ongoing support for numerous innovative programs, including the establishment of *The Regulatory Review*, the founding of the *Journal of Law and Public Affairs* and the annual “notice and comment” pro bono project undertaken by students involved in the Environmental Law Project.

Dr. Coglianese currently serves as the chair of the Regulatory Policy Committee of the American Bar Association’s Administrative Law and Regulatory Practice Section and as the chair of the Rulemaking Committee for the Administrative Conference of the United States. He also serves at present on a National Academy of Sciences committee charged with reviewing and making recommendations for improving safety and environmental inspections of offshore oil and gas operations in the United States.



Cary Coglianese



Sarah Hammer

Penn Law adjunct professor of law **Sarah Hammer** (L’11, WG’99) was also elected to the ALI. Ms. Hammer is the managing director of the Stevens Center for Innovation in Finance and senior director of the Harris Alternative Investments Program at the Wharton School.

## Michael DiBerardinis: Civic Champion Award

**Michael DiBerardinis**, professor of practice at the Fels Institute of Government, has been awarded a 2019 Civic Champion Award by CORA Services, a Philadelphia non-profit that aids children, youth and families experiencing emotional, academic and social challenges.

CORA’s annual Champion awards recognize individuals and organizations that enrich the lives of children and families in the Philadelphia region. The Civic Champion Award recognizes Dr. DiBerardinis for his longstanding commitment to creating a brighter future for local children.

He previously served as managing director for the City of Philadelphia under Mayor James Kenney. He also served as deputy mayor for Environmental and Community Resources, a special advisor to the Free Library of Philadelphia and secretary of the Pennsylvania Department of Conservation of Natural Resources.

## Charles Kane, Eugene Mele: John Scott Award



Charles Kane and Eugene Mele

**Charles Kane** and **Eugene Mele**, both Christopher H. Browne Distinguished Professors of Physics from Penn’s School of Arts and Sciences, were among the three scientists to receive the annual John Scott Award for 2019. First bestowed in 1822, the prize was endowed by John Scott, a chemist and pharmacist from Scotland, in honor of Benjamin Franklin. Awardees receive a medal and a \$10,000 cash prize.

Drs. Kane and Mele were recognized for their mathematical prediction of a new class of electronic materials called topological insulators, widely expected to be useful in future generations of ultrafast computers. In a landmark 2005 paper, the pair used theoretical physics to demonstrate that such materials should exist. The first such substances were created two years later by a team of German scientists.

Drs. Kane and Mele have received a number of awards for their work on topology and symmetry in physics, including the 2019 Breakthrough Prize in Fundamental Physics (*Almanac* October 23, 2018) and the 2019 BBVA Foundation Frontiers of Knowledge Award in the Basic Sciences category (*Almanac* March 26, 2019).

The Scott Awards are given each year by the Board of Directors of City Trusts, a group that manages dozens of charitable trusts for which the City of Philadelphia has been named as trustee. The winners are chosen based on recommendations from a panel of scientists—a group that includes representatives from Temple and Drexel Universities and the University of Pennsylvania.

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### Neil Tomson: NSF CAREER Award

Neil Tomson, assistant professor of chemistry in Penn's School of Arts and Sciences, has been awarded a National Science Foundation Faculty Early Career Development (CAREER) Program Award. The Faculty Early Career Development (CAREER) Program is a Foundation-wide activity that offers the National Science Foundation's most prestigious awards in support of early-career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization. Activities pursued by early-career faculty should build a firm foundation for a lifetime of leadership in integrating education and research.

Dr. Tomson's group performs synthetic inorganic and organometallic chemistry as a way of investigating new concepts in structure, bonding, catalysis and materials chemistry. The research involves the use of rigorous air-sensitive synthetic techniques and draws on a wide range of physical methods for characterizing novel compounds.

