Caltech

2024 YEAR *in* REVIEW

DIVISION OF THE HUMANITIES AND SOCIAL SCIENCES

GREETINGS from the Chair

One of my greatest pleasures as Division Chair is presenting the Year in Review. It is an inspiring catalogue of the new discoveries and notable achievements in HSS over the past year.

I have on occasion heard people refer to HSS as one of Caltech's "hidden gems." I understand what they mean; not all who have heard of Caltech know that Caltech researchers investigate the human and social worlds as well as the natural one. But, as these pages show, HSS researchers examine myriad aspects of human behavior: decision-making and the mind, strategic economic and political interactions, visual culture and political activism, science and policy, and the historical contextualization of scientific discovery. What's more, HSS faculty bring their knowledge and passion into the classroom, helping Caltech students to better understand the practice of science in the world and themselves as individuals and as members of societies.

Next year marks 60 years since the founding of HSS—the moment when Caltech formally added the social sciences to the Division of Humanities, which had been a part of Caltech since 1926. We look forward to celebrating this milestone, to reflecting on our collective achievements, and to building on our successes in the future.

Tracy Dennison
Edie and Lew Wasserman Professor of Social Science History
*Ronald and Maxine Linde Leadership Chair, Division of the Humanities and Social Sciences*

When Does the Brain Process Reward and Risk?

Research from the lab of **John O'Doherty**, the Fletcher Jones Professor of Decision Neuroscience, appeared in the March issue of *Nature Communications* and validated a theoretical idea about the relationship between reward and risk in the decision-making process. Employing a method that utilized electrodes implanted deep within the brains of patients (for unrelated therapeutic purposes), the team, led by Senior Postdoctoral Scholar Research Associate in Neuroscience **Vincent Man**, was able to obtain precise measurements of brain activity during decision-making and identify a neural signature for how the brain processes risk versus reward predictions. "Determining how the brain generates these kinds of computations can help us ultimately build more accurate models of how the brain learns and makes decisions, which could be useful not only for understanding how the brain works in general but also, potentially, for understanding how these processes might go wrong in diseases such as problem gambling, addiction, or other psychiatric disorders," O'Doherty told *Caltech News*.
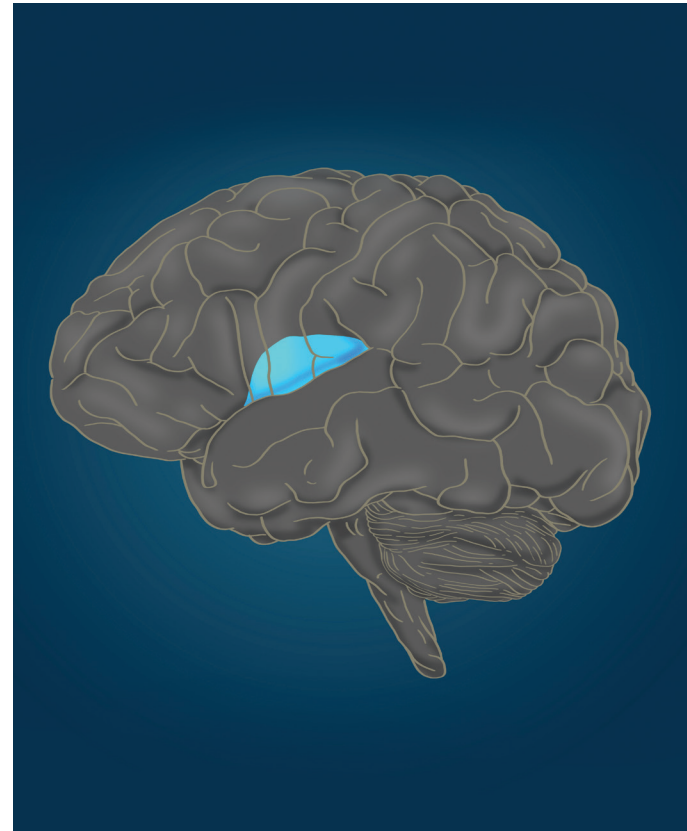
Unlocking the Secret of Human Intelligence

Social and decision neuroscience graduate student **Sneha Aenugu** is a detective of neural mysteries. As a member of the O'Doherty lab, she designs experiments to explore how humans learn, act, and make decisions. Aenugu shared her educational journey with a group of approximately 350 students, teachers, parents, and community members as part of Caltech's Science Journeys program. "I had been scared that studying the brain was just biology," Aenugu told the audience. "But then I realized that the language of the brain is electricity. Since I had a background as an electrical engineer back then, neuroscience felt like something I could do. I could help figure out the biggest mystery of the human mind just doing what I love, which is math and physics."

