Jennifer Phillips-Cremins: NIH New Innovator Award for Study of ‘3-D Epigenome’

The National Institutes of Health have named Jennifer Phillips-Cremins as a member of its 2015 class of New Innovator awardees. She is an assistant professor in the University of Pennsylvania School of Engineering and Applied Science’s department of bioengineering.

As part of the NIH’s “High-Risk, High-Reward Research” program, the New Innovator Award provides Dr. Phillips-Cremins with $2.4 million for the next five years to advance her work on the dynamics of the “3-D Epigenome,” or how DNA, and consequently the epigenetic modifications on top of the DNA sequence, is folded and coiled in the nucleus of neurons during brain development.

Every cell in the body has essentially the same genetic sequence, so the differences in tissue appearance and function can be traced to the timing and level that genes are transcribed in development. Epigenetic marks are a wide range of chemical modifications on top of the genome’s base pairs that give rise to differences in gene expression. Changes in epigenetic modifications have been implicated in normal brain development as well as in neurological disease.

“We’re interested in the link between epigenetic modifications and the diversity of cell types in the developing and diseased brain,” Dr. Phillips-Cremins said. “We now have a wealth of insight into the mechanisms regulating epigenetic marks on the linear genome, but what hasn’t been addressed is how epigenetic modifications work through long-range, 3-D mechanisms and how genome architecture fluctuates over short and long time-scales.”

Classic epigenetic marks and chemical modifications physically attached to the genes they influence. When visualized as a linear gene sequence, these epigenetic marks represent an additional layer of information on top of the long sequence of base-pair letters. Looking at these marks in a linear fashion does not reveal the whole picture, however.

“Often times one might think that epigenetic marks are unrelated if they are separated by vast distances on the linear genome,” Dr. Phillips-Cremins said, “but, if you consider the epigenome in the context of the three-dimensional nucleus, many key regions in the genome are spatially adjacent and thereby functionally linked.”

Studying the three-dimensional shape of a genome is daunting, as existing tools can only analyze large populations of cells. The millions of cells studied at a given snapshot in time might each have a slightly different three-dimensional configuration, but scientists are thus far only able to capture what amounts to an averaged signal. This erases whatever signal might be coming from one particular 3-D pattern and how this changes over time.

“If we could develop tools to very rapidly synchronize the 3-D epigenome across the population of cells and control the folding over very short time scales, we can start to understand how architecture dynamics are linked to brain cell function,” Dr. Phillips-Cremins said.

Her New Innovator Award will fund research on “3-D opto-epigenetic” techniques for achieving architecture synchronization and pulsing. Certain proteins are known to aggregate in response to specific frequencies of light. By genetically engineering cells to express these proteins in their nuclei, entire populations of cells could be coaxied into the same 3-D genome configuration upon light pulsing with a laser.

“Imagine a ball of tissue that can be coaxied into new 3-D configurations upon flashes of light; the power in this approach is that one could specifically dictate what pieces of string are touching,” Dr. Phillips-Cremins said.

The same tools that force a population of cells to exhibit the same three-dimensional state in their nuclei could subsequently be used to better understand epigenetic dynamics. Better understanding of the dynamics of epigenetic regulation could eventually lead to targeted treatments for neurological diseases, such as Alzheimer’s.

“If one could control the dynamics of 3-D genome folding on demand, it could have important clinical applications,” Dr. Phillips-Cremins said. “It could bring to light the possibility of noninvasively shining light on specific sections of the brain, precisely controlling the gene expression of only specific cell types across time.”

$1 Million Gift to Establish the Lauren and Bobby Turner Social Impact Society Fund

The Wharton School of the University of Pennsylvania is pleased to announce a $1 million gift from K. Robert Turner, W’84 and Lauren Golub Turner, W’85 to establish the Lauren and Bobby Turner Social Impact Society Fund. The Fund will provide instrumental support to the Wharton Social Impact Initiative, including stipends for summer internships for Turner Social Impact Society Members and Fellows, as well as funding for trips and other illuminating and formative activities for students in the social impact sphere.

“I’m inspired by Bobby’s strategic thinking on impact investing and his deep commitment to unifying the Penn and Wharton social impact communities,” said Wharton Dean Geoff Garrett. “I’m deeply grateful to both Bobby and Lauren for their generous gift to support students who want to make change happen locally, nationally and globally.”

This gift builds upon Mr. and Mrs. Turner’s history of philanthropy to Wharton. Established in 2009, the Lauren and Bobby Turner Social Impact Curriculum Development Fund has made social impact-themed curriculum and Wharton Endowed Program trips possible. Additionally, the funding created the Turner Social Impact Society (TSIS) in 2013-2014. TSIS is a select community of Penn undergraduate students sharing a commitment to making a difference and benefitting from fellowship, mentorship, training, workshop and internship opportunities. The society is composed of two student groups: Members, who are newly exploring social impact, and Fellows, who have shown their dedication to social impact and wish to deepen their expertise. In addition to TSIS, Mr. and Mrs. Turner have funded the Bobby and Lauren Turner Endowed Scholarship Fund for minority students and established the Lauren and Bobby Turner Social Impact Executive Speaker Series in 2009, which has since brought Eva Longoria, Andre Agassi, Ashton Kutcher and other high-profile speakers to Wharton’s Philadelphia campus for conversations about making positive change in the world.

“Lauren and I see this gift as an opportunity to bring together Penn students with a shared goal of achieving meaningful, scalable change,” said Mr. Turner. “Their collaboration with one another will enable powerful, sustainable solutions to today’s societal challenges. We look forward to encouraging students to lead and connect with one another to build a better world. We are thrilled to be able to make these opportunities happen through this fund.”

Mr. Turner is the principal and CEO of Turner Impact Capital, LLC, a mission-driven investment management firm based in Los Angeles that is focused on creating sustainable solutions for today’s societal problems through impactful infrastructure. He earned his undergraduate degree from the Wharton School in 1984 and serves on the Undergraduate Executive Board. Mrs. Turner graduated from Wharton’s undergraduate program in 1985.

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3 Senate: Members and Committees
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11 Penn’s Way; Update; Twyla Tharp; CrimeStats
12 Talk About Teaching and Learning
Pullout: November AT PENN
Faculty Senate Executive Committee Actions
Wednesday, October 21, 2015

Chair’s Report. Faculty Senate Chair Reed Pyeritz noted that the Senate Committee on the Economic Status of the Faculty (SCESF) is in the drafting stage of its report, which will be published in early 2016. Due to time constraints, he announced that a more detailed report of the activities of the Senate committees will be deferred to the next meeting.

Past-Chair’s Report. Faculty Senate Past Chair Claire Finkelstein reported that the Academ ic Planning and Budget Committee and the Capital Council have both held their second meetings of the year. She gave an update on the Campaign for Community, informing SEC members that applications for branding and funding of up to $1,500 are currently being accepted. She reminded the SEC of the “Academic Freedom Now” symposium, co-sponsored by the Faculty Senate and the Campaign for Community, which will take place on October 27 from 3-6 p.m. in the Kislak Center (6th Floor, Van Pelt-Dietrich Library).

Athletics and Recreation at Penn. M. Grace Calhoun, director of recreation and intercol legiate athletics, gave SEC an overview of athletics and recreation at Penn. She reported that Penn Athletics is a broad-based division covering wellness programming for all students, ranging from intercollegiate teams to club teams, intramural teams, scheduled classes and programs, and drop- ins. She reported that a divisional task force was convened last fall that established standards for team discipline, including the use of alcohol and drugs. An updated anti-hazing policy was endorsed in September 2015, which has included coach and student-athlete education programs and written annual commitments to the policy by each student-athlete. An ongoing sexual misconduct prevention program is also in place. She reported that all Ivy League schools use an “academic index” in their admissions processes, which takes into account the student’s secondary GPA and standardized test scores to ensure that the prospective student has the potential for academic success at the institution. This policy is managed collectively by the eight Ivy League presidents.

Imminent Threats of Campus Violence. Maureen Rush, vice president for public safety, reported on the campus-wide alert of potential violence on October 5, 2015. She reported that a notice was sent to the Penn community with information regarding the alleged threat, which was based on a post to a popular website, and that significant additional security measures were taken to ensure the safety of the community. She added that the posting was later determined to be a hoax. Vice President Rush discussed the effectiveness of the University’s new HELP Line, and encouraged SEC members to remind their constituencies of its 24/7 availability at (215) 898-HELP.

2015 Senate Nominating Committee. Pursuant to the Faculty Senate Rules, the members of SEC were asked to submit a nomination of a member of the Standing Faculty to the Nominat ing Committee.

