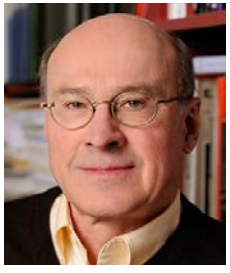
# The Academy at Johns Hopkins, Homewood Campus

## 2024/2025 Annual Report

JOHNS HOPKINS UNIVERSITY

**Susan Forscer Weiss, PhD**
Co-Chair



**Darrell Strobel, PhD**
Co-Chair

# Message from Darrell Strobel and Susan Weiss

We are proud to share highlights from this year's activities of the Academy at Johns Hopkins, Homewood Campus. While the Milton S. Eisenhower Library undergoes renovation, we've been graciously provided space in the Johns Hopkins Club, now serving as the Library Annex. Our new office, located on the Garden Parlors level, has been beautifully renovated while preserving the building's historic charm. Steps away, a newly updated conference room has become central to our weekly gatherings.

Throughout this transition, our Wednesday meetings continued without interruption. We meet weekly, featuring formal lectures one or two times a month, book discussions monthly, and informal gatherings in between. Meetings follow a hybrid format, with some members joining via Zoom and others attending in person to enjoy lunch and conversation.

Academy members remain active in academic life—researching, publishing, and participating in global scholarly conferences. Founded in 2012 with members from the Krieger School of Arts and Sciences, the Academy is now managed centrally by the Provost's Office, allowing for expanded programming and broader membership. This year, we welcomed new members from the Whiting School of Engineering, Carey Business School, and the School of Advanced International Studies, joining colleagues from Krieger and the Peabody Institute.

Our partnership with the East Baltimore Academy also continues to thrive. In addition to attending each other's presentations, we shared joint events, including a scenic train ride in New Freedom, Pennsylvania, and an end-of-year celebration at the Club. These gatherings help foster stronger connections across campuses and disciplines.

We extend our sincere thanks to two individuals essential to the Academy's success. Jennifer van Beek, our Academy Manager, continues to lead both Homewood and East Baltimore with vision and dedication. And our Senior Program Coordinator, Kofi Anning, has been instrumental in supporting all aspects of our operations.

Finally, we thank our invited speakers, dedicated members, and especially the Deans and the Provost for their ongoing support. Their recognition of the value of our retired faculty—and their continued wisdom, passion, and commitment to Johns Hopkins—remains the foundation of the Academy's success.

Sincerely,

Darrell Strobel, PhD, Co-Chair
Susan Forscher Weiss, PhD, Co-Chair

# Homewood Academy Mission

Honoring our retired faculty form the Homewood academy schools for their exceptional wisdom, intelligence and experience, the Academy actively engages retired faculty in the Johns Hopkins community in ways that benefit our students, patients, disciplines, and institution, and that support their ongoing professional fulfillment.

The Academy at Johns Hopkins, Homewood Campus is an institute for advanced study, where retired professors from the Krieger School of Arts and Sciences, Carey Business School, School of Advanced International Studies, School of Education, Whiting School of Engineering, and Peabody Institute can pursue research opportunities, conduct, and attend academic seminars, and explore other opportunities for continued scholarship.

# Speakers and Talks

## July 2024

**July 31**
Guest speaker: Ralph Etienne-Cummings, Former Vice Provost of Faculty Affairs

## September 2024

**September 25**
Reflections of a Career in Academics and the Arts by Daniel Weiss, Professor of Humanities

## October 2024

**October 16**
Authoring Textbooks presented by Michael Johnson

## December 2024

**December 11**
Are You Feeling Well presented by Stephen Oppenheimer

**December 18**
Playing Dice with the Universe presented by Stephen Nichols

## January 2025

**January 29**
Space Telescope Science Institute tour

## February 2025

**February 5**
University Benefits presented by Tamara Simmons Smith, Benefits & Worklife

**February 12**
Knowing Hands presented by Marta Hanson

## March 2025

**March 26**
Author Bruce Parrott presents Part II on his book *Power and Knowledge in Context*

## April 2025

**April 2**
Inventing Resilient Networked Systems that Make a Difference presented by Yair Amir

**April 9**
Author Richard Kagan discussed his book *The Inquisition's Inquisitor, Henry Charles Lea of Philadelphia*

**April 16**
An Ecology of Nonhuman Modes of Protection presented by William Connolly

**April 30**
Alex Triantis, Dean, Carey Business School discusses the business school, immigration policies and enrollment challenges

## May 2025

**May 7**
Magmatism in the McMurdo Dry Valleys, Antarctica presented by Bruce Marsh

**May 14**
Ed Schlesinger, Dean of the Whiting School of Engineering, discussed Artificial Intelligence

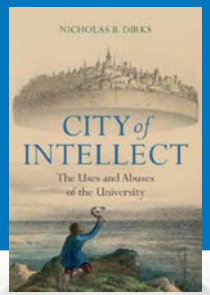
## June 2025

**June 11**
Albrecht Dürer's Musical Interests presented by Susan Weiss

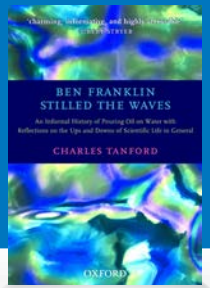
**June 25**
End of year party

# 2024/2025 Academy Book Readings

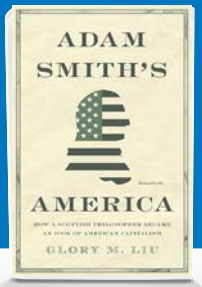
**July 24, 2024**
*City of Intellect* by Nicholas Dirks led by Michael Johnson