Autism Research via Smartphone

Ralph Adolphs, the Bren Professor of Psychology, Neuroscience, and Biology, explores the features of autism by tracking the eye movements of adults with the disorder when they are exposed to visual stimuli. This field of research has yielded interesting findings but has been limited by the expense of laboratory eye-tracking technology. Adolphs lab members **Na Yeon Kim**, postdoctoral scholar research associate in neuroscience, and **Qianying Wu**, social and decision neuroscience graduate student, led a study that tested whether smartphones might be able to capture the same information as standalone eye-tracking devices but at a much lower cost. The researchers compared data collected using established eye-tracking technology, smartphone eye-tracking administered in the lab, and eye-tracking experiments done at home via smartphone. Impressively, similar results were found across all three modalities, as reported in the journal *Autism Research*. Adolphs told *Caltech News* that his smartphone experiments "have the potential to scale sample size by several orders of magnitude and include participants from all over the world." Co-authors on the paper include Adolphs lab member **Jasmin Turner** and Senior Research Scientist **Lynn Paul**.

Understanding Online Toxicity

To further the investigation of the relationship between social media use and mental health and well-being, Professor of Cognitive Neuroscience **Dean Mobbs** and his colleagues **Swati Pandita** and **Ketika Garg**, both postdoctoral scholar research associates in computational neuroscience of social media, constructed a theoretical model to highlight key differences between online and face-to-face communications. In a paper published in *Trends in Cognitive Sciences*, the team outlined their "DAD" framework, short for Disembodiment, lack of Accountability, and Disinhibition—factors that make it more likely for social interactions online to skew toward a level of nastiness and misinformation that exceeds what we experience during in-person interactions. "We have not evolved for a social media environment," Mobbs, who is

also the director and Allen V.C. Davis and Lenabelle Davis Leadership Chair of the Caltech Brain Imaging Center, told *Caltech News*. "The sensory systems and theory-of-mind systems we have evolved in previous millennia do not translate well into an online domain."

Large Language Models in the Classroom

Professor of Philosophy **Frederick Eberhardt** has taken the somewhat controversial step of allowing the students in his Ethics & AI class full use of large language models (LLMs) like ChatGPT in most of their written assignments. The students in his classes not only wrestle with ethical concerns raised by AI but experiment with the use of text-based generative AI to better understand how these tools work. In reflecting on his students' experience with LLMs, Eberhardt told *Caltech News* that they found LLMs particularly helpful in getting past "writer's

block." After he first started implementing this policy, he "received several outstanding term projects, that, to the best of [his] judgment, were more than either the students or the machine could have done on their own. Students' papers included a wealth of material that we had not covered in class, and their arguments were not only insightful but well developed and well supported."

AI and Generative Text in Higher Ed

The increasingly common use of artificial intelligence tools such as ChatGPT for generating text raises important questions, especially in the realm of higher education. When posed a question about who would be considered the real author, the user or the AI, Teaching Professor of Writing **Susanne Hall** told the Caltech Science Exchange, "Faculty in higher ed are still developing ways of thinking about authorship and generative artificial intelligence. We should not yet consider ChatGPT and similar tools 'authors' because the idea of authorship has long been associated with intentionality and responsibility." That said, if errors are present from the text-generating technology, the human author is responsible for correcting them.

Hall, who is also the director of the Hixon Writing Center, published an opinion essay in *Inside Higher Ed* on generative AI, college teaching, and sustainability. She called on universities to consider the environmental impact of LLMs like ChatGPT, citing the massive amounts of electricity and water required by the data centers that power those LLMs. "Campus sustainability plans must factor in the costs of incorporating LLM-based tools into teaching, research and other university operations," she wrote.

(ChatGPT, 2024)?
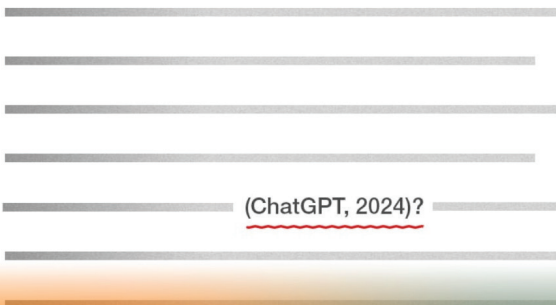
Confidence (or Its Absence) Is Contagious

Professor of Economics and William H. Hurt Scholar **Kirby Nielsen** found that the gender gap in confidence that is often held responsible for women's underachievement in the workplace is "contagious." The study, which was published in the March issue of *American Economic Review* and written with Christine Exley of the University of Michigan, found that when evaluating a worker's performance based on self-assessments, reviewers will reward apparent self-confidence—and, conversely, penalize a lack of confidence—rather than focusing solely on performance. There are many real-world implications of this research, which used a series of incentivized quizzes and questionnaires to test for cognitive bias.