Update from the Office of Investments. Peter Ammon, chief investment officer, discussed the work of the Office of Investments and described the process the office uses to manage the Associate Investments Fund (AIF), a pooled investment vehicle in which the vast majority of Penn’s associated endowments are invested. Individual endowments and trusts at Penn hold shares or units of the AIF, whose purpose is to provide stability and perpetual support for Penn’s mission and programs.


On Wednesday, October 28 from 6:30-8 p.m., the University of Pennsylvania’s Program for Research on Religion and Urban Civil Society (PRRCUS) will host a panel discussion on The Ramifications of the Philadelphia Grand Jury Report on Child Sex Abuse in the Archdiocese of Philadelphia on its 10th Anniversary: Lessons Learned and Spurred. It will feature: Lynne Abraham, former district attorney of Philadelphia; the Rev. William Byron, professor of business and society, Saint Joseph’s University; Marci Hamilton, Paul R. Verkuil Chair in Public Law, Benjamin N. Cardozo School of Law, Yeshiva University; Maureen S. Rush, vice president for public safety and superintendent, Penn Police Department and John Difulio, faculty director of PRRCUS, moderator.

It will be in Claudia Cohen Hall’s Terrace Room. Attendees must RSVP to wendyjen@sas.upenn.edu.

James Brister Society Faculty of Color Luncheon: November 6

The James Brister Society invites Penn Faculty of Color to a luncheon on Friday, November 6. The James Brister Society (JBS) was named after the first African-American to graduate from the University of Pennsylvania in 1881. JBS seeks to improve the quality of the campus experience for students, faculty and administrators of color. JBS is comprised of alumni members from all backgrounds. The networking reception will take place from 11:15 a.m.-12:15 p.m., followed by lunch from 12:15-1:30 p.m. JBS also invites Faculty of Color to stay for a panel on Race in the Corporate World, immediately following from 1:30-2:30 p.m. Register for the Luncheon at http://tinyurl.com/pmzag6f.
Faculty Senate Committees, 2015-2016

Senate Executive Committee

Karen Glanz (PSOM/Biostatistics & Epidemiology)
David Grazian (SAS/Sociology)
Kelly Jordan-Sciutto (Dental Medicine/Pathology)
James Lok (Veterinary Medicine/Pathobiology)
Angela Mills (PSOM/Emergency Medicine)
Brendan O’Leary (SAS/Political Science)
Philip Rea (SAS/Biology)
Florian Schwarz (SAS/Linguistics)

At-Large Representatives

Erol Akay (SAS/Biology)
Alison Buttenheim (Nursing)
Daniel J. Singer (SAS/Philosophy)

Penn Association of Senior and Emeritus Faculty (PASEF) Representative

Martin Pring (PSOM/Physiology)

Members Elected by Constituency

1. Annenberg: Kathleen Hall Jamieson
2. SAS: History: Firoozeh Kashani-Sabet
3. SAS: Anthropology, History of Art, Music: Toorjo Ghose
4. SAS: Economics: Holger Sieg
5. SAS: English: Rita Barnard
6. SAS: Linguistics, Philosophy: Jianjing Kuang (Linguistics)
7. SAS: Classical Studies, Germanic Languages & Literatures, Romance Languages, Slavic Languages & Literatures: Fabio Finotti (Romance Languages)
8. SAS: Economics: Holger Sieg
9. SAS: English: Rita Barnard
10. SAS: Linguistics, Philosophy: Jianjing Kuang (Linguistics)
11. SAS: East Asian Languages & Civilizations, Near Eastern Languages & Civilizations, Religious Studies, South Asia Studies: Steve Tinney (NELC)
12. SAS: Physics & Astronomy: Masao Sako
13. SAS: Political Science: Nancy J. Hirschmann
14. SAS: Psychology: Loretta Flanagan-Cato
15. SAS: Sociology, Criminology: Melissa Wilde (Sociology)
17. GSE: Richard Ingersoll
20. Design: Jackie Tileston
21. Law: Mitch Berman
22. PSOM: Biochemistry & Biophysics, Biostatistics & Epidemiology, Cancer Biology, Cell & Developmental Biology, Pathology & Laboratory Medicine: Douglas Wiebe (Biostatistics & Epidemiology)

Senate Committee on Faculty and the Academic Mission (SCOF)

Lea Ann Matura, Nursing
Justin McDaniel, SAS/Religious Studies
Mindy Schuster, PSOM/Infectious Diseases, Chair
Amy Sepinwall, Wharton
Tom Sollecito, Dental Medicine
Lyle Ungar, SEAS

Senate Committee on Students and Educational Policy (SCSEP)

Paulo Arratia, SEAS
Laura Desimone, GSE
Sharon Irving, Nursing
Jorge Santiago-Aviles, SEAS
Dominic Sisti, PSOM/Medical Ethics
Michael Weisberg, SAS/Philosophy, Chair

Senate Committee on Faculty and the Administration (SCOA)

Ken Drobatz, Veterinary Medicine
Irina Marinov, SAS/Earth & Environmental Science
Emma Meagher, PSOM/Medicine
Pamela Sankar, PSOM/Medical Ethics
Talid Simo, SEAS
Santosh Venkatesh, SEAS
R. Polk Wagner, Law, Chair

Senate Committee on Faculty Development, Diversity and Equity (SCFDFE)

Regina Austin, Law, Chair
Rita Barnard, SAS/English
Krysten Feemster, PSOM/Pathology
Carmen Guerra, PSOM/Medicine
Lisa Lewis, Nursing
Mitch Marcus, SEAS

Senate Committee on Publication Policy for Almanac

Sunday Akintoye, Dental Medicine
Christine Bradway, Nursing
Al Fileris, SAS/English
Cary Mazur, SAS/English
Carolyn Marvin, Annenberg
Martin Pring, PSOM/Physiology, Chair

Senate Committee on Academic Freedom and Responsibility (SCAFR)

Shyam Balganes, Law, Chair
Sue Ann Bidstrup, Annenberg
Peter Dodson, Veterinary Medicine
Nader Engheta, SEAS
Vivian Gadsden, SEAS
Carolyn Marvin, Annenberg
Jon Merz, PSOM/Medical Ethics
Carolyn Muller, SAS/English
Diana Robertson, Wharton
Michael Weisberg, SAS/Philosophy

Senate Committee on Economic Status of the Faculty (SCESF)

Robert Hollebeek, SAS/Physics & Astronomy
Jerry Jacobs, SAS/Sociology
Mark Kahn, PSOM/Cardiovascular Medicine
Susan Margulies, PSOM/Bioengineering, Co-Chair
Andrew Postlewaite, SAS/Economics
Robert Stine, Wharton/Statistics
Andrea Troxel, PSOM/Biostatistics & Epidemiology, Co-Chair

Senate Committee on Economic Status of the Faculty (SCESF)

Robert Hollebeek, SAS/Physics & Astronomy
Jerry Jacobs, SAS/Sociology
Mark Kahn, PSOM/Cardiovascular Medicine
Susan Margulies, PSOM/Bioengineering, Co-Chair
Andrew Postlewaite, SAS/Economics
Robert Stine, Wharton/Statistics
Andrea Troxel, PSOM/Biostatistics & Epidemiology, Co-Chair

Ex officio

Senate Past Chair, Claire Finkelstein, Law
Senate Chair, Reed Pyeritz, PSOM
Senate Chair-Elect, Laura Perna, GSE

Faculty Grievance Commission

Parvati Ramchandani, PSOM/Radiology, Chair
Steven Sondheimer, PSOM/Obstetrics & Gynecology, Past-Chair
Mitch Marcus, SEAS, Chair-Elect

ALMANAC October 27, 2015
Membership of University Council, 2015-2016

Steering Committee
The Steering Committee shall consist of the president of the University, the provost, the chair, the chair-elect and the past chair of the Faculty Senate, the chair of the Undergraduate Assembly, the chair of the Graduate and Professional Student Assembly, the chair of the Penn Professional Staff Assembly and the chair of the Weekly-Paid Penn Professional Staff Assembly. Drawn from the Council membership there shall be in addition four faculty members, one graduate/professional student and one undergraduate student elected by the respective governing bodies, as well as one additional member of the Penn Professional Staff Assembly and one additional member of the Penn Professional Staff Assembly, each elected by their representative assemblies. The chair of the Faculty Senate shall be the chair of the Steering Committee. In the absence of the chair, or at the request of the chair, the chair-elect shall serve as chair of the Steering Committee. The Council moderator will be an official observer at meetings of the Steering Committee. The secretary of the Council shall serve as secretary of the Steering Committee. Members of the Steering Committee may attend the meetings of Council committees.