### The Fisher Fine Arts Library: Iconic Buildings List

Penn's Fisher Fine Arts Library made *Curbed.com*'s recent list of Philly's Most Iconic Buildings. The story noted that the library "stands out on Penn's campus, thanks to its fiery red brick facade and its jaw-dropping interiors. Designed by Frank Furness between 1888 and 1890, the library's soaring reading room made a prominent cameo in the Tom Hanks movie *Philadelphia*. It's been praised by modern architects like Robert Venturi, as well as Louis Kahn, who chose to teach his studios at PennDesign here instead of in the design school next door."



Neil Tomson

### Corey J. Langer: ASTRO Honorary Member

Corey J. Langer, professor of hematology-oncology at Penn's Perelman School of Medicine and director of thoracic oncology in the Abramson Cancer Center, was chosen by The American Society for Radiation Oncology as its 2019 Honorary Member. This is the highest honor that ASTRO bestows upon cancer physicians and researchers in disciplines outside of radiation oncology, radiobiology and medical physics.

### Mark Wolff: College of Physicians Fellow

Penn Dental Medicine's Morton Amsterdam Dean Mark Wolff has been inducted as a fellow of The College of Physicians of Philadelphia, alongside 23 other prominent leaders in medicine, academia and public health advocacy. Dr. Wolff was the only dentist among the new inductees, who were inaugurated at a ceremony held November 15 at the College. Highly respected in the field of cariology and a lifelong advocate and dental provider for individuals with physical, intellectual and developmental disabilities, Dr. Wolff has led Penn Dental Medicine as its 12th Dean since July 2018. Dr. Wolff holds both a DDS (1981) and PhD (1997) from the State University of New York (SUNY) at Stony Brook.

Every spring and fall, new members are welcomed to the College's prestigious fellowship program to join an ever-growing group of esteemed civic leaders, physicians, public health advocates and academics. The College, home of the Mutter Museum, was founded as a non-profit educational and cultural institution in 1787 with the mission of "advancing the cause of health while upholding the ideals and heritage of medicine."

During the ceremony, the inductees had the opportunity to sign their names into the College's historical register, alongside distinguished former fellows, including US Founding Father Benjamin Rush; former Surgeon General C. Everett Koop; and founder of the Mutter Museum, Thomas Dent Mutter, a pioneering American surgeon of the 19th century.

Dean Wolff was sponsored by current College members and Penn Dental Medicine alumni Peter Quinn (D'74, GD'78) and Arnold Weisgold (GD'65). Another Penn Dental Medicine graduate and College member, Joseph Greenberg (D'72, GD'76), accompanied Dean Wolff to the induction ceremony.

College Fellows take on vital roles in supporting and advising on a number of projects relating to the medical humanities, including the Mutter Museum, one of the country's leading medical history museums; the internationally recognized and award-winning project *historyofvaccines.org*; and a number of youth programs in Philadelphia designed to support high school students who wish to pursue careers in STEM.



Mark Wolff

### Charles L. Nelson: ABOS Appointment

Charles L. Nelson, professor of orthopaedic surgery and the chief of adult reconstruction at Penn's Perelman School of Medicine, was newly elected to a 10-year term on the American Board of Orthopaedic Surgery (ABOS). The board is made up of 21 members who are elected after recommendations from the American Orthopaedic Association (AOA), the American Academy of Orthopaedic Surgeons (AAOS), and the American Medical Association (AMA). Dr. Nelson specializes in joint replacement.

### Guobin Yang: Outstanding Article Award

Guobin Yang, Grace Lee Boggs Professor of Communication and Sociology, associate dean for graduate studies at Penn's Annenberg School for Communication and director of the Center on Digital Culture and Society, received an Outstanding Article award from the 2019 Annual Convention of the Chinese Association for History of Journalism and Communication for his paper "Remembering Disappeared Websites: Internet Memory, Media Biography and Website History."

Dr. Yang is also the deputy director of the Center for the Study of Contemporary China, a faculty member in the Graduate Group in History, the Graduate Group in East Asian Languages and Cultures, the Graduate Group in International Studies (Lauder Institute), the Center for East Asian Studies and an affiliated faculty in the Asian American Studies Program. He is the author of the award-winning *The Power of the Internet in China: Citizen Activism Online and The Red Guard Generation and Political Activism in China*.