"For example, some people think that having gender-blinded applications or reports could rectify gender imbalances," Nielsen explained to *Caltech News*. "But this research shows that a gender-blinded process might only make the situation worse. Without knowing applicants' or workers' gender, evaluators would not be able to account for the gender gap in confidence even if they wanted to."

A Conversation on Mechanism Design with Axel Niemeyer

Assistant Professor of Economics **Axel Niemeyer** joined the HSS faculty in the summer of 2023 after earning a PhD in economics from the University of Bonn in Germany. Niemeyer specializes in mechanism design, which helps economists create rules and procedures for achieving desirable social or economic goals. In a 2024 interview with *Caltech News*, Niemeyer explained, "Instead of asking how existing institutions work, mechanism design invites us to imagine all possible institutions—all the possible ways people can trade or sell at auction, for example, or all the ways we could run an election. Then we model how individuals would interact within these hypothetical systems based on the rules and procedures we devise. Out of all these possibilities, we aim to identify an institution—a mechanism—where individuals interact in ways that align best with a broader social or economic goal." Niemeyer is particularly interested in how economists can attain efficiency in a variety of settings, such as ensuring that essential goods and services reach those who genuinely need them most.

CTESS Summer Institute Continues

The Center for Theoretical and Experimental Social Sciences (CTESS) hosted its third Summer Institute in Theory-Based Experiments in June 2024, organized by Professors of Economics **Marina Agranov** and **Charles Sprenger**. The summer institute was followed by a well-attended two-day behavioral economics workshop, attendees of which included many of the student participants from last year's program, HSS graduate students, and Kristóf Madarász of the London School of Economics and Political Science. "It was a great opportunity to meet students from other universities with similar interests and see research on very different topics using similar methodologies (theory-driven experiments)," said **Camila Farrés Rodriguez**, a third-year social science graduate student. "For students from other universities, it is an excellent summary of our second-year sequence in experimental economics and an opportunity to get feedback from our professors." CTESS is part of The Ronald and Maxine Linde Institute of Economic and Management Sciences.

Decision by Committee: How Uncertainty Shapes Negotiations

In a paper published in the November issue of the *American Economic Journal: Microeconomics*, Professor of Economics **Marina Agranov** demonstrated that committees that face uncertainty about the future size of a budget surplus and use a unanimity voting rule may result in more efficient outcomes than those that use a majority voting rule. "This result has been derived theoretically but has never been tested empirically," Agranov explained to *Caltech News*. "In a world with stochastic—that is, changing and uncertain—budgets, the unanimity rule offers noticeable benefits. Under majority rule in such scenarios, committee members often rush to approve small budgets out of fear that if they delay, they may be excluded from future coalitions. These rushed

decisions frequently lead to inefficiency. In contrast, unanimity requires all members to agree, which can encourage the committee to delay decisions until the budget grows larger, resulting in better outcomes for everyone." Agranov's co-authors included Hülya Eraslan of Rice University and Chloe Tergiman of Penn State University.

Detail of *The Sphere of Life and Death*. San Marino, Huntington Library, MS HM 64, folio 15v.

What the Past Can Tell Us About Forecasting the Future

Professor of English and Dean of Undergraduate Students **Jennifer Jahner** has spent much of her career exploring the histories of law, rhetoric, philosophy, and literature in the European Middle Ages. But it was a recent event—the COVID-19 pandemic—that helped form the thesis of her current book project, *Arts of Conjecture: The Medieval Origins of Modern Prediction*. "I had been researching premodern concepts of experimentation but didn't realize I was working on a history of prognostication and conjecture until COVID brought home just how deeply our sense of the world is shaped by faith in the reliability of our forecasting models," Jahner told *Caltech* magazine. In January, she presented some of her findings during a lecture at The Huntington Library, Art Museum, and Botanical Gardens, using examples from their library's manuscript collection to explore the medieval roots of the modern forecasting models we use to predict weather, the economy, the spread of pandemics, and much more.

Revealing Details from Albert Einstein's Time at Caltech

Diana Kormos Buchwald, the Robert M. Abbey Professor of History and director and general editor of the Einstein Papers Project, delivered the Earnest C. Watson Lecture in March detailing Albert Einstein's early connections to Caltech. She shared insights into his scientific work and private life in the late 1920s and early 1930s, when he visited the Institute and spent three consecutive winters in Southern California. Einstein discussed new scientific discoveries, theories, experiments, and instruments with colleagues at Caltech, Kormos Buchwald explained, and he owed a debt of gratitude to several Caltech scientists, including physicist Robert Millikan and mathematician Walther Mayer. "For Einstein, [coming to Caltech] was a unique opportunity to be together with these colleagues with whom he had corresponded quite intensely, over many years," Kormos Buchwald told *Caltech* magazine.