—Council Bylaws

Members of Steering Committee
Laura Bryant
Christophe Van den Bulle
Ray Clark
Lucia DiNapoli
Kuan Evans
Claire Finkelstein, Past-Chair
Karen Glanz
Amy Gutmann
Firoozeh Kashani-Sabet
Jane Meyer
Samantha Miller
Laura Perna, Chair-Elect
Vincent Price
Reed Pyeritz, Chair
Florian Schwarz
Irene Tan
Rosa Vargas

Members of Council Faculty: Forty-five members of the Executive Committee of the Faculty Senate. The Faculty Senate shall insur that each faculty is represented and that at least three assistant professors serve on the Council. The members of the Faculty Senate Executive Committee who are members of the Council shall otherwise be chosen in accordance with the rules of the Faculty Senate. One full-time lecturer and one full-time member of the research faculty to be selected to serve two-year terms by vote facilitated by the Office of the Secretary in consultation with the Steering Committee of the full-time lecturers and research faculty, respectively, from a slate consisting of the five lecturers and the five members of the research faculty receiving the largest number of nominations by lecturers and members of the research faculty. If the Steering Committee receives fewer than five nominations for either group, additional nominations shall be solicited from the constituency representatives of the Senate Executive Committee.

Administrative and Staff: Eleven administrative officers, including the president, the provost and nine members of the administration to be appointed annually by the president, at least five of whom shall be deans of faculties.

Two elected representatives of the Penn Professional Staff Assembly. One elected representative of the Librarians Assembly. Two elected representatives of the Weekly-Paid Penn Professional Staff Assembly.

Students: Fifteen graduate and professional students elected as members of the Graduate and Professional Student Assembly. The Graduate and Professional Student Assembly shall insure that, to the extent possible, each school is represented. The members of the Graduate and Professional Student Assembly who are members of the Council shall otherwise be chosen in accordance with the rules of the Graduate and Professional Student Assembly.

Fifteen undergraduate students elected as members of the Undergraduate Assembly. The Undergraduate Assembly shall insure that, to the extent possible, each undergraduate school is represented. The members of the Undergraduate Assembly who are members of the Council shall otherwise be chosen in accordance with the rules of the Undergraduate Assembly.

One elected representative of the United Minorties Council.

Members of the Administration
Michael Delli Carpini
Steve Fluharty
Amy Gutmann
William Gibson
John Jackson
Anita Mastroieni
Vincent Price
Maureen Rush
Valerie Swain-Cade McCoullum
Marilyn Jordan Taylor
Toni Villarruel

Elected by Faculty At Large
Reed Pyeritz, Chair
Lydie Moudlinen, Secretary
Laura Perna, Chair-Elect
Marcella Devoto, Secretary-Elect
Claire Finkelstein, Past Chair
Karen Glanz
Florian Schwarz

Penn Association for Senior & Emeritus Faculty
Martin Fring, PASEF Representative

Elected by Faculty Constituency
1. Kathleen Hall Jamieson
2. Firoozeh Kashani-Sabet
3. Carol Muller
4. Ron Donagi
5. Brent Helfiker
6. Joseph Subotnik
7. Fabio Finotti
8. Holger Sieg
9. Rita Barnard
10. Jianjing Kuang
11. Steve Tinney
12. Masao Sakao
13. Nancy J. Hirschmann
14. Loretta Flanagan-Cato
15. Melissa Wilde
16. Eric T. Stoopler
17. Richard Ingersoll
18. David Pope
19. Robert Ghrist
20. Jackie Tileston
21. Mitch Berman
22. Douglas Wiebe
23. David Smith
24. James Palmer
25. Michael McGarvey
26. Paul Lanken
27. Bruce Gianthonio
28. Maully Shah
29. Jose Pascual
30. Eileen Lake
31. Toorjo Ghose
32. Narayan Avadhani
33. Erika Krick
34. Robert A. Stine
35. Karen Lewis
36. Christophe Van den Bulte

Assistant Professors
Erol Akçay
Alison Buttenheim
Daniel J. Singer

Faculty Senate officers are italicized. Asterisk [*] indicates observer status.

Lecturers and Research Faculty Members
Christina Frei
Itzhak Nissim

Graduate/Professional Students
Miriam Archibong
Cherag Bhagwagar
Laura Bryant
Taylor Rae Collins-Headley
Abimbola Dairo
Katherine France
Jin Soo Han
Allison Hill
Taylor Knoche
Samantha Miller, GAPSA Chair
Justine Sefick
Tara Stonex
Erica Sucher
Kelsey Van Gelder
Paul Welfer

Undergraduate Students
Albert Cai, APSC
Victoria Chen, Lambda Alliance
Ray Clare, UA Vice-President
Tsunmise Fawole, UMOJA
Nicolas Garcia, LC
Jacob Henner, UA
Michael Karam, UA
Nayab Khan, MSA
Jennifer Kneshbuch, College Republicans
Jane Meyer, UA President
Elise Pi, AIS
Jack Pilutti, SSAP
Eric Tepper, PRISM
Leah Quinn, UA
Megan Van, PAGE

United Minorities Council
Rashad Nimr

Penn Professional Staff Assembly
Lucia DiNapoli, Chair
Kuan Evans, Chair-Elect

Weekly-Paid Penn Professional Staff Assembly
Rosa Vargas, Chair
Irene Tan, Co-Chair

Librarians Assembly
Rachelle Nelson

Parliamentarian
Lauren Steinfeld*

ROTC Representative
Colonel Kenneth DeFreux*

Vice President and Secretary
Leslie Laird Krauhl*

Moderator
Theresa Richmond*

For more information regarding University Council, including Status Reports and Resolutions, see the Council website: http://www.upenn.edu/secretary/council/index.html

University Council Committees, 2015-2016, are on the next page, along with the schedule of Council Meetings and discussion topics for the remainder of the 2015-2016 academic year.
## University Council Committees, 2015-2016

### Standing Committees

**Academic & Related Affairs:**
- **Chair:** Ani Nenkova, SEAS
- **Liaison:** Leo Charney
- **Staff:** Nicole Tillman
- **Faculty:**
  - Frederick Dickinson, SAS
  - Eric Feldman, Law
  - Vera Krymskaya, PSOM
  - Nicola Mason, Veterinary Medicine
  - Rahim Rizi, PSOM
- **Graduate Students:**
  - Thomas Brinkerhoff
  - Qianying Zhang

**Undergraduate Students:**
- Nathaniel Rome
- Jyothi Vallurupalli

**PPSA:**
- Laurie-Ellen Shumaker
- Chris Pastore

**WPPSA:**
- Suzanne Oh
- Peter Rockett

**Campus & Community Life:**
- **Chair:** Rebecca Maynard, GSE
- **Liaison:** Karu Kozuma
- **Staff:** Cyndee Bryant
- **Faculty:**
  - Angela Bradbury, PSOM
  - Monica Calkins, PSOM
  - Jonah Gelbach, Law
  - Campbell Grey, SAS
  - Emily Hamann, SAS
- **Graduate Students:**
  - Lirui Li
  - Jia Xue

**Undergraduate Students:**
- Emily Hoeven
- Adam Mansell

**PPSA:**
- Peter Gemmellaro
- Namrata Narain

**WPPSA:**
- Simcha Katsnelson
- Joyce Woodward-Jones

**Diversity and Equity:**
- **Chair:** Ezekiel Dixon-Roman, SP2
- **Liaison:** Sam Starks
- **Staff:** Kuan Evans
- **Faculty:**
  - Regina Austin, Law
  - Herman Beavers, SAS
  - Chenoa Flippen, SAS
  - Nancy Hirschmann, SAS
  - Joe Libonati, Nursing
  - Jinni Moore, PSOM
  - Sharrona Pearl, Annenberg
- **Graduate Students:**
  - Justine Sefcik
  - Lloyd Talley

**Undergraduate Students:**
- Ann Okhupe
- Cheyenne Rogers

**PPSA:**
- Kristin Field
- Shaina Adams-El Gulabi

**WPPSA:**
- Lauren Kemp
- Irene Tan

**Facilities:**
- **Chair:** Ann Moyer, SAS
- **Liaison:** David Hollenberg
- **Staff:** Taylor Berkowitz
- **Faculty:**
  - Tom Daniels, Design
  - Jerry Jacobs, SAS
  - Tanja Kral, Nursing
  - Kathryn Michel, Veterinary Medicine
  - John Puckett, GSE
  - Masao Sako, SAS
- **Graduate Students:**
  - Salomon Moreno-Rosa
  - Matthew Rappaport
- **Undergraduate Students:**
  - David Cahn
  - Elena Rohner