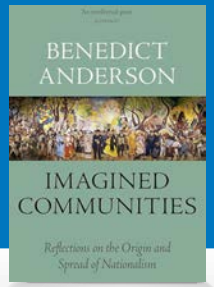

**August 28, 2024**
*Ben Franklin Stilled the Waves* led by George Rose



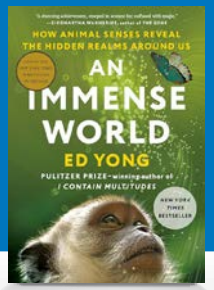

**September 11, 2024**
led by Glory Liu, author and Michael Johnson



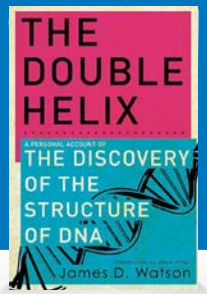

**October 23, 204**
*Imagined Communities: Reflections on the Origin and Spread of Nationalism* led by Franklin Knight



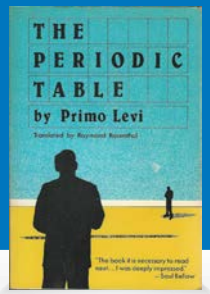

**November 13, 2024**
*An Immense World* led by Michael Johnson



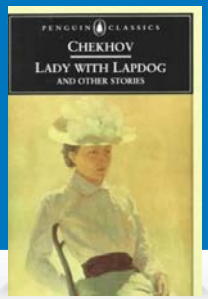

**January 15, 2025**
*The Double Helix* by James Watson led by George Rose



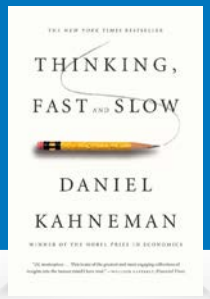

**January 22, 2025**
*The Periodic Table* by Primo Levi led by Jean McGarry



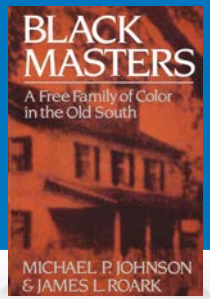

**February 19, 2025**
*Lady with a Lapdog, and A Boring Story* by Chekhov led by Jean McGarry



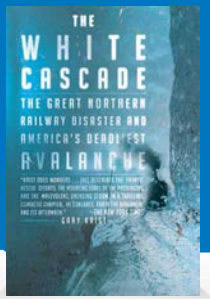

**March 19, 2025**
*Thinking, Fast and Slow* by Daniel Kahneman led by George Rose




**May 28, 2025**
*Black Masters: A Free Family of Color in the Old South* led by author Michael Johnson




**June 18, 2025**
*The White Cascade: The Great Northern Railway Disaster* by Gary Krist led by Franklin Knight



# Homewood Academy Monograph Series

## Report of the Committee – 2024/2025

In the spring of 2024, the Monograph Series Committee was established with five members – Jean McGarry (Chair), Michael Johnson, Franklin Knight, Bruce Marsh, and Stephen Nichols. The committee drafted a concept brief titled ***A Prospectus for a Homewood Academy Book Imprint***. The envisioned series comprises short-format monographs (6"x 4") authored by Academy members. Written with minimal footnotes and scholarly apparatus—aside from a brief bibliography—the monographs are intended for a literate general audience and reflect the authors' career-long engagement with their subjects.

The following statement captures the mission of the series:

> ***Bringing meaningful knowledge to readers everywhere***. Academy books offer accessible reflections on topics drawn from the rich range of subjects taught in Arts and Sciences at Johns Hopkins University. These monographs distill expertise acquired by a lifetime of research, critical thinking, and teaching by distinguished authors.

The proposal was submitted to Christopher Celenza, Dean of the Krieger School of Arts and Sciences, who expressed strong enthusiasm for the initiative. Dean Celenza generously provided funding to support the success of the series in its early years.

After exploring a few options (including Johns Hopkins University Press representatives, who felt the imprint's mission not compatible with the press's mandate), the committee then identified a publisher. Franklin Knight, through a longstanding professional relationship, introduced the committee to Ian Randle of Ian Randle Books (I.R. Books), a Jamaican publisher best known for works focused on the Caribbean. Mr. Randle expressed strong interest in expanding into new thematic areas and audiences, and responded enthusiastically to the proposed series.

In February 2025, Mr. Randle traveled from Jamaica to Baltimore to meet with the committee and formalize a publishing agreement. The meeting proved highly productive. Mr. Randle endorsed the committee's role in vetting submissions and guiding revisions as needed.

As of summer 2025, the first two monographs are in press, with publication expected in December, 2025.

- ***A Guide to the History and Connoisseurship of Rum***, by Franklin W. Knight
- ***Herself and Others: a life story***, by Jean McGarry

The committee is pleased with the successful launch of the series and remains optimistic that additional excellent manuscripts will follow.

Respectfully Submitted,

Jean McGarry, Chair
Michael Johnson  Bruce Marsh
Franklin Knight  Stephen Nichols

# 2024/2025 Academy Member Accomplishments

## Yair Amir

Professor Emeritus, Computer Science

This year marked a significant transition with the closure of the Distributed Systems and Networks (DSN) Lab after nearly 30 years of leadership, and the donation of all equipment to a new faculty member. He is also adjusting to his new role as Professor Emeritus and engaging with the Hopkins Academy.

He released three open-source software packages and published three papers. His PhD student, Sahiti Bommareddy, successfully completed her dissertation.

Among his honors, a specialized global cloud system he led has now operated for 14 consecutive years without a single second of downtime. Additionally, one of his papers received a Best Paper Award at a conference.