### Six Penn Med Clinicians: Academy of Ophthalmology Awards

The American Academy of Ophthalmology recognized six Penn Medicine clinicians and researchers at its annual meeting in October. These awards honor ophthalmologists in multiple stages of practice and for a range of activities, from humanitarian service and significant contributions to the profession, to mentorship and faithful volunteer service. The winners:

Graham E. Quinn, an emeritus professor of ophthalmology, received an Outstanding Humanitarian Service Award, in recognition of his efforts to improve outcomes for infants with retinopathy of prematurity (ROP)—the leading cause of preventable blindness in premature infants worldwide.

Michael E. Sulewski, chief of ophthalmology at the Corporal Michael J. Crescenz Veterans Affairs Medical Center, Maureen G. Maguire, the Carolyn F. Jones Professor of Ophthalmology, and Prithvi S. Sankar, professor of clinical ophthalmology, each received Secretariat Awards. This award recognizes members and non-members for special contributions to the Academy and ophthalmology outside the scope of the current Achievement Awards program.

Ebenezer Daniel and Brian L. VanderBeek, both assistant professors of ophthalmology, received Achievement Awards, which recognize members and non-members who have accumulated 10 points towards the Achievement Awards program.



Interior of The Fisher Fine Arts Library.

## Human Resources: Upcoming February 2020 Programs

### Professional and Personal Development Programs

Open to faculty and staff.

Register at <http://knowledgegelink.upenn.edu/Leading-With-Emotional-Intelligence>; 2/4; 9 a.m.-noon.; \$75. Learn how emotional intelligence factors in at work and discover concrete techniques for raising your own emotional quotient (EQ). This includes perceiving yourself accurately, exercising emotional self-control, practicing resilience and developing empathy. Then turn those lessons around to build your awareness of others and learn to inspire helpful communication and manage conflict.

*Challenging Negative Attitudes*; 2/4; 12:30-1:30 p.m. By challenging negative attitudes, we have the power to take control of pessimistic perspectives and stressful situations. During this course, participants will learn to manage the impact of negative situations, deal with their own negative thoughts more effectively and learn coping tools for dealing with change.

*Tools for Career Assessment and Development*; 2/12; 12:30-1:30 p.m. In today's work environment, complex tasks and projects are more common than ever. By utilizing strategic planning skills, you'll be able to set yourself and/or your team up for success. Participants of this course will learn to identify the foundation for creating a strategic team, discover strategic values, participate in strategic planning efforts and avoid common pitfalls that derail strategic plans.

*Getting Work Done*; 2/18; 12:30-1:30 p.m. Throughout a normal workday, there are multiple distractions that can get many of us off task and behind on our to-do lists. In this course, we'll review tactics to help you stay on target with the many moving pieces of your role. You'll identify your biggest time sponges and ways to manage them, create priority lists, understand ways to delegate when not in a position of authority and learn ways to achieve an acceptable work-life balance.

### Work-life Workshops

Open to faculty and staff.

Register at [www.hr.upenn.edu/registration](http://www.hr.upenn.edu/registration)  
*Faculty and Staff Family Days with Penn Basketball—Men's Basketball vs. Dartmouth*; 2/1; 7 p.m. \$6.50. The Division of Human Resources and Penn Athletics invite benefits-eligible faculty and staff to cheer on the Penn men's basketball team at the Palestra. Faculty and staff tickets include a discounted game ticket, compliments of Penn Athletics and a \$5 concession coupon redeemable for food and beverage, compliments of the Division of Human Resources. Tickets are required for the game. The maximum number of discounted tickets each eligible employee can purchase is four tickets. Order tickets online and enter the code FAMILY or in person at the Penn Athletics Ticket Office in Weightman Hall, located at 235 S. 33rd Street, between Walnut and Spruce Streets.