Einstein Papers Project Releases 17th Volume of Einstein Papers

The Einstein Papers Project released the 17th volume of *The Collected Papers of Albert Einstein*, both a documentary edition and translation supplement, in September. The latest volume covers the period from June 1929 to November 1930, and it finds Einstein living mainly in Berlin and traveling throughout Europe to attend conferences and receive honorary degrees. It includes nine published scientific papers as well as unpublished papers and calculations that Einstein developed in search of a unified field theory. "One nice discovery was a notebook containing ideas and elaborations of the teleparallel theory, documenting many doubts and false starts," **Diana Kormos Buchwald** told *Caltech News*. "But that helped us put together various fragments and drafts of a paper he intended to publish."

THE COLLECTED PAPERS OF

GESAMMELTE SCHRIFTEN

Albert Einstein

VOLUME 17 / BAND 17

THE BERLIN YEARS / DIE BERLINER JAHRE: WRITINGS & CORRESPONDENCE / SCHRIFTEN UND BRIEFWECHSEL JUNE 1929–NOVEMBER 1930

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The Ronald and Maxine Linde Center for Science, Society, and Policy

Established in 2023 with internal funds, the Caltech Center for Science, Society, and Public Policy provides a forum for research, education, and debate on scientific innovations and their ramifications for communities and governments around the world. This year, Ronald Linde (MS '62, PhD '64) and Maxine Linde committed to a $10 million endowment to ensure that the center's important work will continue into the future. In recognition of the Lindes' vision and generosity, the center has been renamed The Ronald and Maxine Linde Center for Science, Society, and Policy (LCSSP).

"Scientific and technological innovations appear at an accelerating pace, but concerns about mistrust of science and technology also are increasing," said **Michael Alvarez**, the Flintridge Foundation Professor of Political and Computational Social Science and LCSSP co-director with Professor of Philosophy **Frederick Eberhardt**. Alvarez continued, "Thanks to the Lindes' vision, Caltech will be taking a leading role in easing public mistrust of science and technology, helping our students and researchers position their work in the public conversation and building strong connections between academia, policymakers, stakeholders, and the private sector."
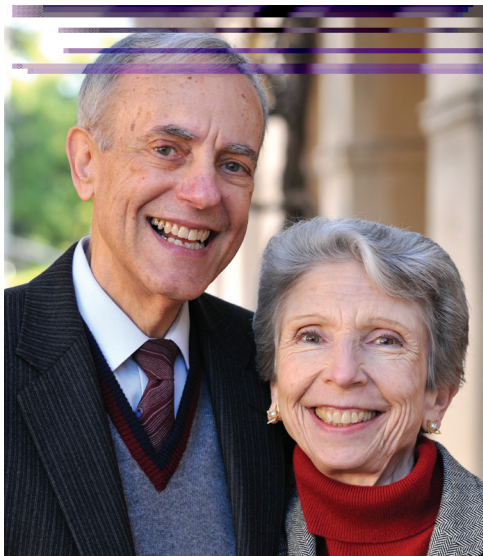
Regulating Engineered Microbes for Environmental Release

LCSSP and the Resnick Sustainability Institute hosted a symposium in February to address the challenges associated with developing and regulating engineered microbes for environmental release (EMERs). Speakers included representatives from regulatory agencies, biotechnologists from the industrial sector, and academic scientists. The resulting report includes policy recommendations geared toward creating clear and consistent regulations while simultaneously building a solid scientific knowledge base about EMERs to help create a framework for safe and responsible research and use of engineered microbial technologies. **Frederick Eberhardt**, professor of philosophy and LCSSP co-director, told *Caltech News* that the center works to "build links between the spectacular science that is done here at Caltech and the impact that science can have on regulation, policy, and society in general."

Water Quality Measurement Workshop

In April, LCSSP scholars organized a workshop that brought together policymakers, economists, environmental engineers, biologists, agronomists, and others to discuss key challenges in measuring and maintaining an adequate clean water supply in the era of climate change. Assistant Professor of Economics and William H. Hurt Scholar **Hannah Druckenmiller** specializes in natural resource policy and helped to organize the workshop. Reflecting on the talks afterward, Druckenmiller told *Caltech News*, "A lot of us were surprised by how much overlap there was in the issues that come up for water-quality researchers looking at the problem from different angles. Sometimes with interdisciplinary conferences, people can be talking past each other rather than to each other. But in this workshop we had very good communication across disciplines."

Reflecting on Visual Activism at Caltech

Political activism can take myriad forms: petitions, protests, strikes, boycotts, even riots. Aimed at communicating a message to an audience, the actions often create a visual spectacle that is arresting and provocative. In her spring Visual Activism class, Weisman Postdoctoral Instructor in Visual Culture **Anna Stielau** gave her students the opportunity to not only view and analyze visual activism but also create it. "I'm interested in thinking about activism as a form of communication that one can master," Stielau told *Caltech News*. "We are thinking about rhetorical tactics and about images as a part of these tactics." With support from the Caltech-Huntington Program in Visual Culture, Stielau also organized a one-day symposium to bring together artists, designers, filmmakers, and scholars to explore the landscape of art, media, and politics as it is being enacted and transformed today.