He completed six years of service on the National Academies Forum for Cyber Resilience and concluded his role as Director of the DSN Lab within the School of Engineering.

He continues to be involved with the two companies he co-founded: Spread Concepts LLC (since 2000) and LTN Global Communications (since 2008).

## Karen Beemon

Professor Emerita, Biology

She continues to investigate the role of the long non-coding RNA (called TAPAS) that her lab discovered in the promoter region of the human and chicken TERT genes. She is also studying the aberrant splicing and nuclear retention of hTERT pre-mRNA.

In addition, she serves as Chair of the Retrovirology Prize Selection Committee.

She attended the Cold Spring Harbor Meeting on Retroviruses in May 2024. She also attended a celebration of Tony Hunter's 50 years at the Salk on February 21, 2025. She was Tony's first postdoc (1976–1981) and brought retroviruses with oncogenes to the lab. Tony discovered that the RSV **src** oncogene was a tyrosine kinase—a discovery that led to the development of 86 drugs for human cancers.

## Barry Blumenfeld

Professor Emeritus, Physics and Astronomy

He is collaborating on the CMS experiment at CERN in Geneva, Switzerland. He serves as the Frontier Coordinator for the CMS experiment. He also leads the Squid Operations Group of the Worldwide LHC Computing Grid. This role has expanded from the original Frontier operations to include CVMFS, which is now the standard for software distribution across the scientific community well beyond the LHC.

## 2024/2025 Academy Member Accomplishments

### Grace Brush

Professor Emerita, Environmental Health and Engineering

Her work focused primarily on research and writing for her forthcoming book on the paleoecological history of the Chesapeake ecosystem. She completed four chapters that have been peer-reviewed and prepared for submission to an ecological journal, with an additional six chapters in rough draft form.

She was invited to give two lectures: “A History of Land-Water Interactions” at the Estuary Urbanism Symposium hosted by the Morgan State University Center for Architecture and Design (May 10, 2024), and a lecture on ecological disasters for the “Disaster Class” at the Johns Hopkins Bloomberg School of Public Health (November 6, 2024).

As part of her research outreach, she provided charcoal and carbon-14 data from sediment cores across various Mid-Atlantic sites—including Indian Creek in Anacostia, the Magothy River, Monie Bay, the Nanticoke, and Cypress Creek—to Gabriel Calahan of The Nature Conservancy for use in his forthcoming book on the history of fire in the Mid-Atlantic United States.

### Betsy Bryan

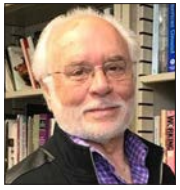
Professor Emerita, Near Eastern Studies

Her research focus in 2024–2025 continues to center on the publication of twenty years of excavation at the Temple of the Goddess Mut. Sadly, colleagues from the Brooklyn Museum who also worked in that precinct passed away in 2024 and 2025, which has somewhat hindered coordination efforts. Nonetheless, significant progress has been made on the pottery volume, although work on it was temporarily set aside to meet deadlines for several article publications. Work on the pottery volume is scheduled to resume in the fall.

She continues to teach graduate-level Egyptian language courses, including a class in Old Egyptian this past fall, which enrolled two students and had two auditors. Her current priority is to publish as much of the Mut Temple material as possible, opting for shorter, focused studies rather than a single large volume. She is also advising two graduate students, Maarten Praet and Tori Finlayson, both of whom have made substantial progress on their theses.

Her work remains supported by annual funding from the Fisher Foundation to aid the publication process. Additionally, she has planned a conference in collaboration with Dr. Zahi Hawass, to coincide with the opening of the Tutankhamun Galleries at the new Grand Egyptian Museum in Giza. The conference will bring together specialists from the U.S., Europe, Asia, and Egypt to present on eight topics related to the reign of Tutankhamun.

## 2024/2025 Academy Member Accomplishments



### William Connolly

Krieger-Eisenhower Professor Emeritus,
Political Science

He published the book Stormy Weather: Pagan Cosmologies, Christian Times, Climate Wreckage Fordham, 2024. He gave a talk to the Academy on Ecology. And he gave a talk at Bauhaus University in Weimar, Germany, on "An Ecology of Nonhuman Modes of Production."

### Paul Dagdigian

Professor Emeritus, Chemistry

His work in recent years has centered on the theoretical and computational study of collisions between small, astrophysically relevant molecules and the hydrogen molecule—the most abundant molecule in the interstellar medium—as well as water, which is abundant in comets. This research has involved calculating the potential energy surface of interaction between the two molecules and then determining the rates of collisional transfer between rotational levels of the molecule of interest. These rate coefficients are essential for interpreting observed spectroscopic intensities to derive molecular abundances and estimate the physical conditions in the medium.

For collisions involving the hydrogen molecule, he computes rate coefficients using rigorous quantum close-coupling calculations, based on a potential energy surface for each system derived through quantum chemistry methods. His most recent prior project focused on collisions of the protonated carbon dioxide ion ($HOCO^+$) with $H_2$. More recently, he has become interested in collisions involving water, the most abundant species in the gas surrounding comets. Specifically, he is investigating $H_2O$–$H_2O$ collisions. In this case, rigorous scattering calculations are not computationally feasible, so he is exploring the use of approximate quantum scattering methods to model water–water collisions.

### Toby Ditz

Professor Emerita, History

In 2024, she wrote a featured book review for the ***William & Mary Quarterly*** on the theme of the "founding fathers" and masculinity, which she greatly enjoyed. Otherwise, the overall pattern of her activities has remained much the same as the previous year. In addition to attending lectures at the Academy, she spent much of 2024 and the spring of 2025 doing advocacy work on behalf of local and statewide reform legislation.