**PPSA:**
- Elizabeth Hartzell
- Kristen McMullen

**WPPSA:**
- Joe Mellon, Jr.
- Peter Rockett
- Joyce Woodward-Jones

**Personnel Benefits:**
- **Chair:** Reed Shuldiner, Law
- **Liaisons:**
  - Jack Heuer
  - Susan Sproat
- **Staff:** Sheila Hall
- **Faculty:**
  - David Balamuth, SAS
  - Carolyn Cannuscio, PSOM
  - Erika Holzbaur, PSOM
  - Russell Localio, PSOM
  - Jonathan Smith, SEAS
  - Petra Todd, SAS
  - Rakesh Vohra, SEAS/SAS
- **PPSA:**
  - Lauren Kemp
  - Irene Tan

**Committee on Committees:**
- **Chair:** Laura Perna, GSE
- **Staff:**
  - Joe Gasiewski
  - Patrick Walsh
- **Faculty:**
  - Christophe Van den Bulte, Wharton
  - Claire Finkelstein, Law
  - Firoozeh Kashani-Sabet, SAS
  - Karen Glanz, PSOM/Nursing
  - Reed Pyeritz, PSOM
  - Florian Schwarz, SAS
- **Graduate Student:**
  - Sangya Agarwal
- **Undergraduate Student:**
  - 1 TBD

**PPSA:**
- Heather Frattone
- Amy Notherer
- Susan Russioniello

**WPPSA:**
- Joe Mellon, Jr.
- Peter Rockett
- Joyce Woodward-Jones

### 2015-2016 Meetings and Discussion Topics for University Council

The following are the dates for meetings of the University Council, which are open to observers who register their intention to attend by calling the Office of the University Secretary in advance at (215) 898-7005.

- **October 28, 2015**
  - State of the University
  - The history and current status of open expression at Penn
- **December 2, 2015**
  - Penn Connects 2.0
  - Open Forum

- **January 27, 2016**
  - Discussion of Penn’s protocol(s) for bringing and responding to complaints about sexual assault or misconduct and other Title IX issues
  - Cross-disciplinary and cross-school programs involving staff, students and faculty

- **February 17, 2016**
  - Reports on Budgets and Plans for the Next Academic Year
  - Discussion of Potential Focus Issues for the 2016-2017 Academic Year
  - Discussion of Potential Committee Charges for the 2016-2017 Academic Year

All meetings are held on Wednesdays at 4 p.m. in Bodek Lounge, Houston Hall. The agenda will be announced in Almanac prior to each meeting. Council meeting coverage is also published in Almanac in the issue following the meeting.
Abramson Cancer Center: “Exceptional” Rating, NCI

The University of Pennsylvania’s Abramson Cancer Center (ACC) has received an “exceptional” rating from the National Cancer Institute (NCI) during an extensive peer-review process for its five-year competitive research support grant. The rating is the highest possible for an NCI cancer center. It also signifies the renewal of the ACC’s status as a “comprehensive” center. The ACC is one of only 45 NCI-designated comprehensive centers in the U.S. and three in Pennsylvania.

Since the last competitive renewal process in 2010, faculty physicians and researchers have authored more than 5,000 cancer-related publications. In addition, the ACC’s research initiatives have been buoyed by an increase in NCI peer-reviewed funding. Today, ACC scientists are making cardiovascular health for one year.

Dr. Levine’s funded project is titled “Angio

genics to predict cardiac dysfunction dur-
ing and after preeclampsia.” Her preliminary data suggest that cardiac dysfunction in pre-
eclampsia is caused by an angiogenic imbalance in the heart, triggered by the late gestational se-
cretion from the placenta of sFlt1, an endoge-

nous soluble inhibitor of VEGF. She plans to rigorously test the hypothesis that sFlt1 is asso-
ciated with cardiac dysfunction in a particular-
ly high-risk group of women: African American women with severe preterm preeclampsia.

National Academy of Medicine: Three New Members from Penn

Three University of Pennsylvania professors have been elected members of the National Academy of Medicine (NAM), one of the nation’s highest honors in biomedicine. NAM was originally the Institute of Medicine, which was established in 1970 under the charter of the National Academy of Sciences to advise the nation on medical and health issues. Members are elected by their peers for distinguished contributions to medicine and health.

The new NAM members bring Penn Medicine’s total membership in the prestigious group to 66. The newly elected members raise NAM’s total active membership to 1,326 and the number of international members to 137. NAM has become recognized as a national resource for independent, scientifically informed analysis and recommendations on health issues. With their election, members make a commitment to volunteer their service on NAM committees, boards and other activities.

The three new Penn NAM members are:

Dennis E. Discher is the Robert D. Bent Professor of Chemical and Biomolecular Engineering at the School of Engineering & Applied Science (SEAS). He joined Penn in 1996 following postdoctoral work in computational biophysics as a U.S. National Science Foundation International Fellow at the University of British Columbia and Simon Fraser University. He received his PhD jointly from the University of California, Berkeley and San Francisco for studies of cell membrane physics and spliceform biochemistry. He holds secondary appointments in bioengineering and in mechanical engineering & applied mechanics and is a member of Graduate Groups in Cell & Molecular Biology, Pharmacology and Physics. His research has focused on investigating mechanisms of epilepsy as well as their age-dependent differences, with special attention to the interactions between brain development, brain injury, epilepsy and cognition. In addition to receiving the NIH Director’s Pioneer Award and the American Epilepsy Research Recognition Award, she has been continuously funded by NIH since 1987 and has trained over 30 research fellows. Dr. Jensen has been a council member of the Society for Neuroscience and was president of the American Epilepsy Society in 2012. She serves on a number of patient and research advocacy boards and is a fellow of the American College of Physicians. Dr. Jensen is a co-author of the widely acclaimed book, The Teenage Brain.
Science Center: Celebrating Women Innovators in 2015 Class of the Innovators Walk of Fame

The University City Science Center announced the second class of its Innovators Walk of Fame at the recent event, Nucleus 2015: Celebrating Women Innovators.

Launched in 2013, the Innovators Walk of Fame (Almanac November 5, 2013) shines a light on the diverse tradition of discovery and innovation in the Greater Philadelphia region and the groundbreaking contributions made to the scientific and entrepreneurial communities that have revolutionized the local, regional and global landscape.

The 2015 class of the Innovators Walk of Fame honors and celebrates the female innovators who transformed the world with their ideas, inventions and creativity. The event included a presentation and induction into the Innovators Walk of Fame a group of influential women whose grit, determination and vision have left a legacy for future generations.

“We wanted to ensure that the Innovators Walk of Fame reflects the diversity of the local, regional and global communities in which the Science Center operates. This celebration of innovation, diversity and impact are at the core of each class of honorees,” said Science Center President & CEO Stephen S. Tang. “Because of this group of extraordinary women, the world is surely a better place.”

A selection committee reviewed nominations from the innovation community and made recommendations to the Science Center’s senior management team.

2015 Innovators Walk of Fame Honorees

Medicine: Rebecca J. Cole

Rebecca J. Cole, a Philadelphia native, overcame gender and racial obstacles to become the second African American woman to receive a medical degree in the United States. Dr. Cole graduated from the Woman’s Medical College of Pennsylvania in 1867—just two years after the Civil War ended. She went on to practice medicine in South Carolina before returning to Philadelphia, where she pioneered access to medical care and legal services for impoverished women and children by opening a Women’s Directory Center. Sponsored by Drexel University.

Science: Stephanie Kwolek

Stephanie Kwolek invented the technology behind Kevlar, a virtually bulletproof fiber that has saved the lives of countless first responders and military personnel. Five times stronger than steel, Kevlar is a groundbreaking material best known for its use in bullet-proof vests. Today, it can also be found in products ranging from space suits to storm shelters. An industrial chemist at DuPont in Wilmington, Delaware, during the 1960’s, Ms. Kwolek was one of the few women in her field at the time.

Community Engagement: Judith Rodin

A pioneer and innovator throughout her career, Judith Rodin was the first woman to serve as the Rockefeller Foundation’s president. While president of the University of Pennsylvania, Dr. Rodin spearheaded groundbreaking programs that engaged the campus, the surrounding community and provided a model that is replicated by other universities nationally and internationally. Sponsored by the University of Pennsylvania.