*Planning for the Financial and Legal Aspects of Long-Term Care Webinar*; 2/4; 1-2 p.m. Our population is aging at an unprecedented pace. While many older adults will remain hale and hearty into their 80s and beyond, 70% will need some type of long-term care in their lifetime. Planning ahead is the key to making good choices about long-term care and securing your financial future. Yet all too often people wait until a crisis occurs and have limited options. Join

us to hear from two leading experts about how you can plan ahead for the financial and legal aspects of long-term care including the various options for care, different payers and resources, how to financially prepare for long-term care and essential documents everyone over 55 needs.

*Posture Strengthening in Your Workspace*; 2/5; 12:30-1:30 p.m. Did you know your posture affects your mind, mood and emotional well-being? Join Chloe Cole, assistant director of fitness & wellness at Penn Campus Recreation, for this experiential workshop where she will share tips and exercises to loosen up muscles, increase body awareness and strengthen your core to support a healthy posture in your workspace. The workshop will conclude with a short chair yoga session with a yoga instructor.

*Flexible Work Options*; 2/10; 12:30-1:30 p.m. This presentation will provide an overview of Flexible Work Options and provide guidelines for proposing and implementing a flex request including: understanding the applicable HR guidelines and policies, assessing the fit between position and job responsibilities, reviewing a sample proposal, documenting the flexible work option request and implementing the request.

*Guided Mindful Meditation*; 2/12; 12:30-1:30 p.m. This workshop is offered twice a month for participants to practice present moment awareness with kindness and compassion. The guided meditation will focus on the breath and being in the body. Self-applied massage and gentle mindful movements that promote rest and relaxation and reduce stress may also be included in the workshop. No experience necessary. All are warmly welcome.

*Mindfulness and Anxiety*; 2/17; 12:30-1:30 p.m. Anxiety motivates us to get things done but it can interfere with what we want to do at home and at work and how we interact with people and circumstances. In this experiential workshop, you'll see, feel and practice how mindfulness can help you to improve your ability to reduce anxiety. Participants will learn: how to be intentional, stay present, observe our thoughts and manage our feelings. Participants will enjoy learning how to let go of negative emotion in favor of more positive emotions like courageousness, acceptance and peace. No prior meditation or mindfulness experience necessary. Bring a journal and pen.

*Admissions Brown Bag: Undecided About Program of Study? And the Liberal Arts?*; 2/18; noon-1 p.m. Faculty and staff with college-age dependents are invited to join Penn's undergraduate admissions office to hear from several admissions officers about the liberal arts, their experiences, advising and the breadth of possibilities.

*Retirement Planning: An Emotional Perspective*; 2/25; 12:30-1:30 p.m. This workshop reviews the six phases of retirement from a social perspective: everything from pre-retirement planning, to the honeymoon phase and ultimately to reorientation and development of a new lifestyle. For many people, a major concern is how they will handle the emotional stages of retirement and how will they create a new identity. This workshop reviews all of these stages, from the imagination stage to the reconciliation stage.

*Guided Mindful Meditation*; 2/26; 12:30-1:30 p.m.; free. See 2/12 listing for program description.

### Penn Healthy You Workshops

Open to faculty and staff.

Register at [www.hr.upenn.edu/registration](http://www.hr.upenn.edu/registration)

*Gentle Yoga*; 2/6; 11 a.m.-noon. Let your body reward itself with movement! Join us for this Gentle Yoga session and explore the natural movements of the spine with slow and fluid moving bends and soft twists. During this session, you will flow into modified sun salutations that loosen those tightened muscles and joints of the lower back, neck, shoulders and wrists. And as an added bonus, you'll get a workout in the process. Mats and props will be provided.

*Oral Health 101—All You Want to Know About Your Teeth and More*; 2/11; 12:30-1:30 p.m. Healthy mouth, healthy body: The link between them may surprise you. Taking care of your teeth isn't just about having a nice smile and pleasant breath. The condition of your mouth is closely tied to your overall health. Find out how oral health is linked to diabetes, heart disease, cancer and more at this interactive seminar with experts from Penn Dental Medicine.