A mural at Robert Hill Lane Elementary School in East Los Angeles titled *Yes We Can!* Credit: Restorative Justice for the Arts.

Seeing Systems with American Artist

American Artist joined HSS in fall 2024 as artist-in-residence in the Caltech-Huntington Program in Visual Culture, and they taught the undergraduate course Seeing Systems: Critical Research as Visual Art. Their work combines technology, performance, sculpture, and cultural criticism. Artist's engagement with the literary and actual lives of science fiction writer Octavia Butler drew them to Caltech and to the author's archives at The Huntington Library, Art Museum, and Botanical Gardens. "Both of us grew up in Altadena," Artist told *Caltech News*. "I wanted to know more about what growing up here by the Arroyo Seco may have meant for her and whether her proximity to Caltech and JPL influenced her science fiction." Their recent installation at the Los Angeles County Museum of Art, involving a recreation of a 1930s rocket engine, was inspired by Butler's postapocalyptic novel *Parable of the Sower*.

Top left: American Artist. Credit: Myles Loftin.
Bottom left: Still image from *The Monophobic Response* (film), 2024, courtesy of American Artist.

ELECTION 2024

Preventing Election Misinformation

Michael Alvarez, the Flintridge Foundation Professor of Political and Computational Social Science, leads an ongoing research project on election integrity that involves auditing voting technologies to ensure that they are sound, as well as tracking and rebutting dubious election claims. To share the results of this research with the public, Alvarez has conducted a series of video interviews with election officials and creators of vote-counting technologies and hosted an election roundtable with experts on such technologies and on voting behavior. In the aftermath of the November 2024 election, he and his team are auditing voting in partnership with election officials in Southern California, and they plan to distribute their reports to stakeholders and election officials. "We have to do what we can to give people the tools to better understand voting and to make their own minds up about the integrity of the process," Alvarez told *Caltech News*. "We're scientists, and we should be providing nonpartisan data and factual information to try to keep the election process moving forward accurately and fairly."

In November, Alvarez took the students in his PS 101 course (Special Topics in Political Science–The 2024 Presidential Elections) on a field trip to the Los Angeles County Registrar-Recorder's ballot tabulation facility in City of Industry. The class attended an information session hosted by an LA County elections official, followed by a detailed tour.

A Critique of the Electoral College

In the midst of a busy election season, the Caltech Science Exchange released new and updated information on their Voting and Elections resource hub, which included commentary from Kay Sugahara Professor of Social Sciences and Statistics **Jonathan N. Katz** on the effectiveness and fairness of the U.S. Electoral College. "For a long time, it didn't matter that the system was a jerry-rigged compromise because for most elections until recent history, if you won the popular vote by enough, you were guaranteed to win the presidency," Katz explained. "Even now, people only tend to complain about the Electoral College every four years and only when the votes are very close. What's concerning is that the Electoral College system has an asymmetric effect. There's a partisan bias to it."

The Art of Seeing Science

Collaborators in the Data to Discovery (D2D) program, co-organized by Research Professor of Art and Design **Hillary Mushkin**, explored new ways to represent data from computational models of Earth's climate systems. At the end of a 10-week summer program, the team presented prototypes for interactive tools that enable researchers to gain new scientific insights from their data while also serving as a springboard for artistic inquiry. Rather than planning a specific tool or solution from the beginning, the interns and organizers endeavored to understand the existing ways that researchers interact with their data and then co-design, iterate, and test prospective solutions in close collaboration with the researchers. "When we're ideating, I get most interested when we see something that isn't what we would expect," Mushkin said to *Caltech News*. "There are certain kinds of diagrams that are very familiar, that are used often in data visualization because they're tried and true. But sometimes we end up hitting upon things that are weird and radically different."
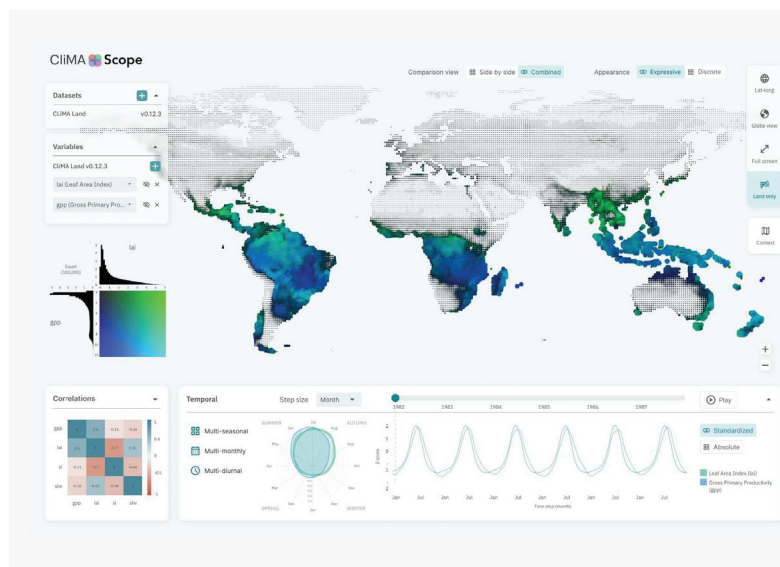
The D2D team collaborated with researchers at the Climate Modeling Alliance (CliMA) to develop CliMAScope, an interactive tool that visualizes data from CliMA's Land model. The interface features a world map with data points represented as colored spheres and has several features to facilitate the comparison of data across variables, between models, and between model outputs and observational data. Credit: Linh Pham.