Social Impact: Judy Wicks

When Inc. magazine named Judy Wicks one of America’s 25 Most Fascinating Entrepreneurs, they said “she put in place more progressive business models that any other entrepreneur.” Her West Philadelphia restaurant, White Dog Café, became a leader in the local food movement and grew a national reputation for community engagement, environmental stewardship and responsible business practices. A founder of the Sustainable Business Network of Greater Philadelphia and co-founder of the International Business Alliance for Local Living Economies, Ms. Wicks is an activist and a pioneer who is dedicated to building a more compassionate, environmentally sustainable and locally based economy. “Business is beautiful,” Ms. Wicks said, “when it’s a vehicle for serving the common good.”

Technology: Women of ENIAC—

Kathleen McNulty Mauchly Antonelli, Jean Jennings Bartik, Frances Elizabeth Holberton, Marilyn Wescoff Meltzer, Frances Bilas Spence and Ruth Lichterman Teitelbaum

In 1946, six brilliant young female mathematicians, working secretly for the U.S. Army’s World War II efforts at the University of Pennsylvania, programmed the first all-electronic, programmable, general-purpose computer, the ENIAC. No programming tools or language existed at the time. Yet, Kathleen McNulty Mauchly Antonelli, Jean Jennings Bartik, Frances Elizabeth Holberton, Marilyn Wescoff Meltzer, Frances Bilas Spence and Ruth Lichterman Teitelbaum learned to program without manuals or courses, using only logical diagrams. When ENIAC debuted in 1947, it ran the ballistics trajectory programmed by the six women in mere seconds and changed the world. Sponsored by the University of Pennsylvania.

Operating ENIAC’s main control panel when it was located at the Moore School, Jean Jennings, who led the programmers, and Frances Bilas.

The physical installation of the Innovators Walk of Fame, presented by Wexford Science & Technology, LLC, a BioMed Realty Company, will open this fall in Innovation Plaza, a new pocket park located within uCity Square along 37th Street between Market and Chestnut Streets.

Innovators Walk of Fame promotional partners for 2015 include the African American Chamber of Commerce; American Heart Association; Arts & Business Council of Greater Philadelphia; Association for Women in Science, Philadelphia Chapter; Association of Women in Forensic Science; Delaware BioScience Association; Charles D. Close School of Entrepreneurship, Drexel University; Delaware State Chamber of Commerce; Drexel University; Economy League; Flying Kite; Fox Rothschild LLP; GlobalPhilly; Greater Philadelphia Chamber of Commerce; Inspiring Women in STEM; Network of Women with Careers in Technology; Pennsylvania Bio; Philadelphia Science Festival; Professional Women’s Business Network; Technical.ly; Philadelphia; Forum of Delaware; Temple University Fox School of Business and Management’s Innovation and Entrepreneurship Institute (IEI); UD Horn Program in Entrepreneurship; Wharton Entrepreneurship; WHYY (NewsWorks); The Wistar Institute and Women’s Way.

The University City Science Center is a dynamic hub for innovation, entrepreneurship and technology development in the Greater Philadelphia region. Since it was founded in 1963, graduate organizations and current residents of the University City Science Center’s Port business incubators have created more than 15,000 jobs that remain in the Greater Philadelphia region today and contribute more than $9 billion to the regional economy annually. The Science Center has a history as the oldest and largest urban research park in the United States. Today, after 50+ years of operations, they are in the midst of a dramatic change that will further impact Greater Philadelphia’s role in the innovation ecosystem, as they join forces with Wexford Science + Technology, a BioMed Realty company, to expand their footprint. In September 2015, the Science Center announced a new brand for their campus: uCity Square—a true mixed-use community comprised of office and lab space for companies of all sizes as well as residential and retail locations. Together with Wexford, they are creating a community of ingenuity where bright minds will flourish and thrive. To learn more about the University City Science Center, visit http://www.uacsreview.org
Penn Medicine Innovation Accelerator Program Kick-starts Eight Projects Aimed at Improving Health Care Delivery and Patient Outcomes

Penn Medicine’s Innovation Accelerator Program, now in its third year, has announced funding for eight new projects aimed at improving health care delivery and patient outcomes. The program, run by leaders in the Center for Health Care Innovation, has been redesigned to support a larger group of thought leaders from across departments and in roles across the University of Pennsylvania Health System in their efforts to develop, test and implement new approaches to health care.

“The Accelerator Program offers Penn Medicine staff members a terrific opportunity to put their ideas into action,” said David A. Asch, executive director of the Center for Health Care Innovation. “It supports a culture of experimentation, where insights can promptly be turned into data. Quick, rapid learning about what is working, paired with ongoing adjustments and tweaking, ensure that the entrepreneurial mindset remains at the heart of our activities.”

Formerly the Innovation Grant Program, in its first two years, the Center provided more than $500,000 in funding for projects ranging from improved antibiotic stewardship to IM-PaCT, a leading, evidence-based community health worker program for vulnerable populations. The program has now been reimagined to move away from a smaller number of projects receiving larger initial grants to enable more novel interventions with seed funding to kick-start their idea.

Teams will work with mentors from the Center for Health Care Innovation over four months, applying high-impact methods for refining and validating solutions to test and develop their concepts. In March 2016, the program will culminate with a pitch session where teams will present their learnings for the opportunity to receive additional funding to take their ideas to scale.

On October 15, Penn’s Next Generation Student Systems (NGSS) project reached an important milestone with the launch of the first full release in its Pennant suite of systems: Pennant Accounts. Pennant Accounts replaces the legacy Billing and Receivables System (BRS), the related billing functions in Student Financial Services Enhanced Access to Student Information (SFS EASI) and the BRS Data Warehouse collection.

Hundreds of members of the Penn community have worked to make possible this first of three transformational advancements in Penn’s student-related electronic infrastructure. From identification of the University’s unique and varied requirements to the reconceiving of business processes; the evaluation of vendor products; the design, development and testing of supporting applications; and readiness activities including extensive outreach and training; the team has drawn on the energy and expertise of colleagues in Schools and Centers throughout the University. After a multiyear effort, the successful launch of Pennant Accounts—on time and on budget—testifies to the creativity and commitment of collaborators across campus and beyond.

Pennant Accounts will help staff provide better service, help Schools and Centers make better decisions and help Penn make a greater impact. It will also establish important foundations for future Pennant releases; Pennant Records, which will modernize student academic records and registration processes, and Pennant Aid, which will support Penn’s leadership in making an unsurpassed education accessible regardless of need.

The NGSS project team thanks everyone who played a part in bringing Pennant Accounts to fruition and looks forward to further collaboration on future Pennant releases.

For more information about Pennant, see: http://www.sfs.upenn.edu/ngss/index.html

—Michelle H. Brown-Nevers, Associate Vice President, Student Registration & Financial Services
—Thomas H. Murphy, Vice President, Information Systems & Computing and University CIO
—Beth Winkelstein, Vice Provost for Education

Goal: Test new patient scheduling, engagement strategies and care coordination approaches to reduce no-shows and cancellations after patients are discharged from the hospital, improving both the patient experience and their health outcomes.

• PEACE—optimizing care models for women with signs of miscarriage
  Project lead: Courtney Schreiber, program director for the Penn Family Planning and Pregnancy Loss Center, obstetrics & gynecology
  Goal: Test a full-service, urgent-care model for women with signs of miscarriage to reduce cost, free up operating room capacity, reduce blood transfusions and improve patient experience. While there is evidence of measurable impact from similar models internationally, this novel approach would establish national leadership.

• Managing superutilizers
  Project lead: Anna Doubeni, associate professor of clinical family medicine and community health
  Goal: Develop and test methods to proactively identify superutilizer patients for new interventions to lower cost by reducing low value care and improving patient outcomes.

“While these proposals demonstrate an inspiring range of new care models, practices and services with the potential to make a dramatic impact on value, outcomes and patients’ experience,” said Roy Rosin, chief innovation officer at the University of Pennsylvania Health System. “All of us at the Center wish we could formally support many more projects, as submissions from so many of our colleagues have tremendous merit, but we do our best to help even when a project hasn’t been officially selected. For those that have been selected, we believe that the seed money, mentorship and support from our internal partners such as our information services team will accelerate testing and validation so we can continue investment in those models that show the most promise.”

Volunteering on Campus for Election Day

In order to promote voter engagement and turnout across the campus community, Penn OGCA leads voter registration and awareness campaigns before every election. The Penn Voter Education Task Force, a nonpartisan coalition of Penn students, faculty and staff, strives to build a stronger community of civically aware, practicing voters. OGCA and the Task Force have been deeply engaged this semester in promoting utilization of Pennsylvania’s new online voter registration portal, encouraging voters to make a plan for Election Day and demonstrating usage of the Philadelphia voting machine.