Her work for the organizations she is affiliated with—chiefly Jews United for Justice and the Coalition for Justice, Safety and Jobs—includes public education, drafting public presentations, and delivering testimony before the Baltimore City Council and the state legislature.

Highlights of the past 18 months include a successful citywide campaign to defeat City Charter initiatives led by David Smith that would have slashed property taxes and reduced the size of the City Council, as well as an ongoing campaign to ensure that the City and its 14 wealthiest tax-exempt universities and hospitals—including Johns Hopkins—negotiate a fairer, more transparent PILOT (payment in lieu of taxes) agreement in 2026.

## 2024/2025 Academy Member Accomplishments

### Mark Gersovitz

Professor Emeritus, Economics

He completed a first draft, in collaboration with Norma Kriger, of a monograph titled ***Political Violence and the Foreign Investor: Dangers and Strategies***, which is currently under consideration by Cambridge University Press. The monograph complements his earlier, widely recognized research on other elements of so-called political risk, including expropriation and repudiation. While this work addresses many classic and enduring concerns, it is also especially timely given current global debates over access to minerals, including rare earth elements.

### Richard Conn Henry

Research Professor, Physics and Astronomy, and Applied Physics Laboratory

This has been a wonderfully productive year for Academy Professor Richard Conn Henry. He co-authored a major paper on the cosmic ultraviolet background radiation with former JHU scientist Professor Jayant Murthy. He also published his interpretation of those observations in the journal ***Universe***, presenting the discovery that the so-called dark matter in the universe is not dark at all—but instead glows in the extreme ultraviolet.

If this finding holds up—and he expects that it will—it could be one of the most significant discoveries of the century.

### Michael Johnson

Professor Emeritus, History

Along with continuing research, writing, and publication in U. S. history, he has been active in organizing Academy discussions of books, often with their authors.

### Richard Kagan

Arthur O. Lovejoy Professor Emeritus, History

His activities over the past two years have centered on three main topics.

The first involves presenting various lectures and seminars related to the publication of his most recent book, ***The Inquisition's Inquisitor: Henry C. Lea of Philadelphia***.

The second focuses on the history of the study of Hispanism—which roughly translates to the study of both Spanish and Spanish American history, literature, and culture—in the United States. In addition to curating and hosting an exhibition on this subject in Washington, D.C., during the fall of 2024, he has also been invited to present several lectures and participate in various roundtables centered on this theme.

Thirdly, in collaboration with the Queen Sofía Spanish Institute in New York, he has been involved in organizing several symposia celebrating Spain's 250-year relationship with the United States.

As for professional service, he serves on the Council and various committees of the American Philosophical Society.

## 2024/2025 Academy Member Accomplishments

### Robert Kargon

Willis K. Shepard Professor Emeritus, Political Science

He was awarded the AGHI Fellowship for 2025–26 and continued research on the book project ***Before Silicon Valley*** with co-author A. Molella, conducting work at the Library of Congress and Duke University Library. He is also revising an article for publication on Robert E. Lee's presidency of Washington College from 1865 to 1870. He served as a referee for articles submitted to the journals ***Planning Perspectives*** and ***Technology and Culture***, as well as for a book manuscript submitted to Worcester Polytechnic Press.

### Sharon Kingsland

Professor Emerita, History of Science and Technology

Her scholarly work has focused on two main projects.

The first was a study of how scientific claims about "plant intelligence" and "plant consciousness" have drawn on a vast range of historical sources, but have often misinterpreted and misrepresented those sources to support the erroneous claim that the idea of plant intelligence has long-standing backing from eminent past scientists. Her analysis involved revisiting these historical sources to reveal their original wording, meaning, and context, and to demonstrate how the literature on plant intelligence repeatedly misuses them. A second aim was to refute arguments that past scientific criticisms of the Indian scientist J.C. Bose—who believed in plant sentience and consciousness—were motivated solely by racism and jealousy. Instead, she argued that those critiques had a legitimate scientific basis when viewed in their historical context and, in fact, resemble modern scientific critiques of plant intelligence. This study was conducted in collaboration with plant physiologist Lincoln Taiz. Their published analysis was praised by many plant scientists, though it also provoked a strong backlash from proponents of plant "intelligence." However, the rebuttals failed to address—let alone answer—the core points of their critique.

The second project is an analysis of a long-standing debate on historical contingency (or historical accidents) among ecologists studying ecological communities and ecosystems since the early twentieth century. The debate over the role of history in the formation of natural communities raises fundamental questions about the nature of ecological science—whether it can make predictions, and if so, what kind. An alternative view has been to characterize ecology as primarily descriptive, or "natural history," an approach that does not prioritize prediction as a scientific goal. She analyzes the shifting terms of this debate, focusing on English-language ecology from the early days of the discipline through the early twenty-first century.

## 2024/2025 Academy Member Accomplishments

### Franklin Knight

Leonard & Helen R. Stulman Professor of History Emeritus, History

In addition to participating actively in the weekly meetings of the Academy, he completed and submitted a manuscript titled ***The History and Connoisseurship of Rum*** to Ian Randle Publishers, as part of the series initiated by the Academy.

He gave a series of lectures for the Ponant/Smithsonian Eastern Caribbean Cruise in January 2024, presented the keynote address to the Asociación de Historiadores de América Latina y el Caribe (ADHILAC) at their convention in June 2024 in Curaçao, and delivered a lecture on "Alcohol and Society" to the JHU Osher Society on March 27, 2025.

In January 2025, the American Historical Association awarded him the 2024 Scholarly Distinction Award.