Robert Rauschenberg, *Green Shirt* (1965–67), neon and enameled metal, 119 x 240 x 10.5 in. Norton Simon Museum, Gift of the Artist © Robert Rauschenberg Foundation / Artists Rights Society (ARS), New York. Credit: The Norton Simon Museum.

It's Electric!

Caltech and the Norton Simon Museum came together for the first time this October to host a two-day academic conference on the rich intersections between art and electric light. "Plugged In" gathered art historians, curators, conservators, science historians, and professors of cultural studies, material culture, and gender studies to reflect on the ways in which artists have manipulated or depicted artificial light since the widespread use of electric lighting began in the late 19th century. Papers covered topics such as paintings of artificial illumination, performance art of the 1960s and 1970s that incorporated lighting, and the minimalist "light sentences" of American artist Laddie John Dill, who is featured in the Norton Simon's exhibit of the same name (on display through February 2025). "We've had continuing conversations about ways to take advantage of the proximity of the two institutions," Professor of Visual Culture **Brian Jacobson** told *Caltech News*. "I really think that this is a great step in what could be a very fruitful collaboration between these two institutions."

Particles

In the early and mid-twentieth century, Caltech physicists and engineers fascinated audiences with pioneering experiments in high-voltage electricity and visual evidence of exotic, previously unknown elementary particles. Records of these experiments include photographs of electrical sparks flying off a million-volt transformer, electron beams accelerated almost to the speed of light in Caltech's synchrotron, and, in 1932, the trail left by an antielectron, or positron, in a cloud chamber. In 1957, Carl Anderson, who discovered the positron, collaborated with Academy Award–winning film director Frank Capra. Together, they produced the TV program *The Strange Case of the Cosmic Rays*, pioneering a new medium of entertainment that became a popular vehicle for communicating groundbreaking scientific ideas to lay audiences.

Crossing Over: Art and Science at *Caltech, 1920–2020*, exhibition produced by Caltech Archives and Special Collections and hosted by HSS in Dabney Lounge. Photo by Joshua White.

Crossing Over

This fall, Caltech participated in the Getty's landmark event PST ART: *Art & Science Collide*, which consisted of three projects exploring the interconnections between art and science. One of the three, *Crossing Over: Art and Science at Caltech, 1920–2020*, spanned six locations across campus and told the story of how scientific discovery and visual culture have shaped each other at Caltech.

Dabney Hall served as a gallery space featuring work that visualized science at all scales, from the smallest particles to the expanse of the cosmos, and across diverse scientific disciplines. It included artwork and data visualization by **Hillary Mushkin** and a large-scale original piece by winter 2022 Artist-in-Residence Lia Halloran.

Where Are They Now?

AFTER EARNING THEIR PHDS IN 2024 . . .

Danny Ebanks is a postdoctoral fellow at Harvard University's Institute for Quantitative Social Science.

Meng-Jhang Fong is a postdoctoral scientist with Amazon.

Lindsey Gailmard is a postdoctoral scholar at Stanford University's Regulation, Evaluation, and Governance Lab.

Wanying (Kate) Huang is a senior lecturer in economics (assistant professor equivalent) at Monash University in Australia.

Joanna Huey is an assistant professor of political science and international relations at the University of Southern California.

Shunto Kobayashi is an assistant professor of marketing at Boston University's Questrom School of Business.

Zhuofang Li is a machine learning engineer at Google.

Po-Hsuan Lin is an assistant professor of economics at the University of Virginia.

Aldo Lucia is an assistant professor of economics at The Ohio State University.

AFTER COMPLETING THEIR POSTDOCTORAL APPOINTMENTS IN 2024 . . .

Patrick Burauel is a quantitative researcher at Citadel.

Eugene Chua is an assistant professor of philosophy at Nanyang Technological University in Singapore.