With little more than a week until Election Day on Tuesday, November 3, intensive recruitment of student, staff and faculty volunteers is underway to operate the campus polling places. This is a nonpartisan opportunity to engage in the democratic process at the local level. Volunteers must be available for all-day or half-day shifts on Election Day between 6:30 a.m. and 8:15 p.m. Here’s how Penn people can do to assist in this effort:

• Volunteer at ogca@exchange.upenn.edu
• Help the Task Force expand its reach by following on Facebook, Instagram and Twitter.
• Talk about your voting experiences, especially with young and first-time voters.

Penn Medicine Innovation Accelerator Program Inaugurates a New Era for Student Systems at Penn

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—Michelle H. Brown-Nevers, Associate Vice President, Student Registration & Financial Services
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—Beth Winkelstein, Vice Provost for Education

Goal: Dramatically increase the number of Penn Medicine patients with care preferences that are known and followed with an online platform optimized for rapid testing of novel strategies to enable completion and sharing of an advance directive.

• Implementing a teleretinal imaging program to increase screening of diabetic patients and readiness activities including extensive outreach and training; the team has drawn on the energy and commitment of collaborators across campus and beyond.

For more information about Pennant, see: http://www.upenn.edu/almanac

www.upenn.edu/almanac
ALMANAC October 27, 2015
**Human Resources: Upcoming November Programs**

**Professional and Personal Development**

Improve your skills and get ahead in your career by taking advantage of the many development opportunities provided by Human Resources.

- **AMA's Developing Emotional Intelligence:** 11/10 & 11/11; 9 a.m.-5 p.m.; $75. Emotional intelligence (EI) in the workplace is vital to being an effective and successful member of any team. Business professionals who understand the connection between emotions and actions and can apply EI skills to maximize effectiveness have a stand-out advantage.

- **Cover Letters That Get Results:** 11/18; 9 a.m.-2 p.m. We all know that employers get so many resumes in response to just one job opening. It becomes more important than ever to find ways to make your letter stand out from the crowd. A well written cover letter gives you that great opportunity to communicate your ‘match’ to the position and your ‘fit’ to the organization. Come to this session to learn the steps to creating a powerful cover letter.

- **Putting Together a Flexible Work Option**
  - Dealing with the demands of work and your personal life can be challenging. These free workshops, sponsored by Human Resources and led by experts from Penn’s Employee Assistance Program and Quality of Worklife Department, offer information and support for your personal and professional life challenges. For complete details and to register, visit [www.hr.upenn.edu/myhr/registration](http://www.hr.upenn.edu/myhr/registration) or qowl@hr.upenn.edu

- **Breastfeeding Support Group:** 11/2; noon-1:30 p.m. Come meet other new moms on campus, get help with breastfeeding challenges or share what’s worked for you. If you are breastfeeding, pumping and bottle-feeding, pregnant and thinking about breastfeeding or formula-feeding and curious about breastfeeding, this group is for you. This group is open to Penn faculty, staff, students, post docs and their partners. The group will also meet on December 7. Funding for this group is provided by the Division of Human Resources, the Family Resource Center and the Penn Women’s Center.

- **Putting Together a Flexible Work Option:** 11/4; 1-2 p.m. Flexible work options offer creative ways to work while managing complex work and life goals. They involve non-traditional work schedules, locations and/or job structures. No matter what you’d like to arrange, you have to make sure that your plan prioritizes the needs of the organization. Come to this workshop and we’ll review what you need to consider and ways of working flexibly at Penn and how to make sure you have a successful arrangement proposal.

- **What is Mindfulness Anyway? And How Can it Help Me?**
  - 11/6; noon-1 p.m. From Psychology Today to the Harvard Business Review, mindfulness has been in the news a lot lately, but what exactly does it mean? Mindfulness practice develops awareness of your present thoughts and feelings to help you manage different situations. In this workshop, we’ll explore the science and philosophy behind mindfulness and learn its potential benefits. You’ll see how mindfulness can help you become more engaged and effective both at home and in the workplace.

- **Education in Philadelphia: School Information Session:** 11/9; noon. The Family Center encourages all parents and families to attend our annual school information session. This event is a vital opportunity to hear firsthand details about charter schools, the Head Start preschool program, private preschools and kindergarten transition into the School District of Philadelphia. Representatives from local schools will be available to answer your questions. This event is sponsored by Parents at Penn and the Family Center. Lunch will be provided.

- **Self-Care for the Caregiver:** 11/13; noon-1 p.m. This workshop is designed to assist caregivers with developing skills to better help their loved ones—and themselves—cope with the many stages of caregiving. Participants will learn some specific techniques to better care for loved ones and emphasize ways of coping with the personal and emotional challenges caregivers face.

**Healthy Living Workshops**

- **Healthy Living Workshops**
  - Get the tools you need to live a full year-round. From expert nutrition, stress reduction and weight loss advice to exercise and disease prevention strategies, we can help you kick-start your body and embrace a healthy lifestyle. These free workshops are sponsored by Human Resources.

  - **Consistent with the Affordable Care Act, Penn employees no longer need to pay for flu shots and seek reimbursement insurance companies. As such, there will be no charge for flu shots given on campus this year.**

  - **Be in the Know Biometric Screenings:** 11/3 -11/20; 9 a.m.-3 p.m. Start this year’s Be in the Know biometric screening and gain access to free and confidential biometric screening, which measures your:
    - Blood pressure
    - Blood sugar (glucose)
    - Non-fasting cholesterol (total and high density lipoprotein)

  - **Biometric screenings are conducted by AREU/FT Health Services, an experienced worksite health promotion company. These screenings should only take 20 minutes. On the spot, you’ll receive your results and learn what they mean from an AREU/FT health educator.**

  - **Visit our Be in the Know webpages at [www.hr.upenn.edu/beintheknow](http://www.hr.upenn.edu/beintheknow) to learn about the full campaign, including complete details regarding this year’s Core Activities (biometric screening and online health assessment) and Bonus Actions. Get started today and earn up to $180* and be entered into various drawings for exciting prizes.**

  - *Note: All Be in the Know incentives are less applicable payroll taxes.

  - **Gentle Yoga:** 11/6; 11/20; 10:30-11:30 a.m. Let your body reward itself with movement. Join us for this Gentle Yoga session and explore the natural movements of the body 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. As an added bonus, you’ll get a workout in the process. Mats and props will be provided.

- **Guided Meditation – Take a Breath and Relax:** 11/17; 11/24; noon-1 p.m. Practice mindful breathing that focuses your attention on the present moment with kindness, compassion and awareness. Self-massage and gentle mindful movements that promote relaxation and reduce stress may also be included in the workshop. No experience necessary. Sandra Herman, the instructor for the course, has 30 years of experience in the fields of social work and health education. She has a special interest and expertise in holistic approaches to stress reduction. Since 2007, she has conducted individual and group workshops and sessions in stress reduction and smoking cessation for Penn students. These sessions incorporate not only educational and behavioral counseling techniques, but also mind/body awareness practices, including meditation, reiki, guided imagery, self-massage and qigong.

  - Ms. Herman also maintains a private consulting practice with individuals and organizations, where she shares these varied methods for increasing calm and balance in facing life’s many challenges.

  - **Division of Human Resources**

**Knowledge@Wharton: Free ebook**

Wharton Digital Press is publishing a new free ebook series that collects the best of Knowledge@Wharton’s interviews that are called Knowledge@Wharton Conversations. The free ebooks in the series are Conversations on Success: 6 Thought Leaders Redefine What It Means to Succeed and Conversations on Leadership: 6 Leaders on What Drives Excellence.

To help launch the new series, Wharton Digital Press is offering Conversations on Success as a free download through October 29 in partnership with Amazon, Apple, Barnes & Noble and other ebook retailers. This free offer includes a foreword by Wharton professor Michael Useem and interviews with Wharton faculty, including Stewart Friedman, Adam Grant and G. Richard Shell, and bestselling author Malcolm Gladwell, NY Times Corner Office reporter Adam Bryant and Barnard College President Debra Spar.

**K@W Radio on XM 111**

The Wharton School powers business radio on Sirius XM 111, broadcasting in business and management knowledge for career success. It includes Knowledge@Wharton, along with CareerTalk and Measured Thoughts; see [https://businessradio.wharton.upenn.edu](https://businessradio.wharton.upenn.edu).

One show, Knowledge@Wharton, is a daily call-in business interview program on Sirius XM channel 111 broadcasting live from 10 a.m. to noon Monday-Friday. It goes behind the headlines with Wharton faculty and expert guests.