### Stuart W. Leslie

Professor Emeritus, History of Science and Technology, and History of Medicine

Most of his research and writing has focused on healthcare in the Global South, including recent articles on rural healthcare in India and Bangladesh, as well as hospital design in Sub-Saharan Africa. He is currently working on an edited volume, ***Spaces of Health and Healing in Africa***, for Bloomsbury Press in collaboration with Ola Uduku, dean of the School of Architecture at the University of Liverpool. He has also written about the contribution of South Asian physicians to the National Health Service during the 1960s and 1970s. Last fall, he taught a First-Year Seminar on the global history of the hospital.

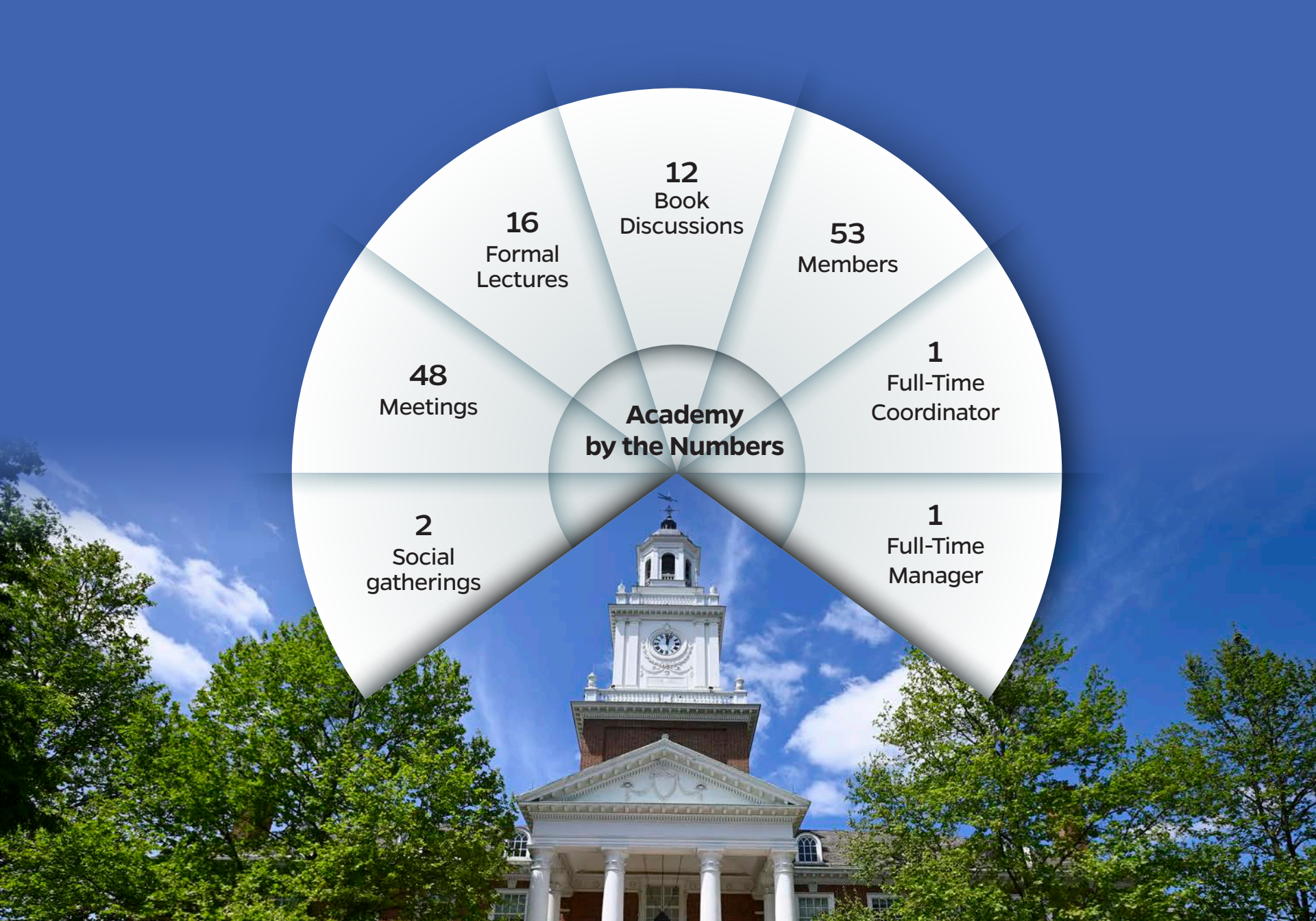
He continues his studies of the Southern California aerospace industry, including a recent piece on the history and environmental impact of the Santa Susana Field Laboratory north of Los Angeles, where the U.S. Air Force conducted thousands of rocket engine tests, resulting in contaminated groundwater and high rates of cancer among workers and local residents. As part of this work, he is editing a special volume of ***Historical Studies in the Natural Sciences*** on proving grounds in the Western U.S.

In July, the Society for the History of Technology awarded him its Leonardo da Vinci Medal. The Leonardo da Vinci Medal is the highest recognition from the Society for the History of Technology, presented to an individual who has made an outstanding contribution to the history of technology through research, teaching, publications, service to the Society, and other activities. His former graduate students also organized a Festschrift to be published this fall by Routledge titled ***Space of Inquiry: Modern Making Science and Technology in the World***.

### Ruth Leys

Professor Emerita, Comparative Thought and Literature

She published a book titled ***Anatomy of a Train Wreck: The Rise and Fall of Priming Research***, published by the University of Chicago Press.