Jeffrey Cockburn is an assistant professor in psychology and brain sciences at the University of Iowa.

Ayse Zeynep Enkavi is an assistant professor of integrated sciences: neuroscience at Claremont McKenna College.

Carina Hausladen is a postdoctoral researcher in the computational social science group at ETH Zurich.
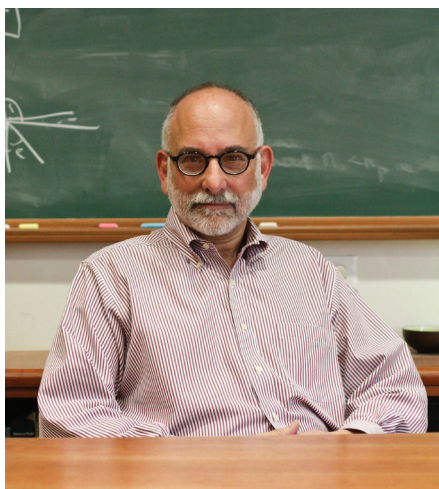
Nina Rouhani is joining the department of psychology (brain and cognitive science program) at the University of Southern California as an assistant professor in 2025.

Juni Singh is an economist at World Bank Group.

Filip-Mihai Toma is a senior researcher at NEXARCH Lab.

Honors & Congratulations

Caltech awarded tenure to two HSS faculty in 2024: **Kirby Nielsen** is now a full professor of economics and **Michael Gibilisco** is a full professor of political science.

Michael Alvarez became the Flintridge Foundation Professor of Political and Computational Social Science. Chaired professorships are considered the Institute's most distinguished award for individual faculty.

Doris and Henry Dreyfuss Professor of History **Jed Buchwald** received the 2023 Alexandre Koyré medal from the International Academy of the History of Science. Presented roughly every other year, the award honors a scholar's lifetime achievements in the field. Buchwald, who joined the HSS faculty in 2001, has authored six books, edited 11 books, and serves as the editor or co-editor for six book series and journals, all in the history of science and technology.

Alum **Abigail Jiang** (BS '23, materials science and history) received a Paul & Daisy Soros Fellowship for New Americans, which benefits immigrants and children of immigrants for their graduate studies in the United States. While at Caltech, Jiang studied history with Assistant Professor of History **Danielle Wiggins** and won Caltech's senior thesis prize for a project titled "Who's Chinatown, Whose Chinatown? Visions of Urban Progress in Los Angeles Chinatown, 1970–2020." Jiang is currently studying applied physics at Harvard.

Wanying (Kate) Huang (PhD '24, social sciences) won the award for Best Paper with a Student Lead Author at the Twenty-Fifth ACM Conference on Economics and Computation (EC'24), which is the main economics and computer science conference, with about 500 papers submitted and 100 chosen through a rigorous peer-review process. Huang's winning paper was also her job-market paper, titled "Learning About Informativeness." This fall, she joined the faculty at Monash University in Australia as a senior lecturer in economics (assistant professor equivalent).

Social science graduate students **Binyamin (Ben) Wincelberg** and **Po Hyun Sung** received the John O. Ledyard Prize for Graduate Research in Social Science for their second-year paper, titled "Narrow Framing and Risk in Games" (joint work with former Linde Institute Postdoctoral Instructor in Economics Fedor Sandomirskiy and Professor of Economics and Mathematics Omer Tamuz).

The Society for Political Methodology honored Kay Sugahara Professor of Social Sciences and Statistics **Jonathan N. Katz** with the Career Achievement Award for his research into modeling election dynamics. The award is the society's highest honor and recognizes the "foundational, distinguished and sustained contributions to the field and the Society made by the recipients over their careers." Katz is perhaps best known in the field for his work with Nathaniel Beck, professor of politics and public policy at NYU, which corrected a prior method of analyzing data in comparative politics that allowed for more refined and accurate political prognostication.

On the occasion of Caltech's 130th commencement exercises, the Division of the Humanities and Social Sciences was pleased to present nine outstanding PhD recipients (listed with their dissertations):

- **Danny Ebanks** ("Unexpected Partisan Unity Among Congressional Leaders and Legislators Using New Latent Variable Estimation Techniques and Frameworks")
- **Meng-Jhang Fong** ("Essays in Behavioral Economics and Game Theory")
- **Lindsey Gailmard** ("Reputation and Accountability")
- **Wanying (Kate) Huang** ("Essays on Rational Social Learning")
- **Joanna Huey** ("Institutional Design of Criminal Justice Processes")
- **Shunto Kobayashi** ("Essays in Empirical Industrial Organization")
- **Zhuofang Li** ("Essays on Trustworthy Online Platforms")
- **Po-Hsuan Lin** ("Essays in Behavioral Game Theory Solution Concepts")
- **Aldo Lucia** ("An Experimental and Theoretical Investigation of Decision-Making Under Risk")