*Chair Yoga*; 2/19; noon-1 p.m. Interested in trying yoga but don't know where to start? Join us for a wonderful class of chair yoga. You get the same benefits of a regular yoga workout (like increased strength, flexibility and balance) but don't have to master complex poses. Chair yoga can even better your breathing and teach you how to relax your mind and improve your wellbeing.

*February Indoor Wellness Walk*; 2/21; noon-1 p.m. February is American Heart Month, an appropriate time to pay attention to one of the most important organs in your body. On February 21, meet the Center for Public Health Initiatives Staff inside the Palestra for some heart-healthy exercise. As the center of your circulatory system, your heart is vitally responsible for just about everything that gives your body life. In keeping with this month's Valentine's Day and heart-health theme, participants are encouraged to wear red for this 1- to 2-mile walk. Bring your water bottle and don't forget your sneakers!

*Gentle Yoga*; 2/27; 11 a.m.-noon. Please see 2/6 listing for program description

—Division of Human Resources

### Walking with Basketball Coaches

All students, faculty and staff are invited for a walk & talk with Penn Basketball on *Monday, January 27* from noon to 1 p.m. The walk will be led by Steve Donahue, John R. Rockwell Head Men's Basketball Coach and Mike McLaughlin, Head Women's Basketball Coach, and will depart from the Ben Franklin statue in front of College Hall and end at The Palestra.

More information can be found at [www.bit.ly/pennwalks](http://www.bit.ly/pennwalks)

### PENNTRIathlon

Test your overall fitness with three challenges in Penn Campus Recreation's PENNTRIathlon on *Saturday February 29*. Prizes will be rewarded to each of the top male and female finishers in a 3.1 mile run, 12.5 mile bike ride and 700 meter swim (all events indoors). Registration is limited to 30 spots and there is a \$25 registration fee. Registration at [recreation.upenn.edu](http://recreation.upenn.edu) closes on *February 24*.



## At Annenberg Center in January

Showcasing Annenberg Center's unique relationship with the University of Pennsylvania, INSIGHTS events feature Penn faculty, Penn student performing arts groups, area experts and of course, the artists themselves! Occurring pre- and post-show, INSIGHTS events explore and illuminate the work on stage and are always free for ticket holders.

On *January 24*, stay after the Paul Taylor Dance Company performance for a post-show talk with Annenberg Center Executive & Artistic Director Christopher A. Gruits and NextMove Dance Artistic Director Randy Swartz. This will occur at approximately 9:50 p.m.

On *January 31*, arrive early for a 7 p.m., performance by a Penn jazz combo before the Spanish Harlem Orchestra performance at 8 p.m.

On *January 25* at Annenberg Center's Harold Prince Theatre, The Daedalus Quartet, Penn's

quartet-in-residence, explores migration through music, illustrating how centuries of cultural cross-pollination has enriched our artistic and spiritual life. Music truly has no borders, unifying through the universality of the human experience. In this performance, the quartet will perform works that exhibit the richness and complexity of this cultural convergence, including a world premiere of traditional African American spirituals by Nansi Carroll.

The Program includes Sofia Gubaidulina—*Reflections on the theme B-A-C-H*; Osvaldo Golijov—*Yiddishbbuk*; Nansi Carroll—*On My Journey Now: Five Spirituals* (World premiere) with Karen Slack, soprano; Tan Dun—*Ghost Opera* with Min Xiao-Fen, pipa.

For tickets, go to: [annenbergcenter.org/events/ticket-info.php](http://annenbergcenter.org/events/ticket-info.php) or the Box Office: (215) 898-3900. For the full list of upcoming events, visit [annenbergcenter.org/events/](http://annenbergcenter.org/events/) There is a 20% discount for Penn faculty and staff and a 10% discount for alumni, active military and veterans. Additionally, there are \$10 tickets for students and \$15 tickets for West Philly residents.



Spanish Harlem Orchestra (above) and Daedalus (below) perform this month.



## Update

January AT PENN

### EXHIBITS

#### Upcoming

**23** *Philadelphia Cartoonists*; work by six local cartoonists; opening reception including a panel discussion with the artists: 6 p.m.; Brodsky Gallery, Kelly Writers House.