12
Book
Discussions
16
Formal
Lectures
53
Members
48
Meetings
Academy
by the Numbers
1
Full-Time
Coordinator
2
Social
gatherings
1
Full-Time
Manager

## 2024/2025 Academy Member Accomplishments

### Jean McGarry

Elliott Coleman Professor Emerita,
The Writing Seminars

Her year was divided among several pursuits: writing new short stories and a novella, as well as studying the art, life, and letters of Vincent van Gogh in preparation for composing a long essay on his work. She also read all of Svetlana Alpers's remarkable volumes on art history and is now reading the art commentary and letters of the French poet Charles Baudelaire.

### Stephen Nichols

James M. Beall Professor Emeritus of French and Humanities

During the 2023–24 academic year, he held an Alexander Grass Humanities Institute Fellowship, during which he collaborated with Frau-Prof. Dr. Claudia Olk (Ludwig-Maximilian-Universität, Munich) on the origins of the Golden Age myth in Archaic Greek philosophy. Their co-edited volume, ***Myths of the Golden Age in European Culture***, was published by Routledge in January 2025.

As part of the fellowship, he led a weekly non-credit seminar on reading medieval manuscripts for graduate students, primarily from the History Department.

He continued to serve as founding editor of ***Digital Philology: A Journal of Medieval Culture*** (JHU Press and Project Muse), advising the outgoing editor and participating in the national search for successors.

In his role as editor of the ***Medieval Interventions*** book series (Peter Lang Verlag), he solicited and reviewed manuscripts.

As a member of the Homewood Academy publishing committee, he helped define the mission, assisted in selecting a publisher, reviewed the first two submissions, and recommended the publication of Jean McGarry's ***Herself and Others***. He also presented a paper for the Academy on December 18, 2024, titled "Playing Dice with the Universe: on Hesiod's ***Theogony***."

On May 12, 2025, he gave a seminar at NYU for graduate students studying ***Le Roman de la Rose***, titled "Remaking the ***Roman de la Rose*** in the Sixteenth Century."

He remains actively engaged with two monograph projects: ***The Magic of Manuscripts: Reading Medieval Romance in the Raw*** and ***The Weight of My Ass: François Villon's Inferno***.

His public-facing activities include leading ***The Baltimore Bookies***, a men's book club composed of prominent Baltimore residents

### Stephen Oppenheimer

Founding Director of Stroke Program and
Director of Neurocardiology Laboratory

He has been a published author for several years and has contributed stories to the annual ***Bay to Ocean Journal***, among other publications. He has published two books in the past year and is currently preparing a third.

He is also peripherally involved in research on the effects of selenium deficiency in horses in Ancient China and its subsequent impact on the agriculturalists of the Middle Kingdom compared to the pastoralists of the Steppe.

## Maria Portuondo

Professor Emerita, History of Science and Technology

She continued actively advising two doctoral students through the process of writing their dissertations, as well as mentoring former students and advisees. Several journals and academic presses have kept her busy refereeing articles and manuscripts, while peer universities seek her advice on promotions and related matters.

## Brenda Rapp

Research Professor, Cognitive Science

Her research focuses on understanding the cognitive and neural bases of written word processing and learning, using behavioral and neuroimaging methods across various populations, including neurologically healthy adults and children, individuals with developmental dyslexia, and adults with post-stroke and neurodegenerative language disorders.
Ongoing projects include:

1. Research on developmental dysgraphia in collaboration with Dr. M. McCloskey (Department of Cognitive Science);
2. Collaborative work with Dr. K. Tsapkini (Neurology, School of Medicine) aimed at identifying the neural mechanisms underlying the benefits of neuromodulation (tDCS) as an adjunct to language therapy in neurodegenerative disease;
3. Joint research with Dr. M. Bedny (Psychological and Brain Sciences, JHU) on the cognitive and neural bases of braille reading;
4. A collaboration with colleagues from Nanyang Technological University, Singapore, investigating the neural underpinnings of reading and spelling in biscriptal individuals;
5. Ongoing work with Dr. Robert Wiley at UNC Greensboro and Dr. Craig Stark at the University of California, Irvine, exploring the cognitive and neural bases of new word learning in aging.

## George Rose

Krieger-Eisenhower Professor Emeritus, Biophysics

The protein folding problem was first articulated in the 1930s, and to this day, a mechanistic understanding of the folding reaction remains a challenge—perhaps the most significant unsolved problem at the chemistry-biology interface. For proteins, function follows form; that is, the three-dimensional structure of the protein is responsible for its biological function. Remarkably, proteins can self-assemble spontaneously and reversibly into their unique native three-dimensional structure under suitable physiological conditions. Here, “spontaneous” means that no external energy source such as ATP hydrolysis is required. This chemistry was established about 60 years ago by Anfinsen and Haber, who showed that purified ribonuclease can self-assemble

spontaneously in salty water. Many subsequent experiments with other proteins confirmed the generality of this finding. Successful self-assembly of purified ribonuclease—free of cellular components—proved that the information needed to determine a simple protein's native state is encoded solely within its amino acid sequence. For such proteins, the fold is governed by physical chemistry, not cell biology.

Lately, he has been questioning the conventional interpretation of protein folding. According to this interpretation, developed over many decades, a protein population can visit a vast number of conformations under unfolding conditions, but a single dominant native population emerges under folding conditions. Accordingly, folding comes with a substantial loss of conformational entropy. How is this price paid? The conventional answer is that favorable interactions between and among the side chains compensate for entropy loss, and moreover, these interactions are responsible for the structural particulars of the native conformation. Challenging this view, he proposes that high-energy (i.e., unfavorable) excluding interactions substantially winnow the accessible population under physicochemical conditions that favor folding. Both steric clashes and unsatisfied hydrogen bond donors and acceptors are classified as excluding interactions—so called because conformers with such disfavored interactions are largely excluded from the thermodynamic population. Both excluding interactions and solvent factors that induce compactness are somewhat nonspecific, yet together they promote substantial chain organization. Moreover, proteins are built on a backbone scaffold consisting of α-helices and strands of β-sheet, where typically the number of hydrogen bond donors and acceptors is exactly balanced. These repetitive secondary structural elements are the only two conformers that can be both completely hydrogen-bond satisfied and extended indefinitely without encountering steric clashes. Consequently, the number of fundamental folds is limited to no more than about 10,000 for a protein domain. Once excluding interactions are taken into account, the issue of "frustration" is largely eliminated and the Levinthal paradox is resolved. In a nutshell, it is likely that hydrogen-bond satisfaction represents a largely underappreciated parameter in protein folding models.