**ALMANAC October 27, 2015**

www.upenn.edu/almanac
Some Tricks for Traveling More Safely

Remember: Fall back, Spring forward! On Sunday, November 1 at 2 a.m., Daylight Saving Time comes to an end. This means we can all sleep an extra hour Sunday morning and still have breakfast at the usual time. It also means we lose an hour of daylight just around the time most of us are heading home from work or school. Penn’s Division of Public Safety (DPS) wants to remind you of the following tips on how to stay safe during your commute:

Public Transportation Safety Tips

Become familiar with the different bus and trolley routes and their schedules. SEPTA schedules and general information are available by visiting www.septa.org or calling (215) 580-7800.

If you travel underground, be aware of the emergency call boxes on the platform. These phones contact SEPTA Police. The phones operate much like the University’s Blue Light Phones. To operate the SEPTA Phone, push the button. A SEPTA operator will identify your transit stop and assist you immediately.

• Whenever possible, try to sit near the driver.
• In the subway station, stand back from the platform edge.
• Pay attention to your surroundings.
• Don’t become complacent while using your cell phone or other devices.
• Don’t fall asleep. Stay alert.
• Never display your money in a crowd.
• Keep your bag or purse close to you and in view.

Off-Peak Travel Tips

• When using subways, especially during off-peak hours, stand near the SEPTA call box.
• In case of an emergency, there is a cashier’s booth staffed during hours of operation.
• If possible, travel with a companion(s).
• Request a Penn Walking Escort by calling (215) 573-WALK (9255). The security officer will wait with you until you board the train, bus or trolley.

Blue Light Phones

• If you observe a potential safety hazard, would like a walking escort or require the Division of Public Safety’s assistance, you can use one of more than 500 Blue Light emergency phones on campus and in the surrounding community. Just pick up the receiver or press the button. For a map of emergency phone locations see: https://www.publicsafety.upenn.edu/about/security-technology/blue-light-ephones/

Safety Tips on the Street

• Do not display your smartphone when walking about. Keep it in your bag or pocket.
• Avoid using earphones when walking to ensure that you stay alert and aware of your surroundings.
• Stay in well-lit areas. Walk mid-point between curbs and buildings, away from alleys, entries and bushes. Stay near people.
• Avoid shortcuts through parks, vacant lots and other low-occupancy places.
• Carry only necessary credit cards and money. Avoid using outdoor ATMs (automated teller machines). Instead, look for banks that require entry into a lobby to use their ATM.
• If you must carry a purse or handbag, keep it close to your body. This will minimize the chances of theft. If your purse is taken, don’t fight. Turn it over and immediately call 911.
• Walk with someone whenever possible. Participate in buddy systems.
• Do not stop to give directions or other information to strangers. Never hitchhike.
• If you believe you are being followed, call 911. Be alert and confident—making good eye contact may discourage the follower. Cross the street, change directions or vary your pace. If someone follows you in a car, send a text message to your phone. You can then communicate directly via text.
• Keep your key out and ready before you reach your car or door.
• Have your key out and ready before you reach your car or door.
• Trust your instincts and use common sense.

Additional Services Available to you on Penn’s Campus

LUCY (Loop through University City)

LUCY is a shuttle operating Monday through Friday, from 6:10 a.m. until 7 p.m., between 30th Street Station and University City. Managed by the University City District (UCD) and operated by SEPTA, LUCY is a great way to ease your commute. Rides are free for holders of a valid PennCard. Schedule and route information is maintained by the UCD. For more information visit: www.universitycity.org/riding_lucy

Walking Escort

Available 24 hours a day, 365 days a year, from 30th to 43rd Streets and Market Street to Baltimore Avenue.

Escorts are also available from 10 a.m. until 3 a.m. from 30th to 50th Streets and Spring Garden Street to Woodland Avenue via the University’s partnership with the University City District Ambassador Program.

Riding Escort

Penn Transit Services: (215) 898-RIDE (7433), Monday-Sunday, 6 p.m.-3 a.m.; limited on-call service, 3 a.m.-7 a.m. Business Services’ Penn Transit offers various transportation services that you can use for getting around University City or simply getting to your car. For more information, visit www.upenn.edu/transportation

Penn Guardian

Penn Guardian is a free app that is available to all Penn community members. It was developed by the University’s safety partner, Rave Guardian, a service utilized on college campuses across the country.

Registering is easy—search “Rave Guardian” in the App Store for iOS devices or Google Play for Android devices. You will be prompted to enter your name, phone number and Penn email address, which provides access to the University’s customized interface. Calls from a registered phone will allow Penn Police to determine your cell phone’s GPS location, which can decrease response time. This information will only be available to Penn Police if you call the PennComm Operations Center (PennComm) directly, either through the app or at (215) 573-3333.

The app also allows users to create a Smart911 profile, in which medical conditions, medications, allergies and disabilities can be included. This information can also be viewed at other Smart911-enabled emergency response centers across the country should you need to call them.

If a call is made to PennComm, and you are unable to speak—perhaps because of an allergic reaction—a call taker will send a text message to your phone. You can then communicate directly via text.

The app includes other features, such as a safety timer, and provides a confidential way to submit a tip to Penn Police—with a photo, if necessary—through a text message.

For more information, please visit the Penn Guardian website at www.publicsafety.upenn.edu/penn guardian

Important Numbers

Penn Help Line: (215) 898-HELP (4357)
University of Pennsylvania Police: (215) 573-3333 or 511 from campus phone
Philadelphia Police: 911
SEPTA Police Hotline:
Emergency: (215) 580-8111
Non-Emergency: (215) 580-4487
Children’s Hospital of Philadelphia Security: (215) 590-5500
Philadelphia Poison Control Center: (215) 386-2100
National Poison Control Center: (800) 222-1222
Special Services: (215) 898-4481
Victim Support & Sensitive Crime Reporting (24/7): (215) 898-6600
Public Safety Headquarters is located at 4040 Chestnut Street

Halloween Safety

This is also a good time for Halloween safety tips for the children in your life:

• Encourage them to trick-or-treat in familiar neighborhoods.
• Don’t let children trick-or-treat alone; go with friends and/or family.
• Make sure they stay in well-lighted areas.
• Costumes should be highly visible; include white or reflective clothing.
• Have them carry a flashlight, glowstick or reflective bag.
• Make sure they watch out for cars.
• Be sure to inspect all treats before they are consumed.

Tips from Penn Vet to Keep Pets Safe on Halloween

Tips to keep pets healthy and out of the emergency room this Halloween:

• Keep Halloween candy out of your pet’s reach. Chocolate and other treats can be potentially harmful to animals. Tinfoil and cellophane candy wrappers can also be hazardous if swallowed.
• Don’t put costumes on your pets unless you know they enjoy it. If they do, make sure the costume doesn’t restrict your pet’s movement, vision, hearing or ability to breathe or bark. Adults should supervise pets in costume at all times.
• Keep pets away from lit pumpkins. Curious pets could be burned or start a fire if they knock the pumpkin over.
• Keep pets inside on Halloween to avoid pranks made by dog owners.
• If your pet is very social and you choose not to put him/her in a separate room, be sure your pet doesn’t dart out when you open the door. Just in case, make sure your pets are wearing current identification.
• Penn Vet’s Emergency Service is open 24 hours a day, seven days a week, 365 days a year. Call (215) 746-8770.
Update
October AT PENN

TALKS

29 Publishing for Early Career Faculty & Graduate Students; Brigitte Schull, Palgrave Macmillan; noon; Meyerson Conference Room, Van Pelt-Dietrich Library; register: www.phf.upenn.edu/events/publishing-oct29 (Open Dialogs on Open Access).

Child-beating and Trauma in Late Antiquity; Jonathan Conant, Brown University; 4:30 p.m.; rm. 402, Claudia Cohen Hall (Classical Studies).

Twyla Tharp at the Annenberg Center: October 30-November 1

Legendary choreographer Twyla Tharp celebrates 50 years of dance with this special engagement of new works opening with the vibrant Fanfare followed by Preludes and Fugues, a spirited piece set to Bach, and Towzie, a humorous work set to a raucous and jazzy score. Known for her beloved works for film, television and the Broadway stage, Ms. Tharp leads a meticulously rehearsed ensemble to bring her lively choreography to life with immaculate technique and pure joy. Performances will be October 30-November 1 at the Annenberg Center. For tickets, visit www.annenbergcenter.org/Almanac

The University of Pennsylvania Police Department
Community Crime Report

About the Crime Report: No Crimes Against Persons or Crimes Against Society were reported for October 12-18, 2015, although 11 Crimes Against Property (6 thefts, 2 frauds, 2 other offenses and 1 DUI) were reported. Full reports are available at: www.upenn.edu/almanac/volumes/v62/n11/creport.html —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 October 12-18, 2015. The University Police actively patrol from Market Street to Baltimore Avenue and from the Schuylkill River to 43rd Street 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.