**24** *The Zama Zama Project*; a multi-format installation by Rosalind Morris about the world of informal mining in the abandoned gold mines of South Africa; opening reception: *January 29*, 6:30-8:30 p.m.; Slought. *Through March 20*.

### READINGS AND SIGNINGS

#### Penn Book Center (PBC)

Info: [www.pennbookcenter.com/event](http://www.pennbookcenter.com/event)

**24** *Thirty West Presents: 'Not Great/Thanks For Asking' Release Party*; 6 p.m.

**27** *Talk Till The Minutes Run Out*; Benedicte Grima, author; 6:30 p.m.

### TALKS

**23** *Rethinking Facadism: Materiality and the Politicization of Historic Structures*; Kasey Diserens Morgan, anthropology; noon; Upper Gallery, Meyerson Hall (Weitzman).

**24** *Criminal Record Expungement Project (C-REP)*; Taylor Pacheco and Sarah Marie Coyle, Lawyers for Social Equity; noon; rm. 108, The ARCH; RSVP: [deluciar@upenn.edu](mailto:deluciar@upenn.edu) (Affirmative Action; MLK Symposium on Social Change).

#### AT PENN Deadlines

The February AT PENN calendar will be published *January 28*. The deadline for the March AT PENN calendar is *February 10*. The deadline for the weekly Update is the Monday prior to the week of the issue's publication.

## Almanac

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## The University of Pennsylvania Police Department Community Crime Report

**About the Crime Report:** Below are the Crimes Against Persons or Crimes Against Society from the campus report for **January 6-12, 2020**. Also reported were 6 crimes against property (2 thefts from building, 1 bike theft, 1 retail theft, 1 theft from vehicle and 1 other offense) with 2 arrests.

Full reports are available at: <https://almanac.upenn.edu/sections/crimes>  
Prior weeks' reports are also online. —Eds.

This summary is prepared by the Division of Public Safety and includes all criminal incidents reported and made known to the University Police Department between the dates of **January 6-12, 2020**. The University Police actively patrol from Market St to Baltimore Avenue and from the Schuylkill River to 43rd St in conjunction with the Philadelphia Police. In this effort to provide you with a thorough and accurate report on public safety concerns, we hope that your increased awareness will lessen the opportunity for crime. For any concerns or suggestions regarding this report, please call the Division of Public Safety at (215) 898-4482.

01/07/20	3:26 AM	3900 Walnut St	Subjects in possession of weapon/2 Arrests
01/08/20	4:05 PM	3800 Locust Walk	Confidential sex offense
01/09/20	9:21 AM	3200 Chestnut St	Complainant threatened by offender on the highway
01/11/20	6:46 PM	3931 Walnut St	Complainant assaulted by juveniles

### 18th District

**Below are the Crimes Against Persons from the 18th District:** 8 incidents (3 domestic assaults, 2 indecent assaults, 2 robberies and 1 assault) with 1 arrest were reported for **January 6-12, 2020** by the 18th District covering the Schuylkill River to 49th Street & Market Street to Woodland Avenue.

01/07/20	6:16 PM	4520 Walnut St	Domestic Assault/Arrest
01/08/20	4:05 PM	3800 Locust Walk	Indecent Assault
01/08/20	5:36 PM	4501 Chestnut St	Indecent Assault
01/08/20	7:15 PM	215 Buckingham Place	Domestic Assault
01/08/20	10:23 PM	4512 Kingessing Ave	Robbery
01/11/20	6:19 PM	4640 Walnut St	Domestic Assault
01/11/20	7:41 PM	3931 Walnut St	Assault
01/12/20	1:54 PM	43rd/Chester Ave	Robbery

## Engineering and Nursing Collaboration

There have been huge advances in the world of “hard” robotics—robots that are made from hard plastics and metals—which are excellent for industrial jobs because they are precise, strong and well equipped for strenuous labor. James Pikul, assistant professor in mechanical engineering and applied mechanics at Penn’s School of Engineering, studies soft robotics, an emerging field that seeks to build robots that can safely handle more delicate and fragile objects. These robots must incorporate materials that deform under pressure, reducing the chances of crushing, pinching or otherwise hurting the equally soft things they interact with, such as human bodies.