## Mary Jo Salter

Professor Emerita, The Writing Seminars

In 2024, she completed work on ***The Best American Poetry 2024*** (Scribner), for which she served as Guest Editor. For that book, she wrote an introduction on the state of poetry today, which was excerpted in LitHub just before the book's publication in September. She traveled to England to give a poetry reading; to France, where she wrote and later published poems set in Avignon; and to Italy, where she researched a long poem about the paintings of Piero della Francesca. All of this work contributed toward finishing ***Cameo Appearance***, her tenth volume of poems, scheduled for publication by Knopf in 2026. Her long-term projects included research for a long essay on the work of James Merrill, planned for an issue of ***Twentieth Century Literature*** devoted entirely to Merrill.

## 2024/2025 Academy Member Accomplishments

### Erica Schoenberger

Professor Emerita, Environmental Health and Engineering

One of the features of becoming emerita is that many of the academic colleagues and friends she grew up with are also retiring. This year included two from her time in graduate school: Flavia Martinelli, Professor Emerita in the Department of Architecture and Territory at the Università degli Studi Mediterranea di Reggio Calabria, and Meric Gertler, who stepped down as President of the University of Toronto and returned to the Department of Geography and Planning at that institution.

She had not foreseen the incredible burden of work that these retirements would occasion. In graduate school, they were all working on fairly closely connected topics; since then, they have diverged considerably. Writing a paper in their honor that truly reflects their work over the last forty years required an astonishing amount of research—reading all of their papers and, in order to situate them intellectually, reading papers by others in their part of the discipline. It was extremely interesting but also a major time sink that took her away from the book she has been working on for the last few years.

In the acknowledgments of that book, she plans to write, “Many thanks to Flavia Martinelli and Meric Gertler, without whose intellectual and moral support this book would have been finished a year earlier.”

### Alan Shapiro

W.H. Collins Vickers Professor of Archaeology, Emeritus, Classics

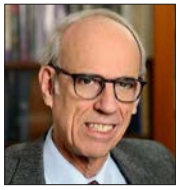
He has continued his research and publications on Greek art and archaeology of the Archaic and Classical periods. This work has included extended periods of research in the library of the American School of Classical Studies at Athens, as well as visits to collections of classical antiquities in Germany, Austria, France, Italy, Greece, Spain, and the United States. He has participated in an international conference on Greek vases in Munich and lectured at various universities in Germany, Austria, Spain, and Portugal. At home, he is contributing to the planning and cataloguing of a major international loan exhibition at the Metropolitan Museum of Art, scheduled to open in December 2026.

### Bernard Shiffman

Professor Emeritus, Mathematics

He published a survey article titled “Stochastic Kähler Geometry: From Random Zeros to Random Metrics,” co-authored with Steve Zelditch, who tragically passed away in 2022 as they began work on the piece. The article summarizes recent results on the statistics of solutions to random equations defined on complex manifolds—geometric shapes described using multiple complex parameters. He also co-edited a forthcoming volume on geometric analysis for the ***Contemporary Mathematics*** series of the American Mathematical Society. In addition to continuing his role as Associate Editor of the ***American Journal of Mathematics***, he refereed papers for the ***Indiana University Mathematics Journal*** and ***Advances in Mathematics***.

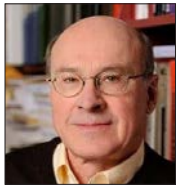
## 2024/2025 Academy Member Accomplishments



### Harris Silverstone

Professor Emeritus, Chemistry

He is applying his series-convergence-acceleration method, "Educated Match," to the calculation of quantum-mechanical wave functions for molecules. In September 2024, he presented a paper entitled "A Generalization of Padé Approximants with Application to Molecular Electronic Structure: Educated Match" at the International Conference on Molecular Electronic Structure, held September 21–25, 2024, in Pescara, Italy.



### Darrell Strobel

Research Professor, Earth and Planetary Sciences

He continued his research on the Galilean satellites of Jupiter (Io, Europa, Ganymede, and Callisto), utilizing recent data from the James Webb Space Telescope (JWST) and the Hubble Space Telescope (HST). He also remains engaged in a funded HST study on Uranus' upper atmosphere and is hopeful for final data acquisition.

His recent publications include two journal articles: one in ***Geophysical Research Letters*** on ion precipitation at Io's poles, and another in ***Nature Astronomy*** on oxygen production from Europa's water-ice surface. He also co-authored a forthcoming book chapter, ***Saturn's Thermosphere: A Post-Cassini Perspective***, in ***Cassini at Saturn: The Grand Finale*** (Cambridge University Press, 2025).

Strobel gave an invited talk at the 4th Outer Planet Moon–Magnetosphere Interaction Workshop in Cologne, Germany, in April 2025, addressing mass transfer processes between Io and the Io Plasma Torus.

In the area of mentorship, he advised Benedict Van Den Bussche, a master's student at the University of Cambridge, on graduate applications, and continued supervising Ph.D. students Stefan Duling and Anne-Cathrine Dott at the University of Cologne.