The HSS student prizewinners honored at Caltech's commencement in June included:

- **Grace Davis** (Alexander P. and Adelaide F. Hixon Prize for Writing)
- **Sarah Hashash** (Eleanor Searle Prize in Law, Politics, and Institutions)
- **Joseph H. Kim** (Mary A. Earl McKinney Prize in Fiction)
- **Shrishti Pankaj Kulkarni** (Hallett Smith Prize)
- **Sarah Yuan Ni Liaw** (Gordon McClure Memorial Communications Prize in Philosophy)
- **Emeka Nkurumeh** (Gordon McClure Memorial Communications Prize in History)
- **Heidi Redmond** (Gordon McClure Memorial Communications Prize in English)
- **Alec Sandroni** (David M. Grether Prize in Social Science)
- **Domani Sharkey** (Mary A. Earl McKinney Prize in Poetry)

At the 69th annual Staff Service & Impact Awards in May, Caltech honored two HSS staff members for the work they do to advance the mission of the Institute: Division Communications Coordinator **Hanna Ramsey** for 15 years, and Administrative Assistant **Barbara Estrada**, who retired in September after 25 years of service.

Professor of Philosophy **Frederick Eberhardt**'s article "Discovering Causal Models with Optimization: Confounders, Cycles and Instrument Validity" came in second for the 2024 ADIA Lab Best Paper Award. The article, written with Nur Kaynar of Cornell University and Auyon Siddiq of UCLA, is forthcoming in *Management Science*.

At the holiday gathering on December 5, HSS presented its Brass Division Awards to recognize the outstanding service and teaching of the following honorees:

- **Warren Brown**, Professor of History
- **Peter Caradonna**, Assistant Professor of Economics
- **Mary Martin**, Administrative Assistant
- **Anna Stielau**, Weisman Postdoctoral Instructor in Visual Culture

Stanford University awarded Assistant Professor of Black Studies and English **Dana Murphy** a Stanford Humanities Center external faculty fellowship for the academic year 2024–25.

The division awarded internal fellowships to the following HSS graduate students during Caltech's 2023–2024 academic year:

- **Brenden Eum** (A. Michael and Ruth C. Lipper Graduate Fellow)
- **Kexin Feng** (James and Karen Gerard Fellow in Social Sciences)
- **Joanna Huey** (Repetto-Figueroa Family Graduate Fellow)
- **Zhuofang Li** (The Stephen A. Ross Memorial Fellow)
- **Po-Hsuan Lin** (Roger and Marjorie Davisson Graduate Fellow)
- **Aldo Lucia** (Lance E. Davis Graduate Fellow)

Also in the News

Ahead of the November 2024 election, Flintridge Foundation Professor of Political and Computational Social Science **Michael Alvarez** spoke to a number of news outlets about voting issues. In an interview with KPCC, he was critical of a Huntington Beach ballot measure to require voter ID, noting that claims of voter fraud are unsubstantiated. On NBC4 LA, Alvarez talked about the use of artificial intelligence in political campaigns and how voters can identify deepfake videos, audio, and photos. And *Independent Voter News* cited an Alvarez study in an article about efforts to limit voting in South Carolina primaries to registered members of each party due to potential threats of sabotage; Alvarez's research found minimal "crossover voting" in a previous primary.

KCSB-FM in Santa Barbara talked to **Ian Axel Anderson**, postdoctoral scholar research associate in computational neuroscience of social media and emotion, about the manipulation of information on social media and how people might break the cycle of engaging in destructive and polarizing interactions on social media platforms.

KPLA-FM and Health.com both reported on work by Robert Kirby Professor of Behavioral Economics **Colin Camerer** that used machine-learning tools and large data sets to show that the time it takes to form a habit is variable and dependent on many different factors. A *Mashed* article about The Cheesecake Factory's extensive menu of 200+ items cited a 2018 study by Camerer that showed that having too many choices can tax the brain and cause people to struggle with decision-making.

An NPR story about the discovery of an 11th-century 2D map of the universe called an astrolabe featured Lecturer in Humanities **Margaret Gaida** commenting on evidence of cross-cultural interaction and scientific collaboration between Muslims and Jews found on the instrument.

Lecturer in History and Dibner Senior Curator for the History of Science and Technology at The Huntington **Daniel Lewis** wrote in an article for *Discover* about coastal redwoods and their enduring ability to adapt to rapidly changing environments. He was a guest on *Inside Higher Ed*'s podcast *The Academic Minute*, talking about the same subject. *Time* magazine featured a piece by Lewis that outlined how three different trees are doing often unnoticed work to help protect the planet against climate change.

A special thank you to Weisman Postdoctoral Instructor in Visual Culture **Anna Stielau** and the students in her Representation Matters? class for participating in our cover photoshoot.

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