In September 2019, Dr. Pikul and his team received a \$2 million grant from the National Science Foundation to explore a new type of soft robotics. These soft robots start as flat sheets, then transform into precise shapes to perform tasks. Their goal: to create an inflatable robotic mat to be placed on top of hospital beds and used to move patients. This application has the potential to increase patient comfort and decrease injuries to nurses and health-care workers that can be caused by patient handling.

For inspiration, Dr. Pikul has studied octopuses—an organism with an entirely soft body—and how they transform the texture of their skin to camouflage into their surroundings. He and colleagues from Cornell developed a soft robotic system inspired by this ability; now, he is expanding on this technology.

“The challenge here is that controlling soft materials is very difficult,” Dr. Pikul said. “If I build with something soft, how do I control it to make it do something useful?”

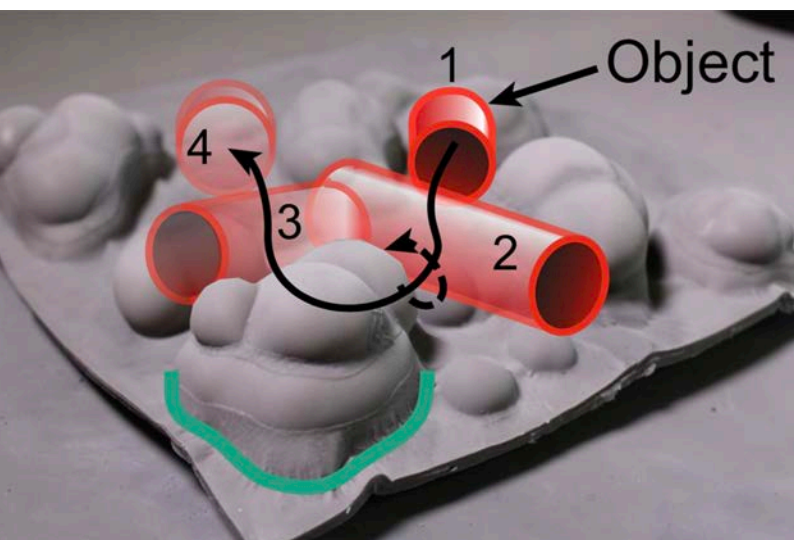
Dr. Pikul’s team included Michael Posa, assistant professor in mechanical engineering and applied mechanics, Mark Yim, director of the GRASP Laboratory and professor in mechanical engineering and applied mechanics, as well as professors from University of Colorado at Boulder and Syracuse.

Dr. Pikul then met Pam Cacchione, nurse scientist at Penn Presbyterian, Ralston House Term Chair in Gerontological Nursing and associate professor of geropsychiatric nursing at Penn, who had a possible application for Dr. Pikul’s soft robotic technology: portable seat lifts for older adults who struggled with getting in and out of chairs.

Together, Dr. Pikul and Dr. Cacchione added the portable seat lift design as an initial prototype for the inflatable robotic mat for hospital beds that would assist nurses in moving and turning patients. This intervention would prevent patients from developing pressure injuries and alleviate strain on nurses who are often tasked with moving patients by hand and injuring themselves in the process.

Dr. Pikul’s technology has the potential to increase patient comfort as well. “When you think about it,” Dr. Pikul added, “a hospital bed is already a robot. It bends to different shapes and has sensors to monitor vital signs. They’re already sophisticated systems, they’re just bad at moving people. And we want to fix that.”

Dr. Cacchione noted that “there is great synergy between the Schools of Nursing and Engineering because the Nursing school has access to patients and clinical ideas. We are working together to conceptualize engineering ideas and apply them to something that will be meaningful for a patient.”