His professional service included writing letters of support for colleagues nominated for awards and honors.

### Winston Tabb

Former Sheridan Dean of University Libraries and Museums

He introduced the annual lectures and lecturers for the American Trust for the British Library. Professionally, he serves as a trustee of Simmons University and as a board member for both the American Library in Paris and the American Trust for the British Library. Additionally, he is a member of the Advisory Committee on Cultural Heritage for the International Federation of Library Associations (IFLA).

## 2024/2025 Academy Member Accomplishments

### Susan Weiss

Professor Emerita, Musicology and Modern Languages

In 2024, she presented “Albrecht Dürer’s Music” and chaired a session at the Renaissance Society of America (RSA) Annual Meeting, as well as presented at the “Linked Music Data” workshop at McGill University.

A major achievement was submitting a collaborative NEH grant proposal as Principal Investigator in November 2024 for 2026 seminars on “The Senses in Early Modern Nuremberg,” involving an international consortium. Her RSA involvement continued into March 2025, when she chaired another session, and in April 2025, she presented her Dürer research to the AGHI Faculty Fellows.

As Co-Chair of the Academy, she worked with Deans to coordinate retiree lists and speaker invitations for weekly meetings, with Deans Celenza, Triantis, and Schlesinger among the participants. Her responsibilities included selecting speakers for formal sessions and organizing academic trips. Concurrently, as Co-President of the Johns Hopkins University Woman’s Club alongside Eileen Vining, she has overseen monthly Executive Committee meetings, planned diverse events, and fostered collaborations with campus organizations such as the Academies and the Osher Institute.

Looking ahead, she has been invited as the keynote speaker at two international conferences: “Knowing Hands” in Erlangen, Germany (September 2025), and “La voce, il segno e la memoria” in Arezzo, Italy (June 2026). She has also been invited to contribute a chapter on Albrecht Dürer and music for a forthcoming festschrift in honor of British musicologist Iain Fenlon. Additional forthcoming publications include two chapters: one in ***Music in Africa and Its Diffusion in the Early Modern World (1300–1650)***, and another on hands, circles, and other images of learning music in the Early Modern Era for ***The Art of Musical Diagrams*** (Peter Lang Verlag).

### John Wierman

Professor Emeritus, Applied Mathematics and Statistics

Prof. Wierman remains active publishing research in probability, stochastic processes, statistics, graph theory, combinatorics, and mathematical modeling, with a current emphasis on percolation theory, rendezvous search theory, graph domination, and graph labeling. He mentors and collaborates on research with students at all levels, young faculty, and alumni.

At Hopkins, he chairs the Acheson Duncan Fund for the Advancement of Statistics ( which provides travel grants to statisticians), consults with the admissions office on an enrollment prediction model, and serves as faculty advisor for the varsity women’s soccer team.

In professional society service, he continues as the long-time treasurer of the Southern Regional Council on Statistics, serves on the Allendoerfer Award Committee and the Investment Committee for the Mathematical Association of America, and serves of two editorial boards.

## 2024/2025 Academy Member Accomplishments

### W. Stephen Wilson

Professor Emeritus, Mathematics

Dr. Wilson remains deeply engaged in research and professional activities. Between January 2024 and June 2025, he published two research articles in the ***Glasgow Mathematical Journal*** and the ***New York Journal of Mathematics***, with two additional manuscripts currently under review. His ongoing research focuses on connective K-theory and related topics, including collaborations on the Morava K-theory and KO-theory of Eilenberg-MacLane spaces.

Dr. Wilson maintains an active presence in the mathematical community. He presented at an online conference in January 2024 and attended two in-person conferences—one in Spain (September 2024) and another at the University of Virginia (March 2025). He also participated in 56 seminars, colloquia, and similar academic events, often followed by informal discussions over dinner. In addition to attending events, he frequently hosts mathematicians at his home to foster collaboration and intellectual exchange.

Though no longer teaching, Dr. Wilson continues to contribute informally to public engagement, occasionally offering guidance on K–12 mathematics education. He also remains an enthusiastic contributor to the Hopkins topology seminar and broader scholarly community, continuing work on a long-term research project that he pursues with dedication.

**Additional Academy members include:**

**Bruce Barnett**
Professor Emeritus, Physics & Astronomy

**Sara Castro-Klaren**
Professor Emerita, Modern Languages and Literature

**Richard Cone**
Professor Emeritus, Biophysics

**Matthew Crenson**
Professor Emeritus, Political Science

**Andrew Douglas**
Professor Emeritus, Mechanical Engineering

**Bernard Ferrari**
Dean Emeritus, Carey Business School

**James Fill**
Professor Emeritus, Applied Mathematics and Statistics

**Michael Fried**
Professor Emeritus, Comparative and Thought Literature

**Louis Galambos**
Professor Emeritus, History

**Margaret Keck**
Professor Emerita, Political Science

**Yuan Chuan Lee**
Research Professor, Biology

**Bruce Marsh**
Professor Emeritus, Earth and Planetary Science

**P. Kyle McCarter**
William Foxwell Albright Professor Emeritus of Near Eastern Studies

**Alice McDermott**
Richard A. Macksey Professor, Writing Seminars

**Bruce Parrott**
Professor Emeritus, Russian and Eurasian Studies Emeritus

**Orest Ranum**
Professor Emeritus, History

**Avi Rubin**
Professor Emeritus, Computer Science

**Gabrielle Spiegel**
Krieger-Eisenhower Professor Emerita, History

**Walter Stephens**
Professor Emeritus, Modern Languages and Literature

**Ronald Walters**
Professor Emeritus, History


JOHNS HOPKINS
UNIVERSITY