18th District Report

Below are the Crimes Against Persons from the 18th District: 13 incidents with 9 arrests (1 aggravated assault, 5 assaults and 7 robberies) were reported between October 12-18, 2015 by the 18th District covering the Schuylkill River to 49th Street & Market Street to Woodland Avenue.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location</th>
<th>Offense</th>
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<tr>
<td>10/12/15</td>
<td>3:19 AM</td>
<td>42nd &amp; Market St</td>
<td>Robbery/Robbery/Arrest</td>
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<tr>
<td>10/12/15</td>
<td>10:26 PM</td>
<td>4726 Larchwood Ave</td>
<td>Robbery/Arrest</td>
</tr>
<tr>
<td>10/12/15</td>
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<td>10:26 PM</td>
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<tr>
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<td>12:40 PM</td>
<td>4000 Market St</td>
<td>Assault</td>
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<td>4:26 PM</td>
<td>200 S 47th St</td>
<td>Assault</td>
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<td>10/15/15</td>
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<td>4901 Chestnut St</td>
<td>Assault</td>
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<td>12:10 PM</td>
<td>3401 Civic Center Blvd</td>
<td>Assault/Assault/Arrest</td>
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<td>4806 Market St</td>
<td>Robbery/Assault/Arrest</td>
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<td>4800 Chestnut St</td>
<td>Assault/Assault/Arrest</td>
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<td>10/16/15</td>
<td>8:54 PM</td>
<td>4800 Chestnut St</td>
<td>Assault/Assault/Arrest</td>
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<tr>
<td>10/17/15</td>
<td>10:14 PM</td>
<td>4700 Pine St</td>
<td>Robbery</td>
</tr>
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</table>

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Sign up to receive email notification when a new issue is published each week and when we post breaking news between issues. Send an email to listserv@lists.upenn.edu with “subscribe e-almanac <your full names>” in the body of the message. —Ed.

AT PENN Deadlines

The November AT PENN calendar is online at http://www.upenn.edu/almanac. The deadline for the December AT PENN calendar is November 10. Info. is on the sponsoring department’s website; sponsors are in parentheses. For locations, call (215) 898-5000 or see www.facilities.upenn.edu

Penn’s Way 2016 Raffle Prizes

Week 4 (11/3 drawing)

Mid-Point Grand Prize Drawing

World Travel: Two round-trip tickets for anywhere in the 48 contiguous states (valued at $1,000)

Q: What contribution methods are available using the online pledge form?

A: Employees may contribute via payroll deduction, cash, check or credit card using the online pledge form. Please follow the instructions on the online confirmation page to ensure all contributions are properly processed.

Visit the Penn’s Way website for more information about what a gift can provide, pledge forms, a payroll deduction guide, an agency list and more frequently asked questions & answers: http://www.upenn.edu/pennsway/
Motivating Students with “Real Projects for Real Customers”

Christian Murphy

A colleague once asked me, “How do you motivate your students? How do you inspire them?” and I was disappointed with myself that I couldn’t come up with anything more insightful than “I have them do stuff that I think is cool and hope that it works out okay.”

Every so often, though, things do work out okay, and I come across something that really motivates my students to take their work seriously, put in a tremendous amount of effort and achieve more than they thought they could.

In my two Software Engineering courses—CIS 350 for undergraduates, and CIS 573 for graduates—students have the option of doing “real projects for real customers,” in which they engage in group projects to develop mobile apps for customers from outside the course. The customers—who are almost always part of the Penn community—provide the requirements and direction for the project, and then receive the code and supporting documentation at the end of the semester. In some cases, projects span across semesters, so that different groups of students work on them at different times.

Despite the organizational challenges of running these sorts of projects at scale, there are a number of benefits that make them worthwhile, and I have found that they go a long way in motivating the students to do great work.

First, even when a project is positioned as “solving a real-world problem,” students may feel that the output of their project (whether it’s a paper, a design, a model, a device, a piece of software, etc.) is simply going to be discarded at the end of the semester, and that no one really cares about its quality except for possibly the TA who will grade it. It is important that the students get the feeling that someone else does care about the quality of what they produce, and that it will potentially live on even after the term is over. By having the students work directly with a customer, the project ceases to be considered “a big homework assignment” and purely an academic exercise, but rather is seen as a professional engagement in which the students are delivering a product that needs to be of high quality. Accordingly, the students put in more effort because they know that what they produce is ultimately worth more than just a grade.

Second, students realize that what they produce may be distributed beyond the University setting to a potentially large number of users. Part of the appeal of working at companies like Microsoft, Facebook or Google is the thrill of knowing that potentially millions of people are using your software, but that sensation is hard to reproduce in a classroom setting. Although the apps that the students build in our courses are unlikely to be used by “millions” of users, of course, they are almost always intended for a larger audience than just the customer with whom the students interact. Thus, the students know that it is not only their customer who cares about the quality of what they produce, but that other people whom the students will not meet care about it, too. Given that the projects tend to be in domains like healthcare and education, the students know that their apps will be used to help medical patients, elementary school children, families, the homeless, other students, etc. and are motivated to put in extra effort in order to benefit people other than themselves.

Third, students feel the passion that the customer has for the subject matter, and that motivates them to help their customer be successful. In our group projects, we very specifically avoid the situation in which the customer hands the students a list of requirements and says, “build this,” and then the students say, “Okay, see you in 10 weeks!” Rather, the customer is engaged throughout the semester and is actively involved in weekly update meetings that are organized and run by members of the teaching staff.

This process methodology not only keeps the customer more involved — so that they are more likely to get what they wanted — but also has the side effect of further motivating the students: through these weekly face-to-face meetings, students feel the customer’s passion and are energized to help them reach their goals. Almost all of the customers are Penn faculty, staff and graduate students, from places as various as Penn Medicine, the School of Nursing, PennVet Working Dog Center, Student Health Services and the Netter Center for Community Partnerships. Because the customers are people who would not have reached this stage of their career if they were not passionate about what they do, the students are surely affected by hearing them talk about their work. Often the customers say things like, “I have this great idea for an app that will really help people, it’s just that I don’t know how to build it.” The students—even undergraduates who have only recently learned how to program—realize that they have the ability to help these domain experts see their apps come to life, and that is a very thrilling and rewarding experience that motivates them further.

Admittedly, when I first set out to have the students do these projects for real-world customers, I wasn’t necessarily thinking about how to motivate them: I just thought it would be something different from usual group projects and would give them something approximating a real-world experience. However, I must admit that there was one insight that I had at the time regarding motivation, and I have mostly observed it to be true: students are more afraid of disappointing their customer than they are of disappointing their instructor. This is perhaps speculative, but I might summarize the students’ mindset as such: “If I tell my instructor that I didn’t do my work or do a bad job of it, then I just get a bad grade; I can live with that. But if I tell my customer—someone who’s essentially a stranger—that I didn’t do something, or if I let them down, then I might be embarrassed and this person may think less of me; I wouldn’t like that.”

This may also be related to the manner in which students interact with the customer and with the instructor. With the instructor, it is very easy to simply send an email saying, “I didn’t have time to do it,” or just not do the work and let the instructor figure it out. After all, in these courses there may be over 100 students, and students may feel safer in their anonymity. But because students meet with the customer in person (students usually work in groups of four on these projects), there is social cost to showing up for the meeting with nothing to say or admitting that the work they did is not very good. I wouldn’t say that avoiding embarrassment is the students’ primary motivation, of course, and the above-mentioned reasons certainly provide enough “carrot” so that “stick” may not be necessary, but it is something that combined with the other reasons has led the students to achieve truly remarkable work.

I am certainly not the only one at Penn who does “real projects for real customers,” and I suspect that such an approach would be effective not just in engineering or the professional schools, but in any course in which students engage in group projects. I encourage you to try having your students collaborate with a “customer” within the University. You will find that the students are motivated to work harder, act more professionally and accomplish something great.

Christian Murphy is an associate professor of practice in the department of computer & information science in the School of Engineering and Applied Science and is director of the Master of Computer & Information Technology program.

This essay continues the series that began in the fall of 1994 as the joint creation of the College of Arts and Sciences and the Lindback Society for Distinguished Teaching.

See www.upenn.edu/almanac/teach/teachall.html for the previous essays.

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