Using a series of inflatable protuberances, a flat sheet of stretchy silicone can morph into predetermined 3D shapes, gently lifting and manipulating objects on top of it.

## Radiation Treatment in Less than a Second

Cancer patients may one day be able to get their entire course of radiation therapy in less than a second, and researchers in Penn’s Abramson Cancer Center have taken the first steps toward making it a reality. In a report published in the *International Journal of Radiation Oncology, Biology, and Physics*, researchers detailed how they used proton radiation to generate the dosage needed to theoretically give a cancer patient their entire course of radiotherapy in one rapid treatment. It’s known as FLASH radiotherapy, and it’s an experimental paradigm that could represent a sea change for the world of oncology in the future. The researchers also found FLASH demonstrated the same effect on tumors as traditional photon radiation while sparing healthy tissue due to the shorter exposure time.

“This is the first time anyone has published findings that demonstrate the feasibility of using protons—rather than electrons—to generate FLASH doses, with an accelerator currently used for clinical treatments,” said the study’s co-senior author James M. Metz, director of the Roberts Proton Therapy Center and chair of radiation oncology. The co-senior authors on the study are Constantinos Koumenis, the Richard H. Chamberlain Professor of Research Oncology, and Keith A. Cengel, associate professor of radiation oncology, both in Penn’s Perelman School of Medicine.

Other research teams have generated similar doses using electrons, which do not penetrate deep enough into the body. Others have tried the approach with conventional photons, but currently available treatment devices do not have the ability to generate the necessary dosage. This study shows that with technical modifications the currently available accelerators for protons can achieve FLASH doses with the biologic effects today.

The key was the ability to generate the dose with protons. They had to specially develop tools to measure radiation doses since the standard detectors were quickly saturated due to the high levels of radiation. The Roberts Proton Therapy Center includes a dedicated research room to run experiments like these, allowing investigators to use photon and proton radiation side-by-side just feet from the clinic. It’s one of the few facilities in the world with those unique features.

Researchers said they are already beginning to optimize how they would use this down the road for clinical trials, including taking the necessary steps to translate the ability from the research room to a clinical space, as well as designing a delivery system for FLASH in humans.

## US Socioeconomic Status Now Harder to Change

In the first long-term assessment of social mobility in the US, Xi Song, associate professor in the department of sociology in Penn’s School of Arts and Sciences and an affiliate of the Population Studies Center, and colleagues from University of Nebraska Omaha, Northwestern University and the US Census Bureau discovered that socioeconomic mobility has substantially declined during the past 150 years, particularly for those born in the 1940s and later. They also found that the well-documented rise in economic inequality of the past four decades has not affected intergenerational mobility in the ways many expected it would. The findings were published in the *Proceedings of the National Academy of Sciences*.

“Most work in this area has focused on more recent decades,” said Dr. Song. “Ours looks back to 1850.” Dr. Song and her collaborators could go that far back thanks to newly available Census data. They examined information from approximately five million people. For consistency, the analysis included mostly white males, with a small number of males from other racial groups. In the mid-1800s, most females didn’t have jobs outside the home—the gauge the researchers used to measure socioeconomic status—or they changed their names after marriage, making them harder to track over time. Other races were underrepresented due to a low rate of linking across years in the dataset.

The researchers’ analysis showed that for the study population, sons born before 1900 experienced significant upward mobility compared to their fathers. Around that time, the country was moving from agriculture to industry. But then, as the prestige of certain occupations diminished, such as cashiers, typists and elevator operators, this trajectory slowly began to change.

The effect becomes even more pronounced starting with the baby boomer generation and continuing through today. According to Dr. Song, children today resemble their parents more in terms of socioeconomic status than in any previous generation. The researchers found that although income inequality has risen sharply since the 1970s, the relative trend in social mobility has stayed largely stable.

One major limitation to the work was the lack of diverse demographic information within the dataset, Dr. Song conceded. In the future, she said she hopes to find other datasets that might paint a truer picture of how non-white groups in the US have fared in terms of social mobility. Read the full story at <https://tinyurl.com/pennsociostatusstudy>