

PsychologiCal

Letter From the Chair

Hello, Alumni and Friends!

The fall semester has been a busy and productive one. Our faculty and students continue to make great discoveries as we progress toward further advancing our understanding of the mind, brain, and behavior.



Faculty News

Did you know that some of our faculty also write about the science of psychology in places other than academic journals and books? For example, **Alison Gopnik** writes a monthly column for the *Wall Street Journal* called “Mind and Matter”, and **Tania Lombrozo** writes a weekly post for National Public Radio’s blog “13.7: Cosmos & Culture”. Check them out!

Speaking of our faculty, I am delighted to share that several faculty have received prestigious awards recognizing their significant contributions to the UC Berkeley campus, psychological research, and the field of science as a whole. Flip to the Department News on page 8 to read more about our distinguished faculty members and their recent accolades.

Fall Department Party

We had a Department party in September to say a big thanks to Rich Ivry for his four years as department chair. Faculty members and their family gathered for a wonderful outdoor picnic full of fun, food, and games.



Above: Current and former chairs Rich Ivry, Steve Hinshaw, Ann Kring, Erv Hafter, and Shelly Zedeck gather for a group photo at the fall Department party.



What Good is a Psychology Degree?

You may have heard about a recent Twitter hashtag that developed in response to the suggestion that psychology majors might have a hard time obtaining jobs. #ThisPsychMajor yielded all sorts of interesting tweets about what psychology majors from institutions around the world do with their degrees; it turns out that psychology can lead to all sorts of interesting careers!

This is particularly true for our Cal Psychology majors. Please continue to answer our question, *“What do people do with a Cal psych degree?”* by sharing your stories on the Department website: psychology.berkeley.edu. While visiting the site (which will be rolling out a brand new look in the new year), please also send us your stories and life updates! And of course, keep in touch with us via Facebook, Twitter, and YouTube.

Best wishes for a wonderful holiday season. Cheers!

Ann Kring

Professor and Chair



New department chair Ann Kring and new vice-chair Serena Chen pose for a photo between chatting with undergraduate students at the Department's semester-kickoff hot dog fest outside Tolman Hall in September.

Big Give 2015

This year, we went big in our participation in the 2nd annual Berkeley BIG GIVE. The theme was “Think Bigger”, and nowhere on campus do people think bigger than in the Psychology Department. We had a day of events in Tolman Hall to celebrate what we do in psychology and to raise money to ensure we can continue our excellence in undergraduate and graduate education and cutting-edge research. Our undergraduate students organized a terrific afternoon event that attracted several students and faculty. Thanks to all of you who helped us make this a BIG day for Psychology!

If you did not have a chance to participate in the Big Give (or even if you did!) and want to contribute to our work in psychology, we welcome your gift. Your gift is a true multiplier since 100% of alumni-donated funds to the Department go directly to the support of our undergraduates and graduates. We continue to work to increase funding for graduate students, something that remains a high priority as our students are living in one of the most expensive areas in the country while they make BIG progress on BIG topics. Please help us continue to support our students with your contributions, which can be made online at <http://psychology.berkeley.edu/donate>.



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Join our LinkedIn networks:

For undergraduates: <http://link.in/LmmrEJ>

For graduate students: <http://link.in/J90JUz>



Subscribe to our YouTube channel to watch videos of special events and lectures from the Department.

Q&A With New Faculty Member Anne Collins



As the Psychology Department's newest behavioral neuroscience faculty member, Professor Anne Collins talks with us about her research and impending transition to the Bay Area this winter.

Can you tell us about a scientist who has had a big influence on your career?

As an undergraduate student in France, I majored in theoretical math, with some physics, computer science, applied math, and other “hard” sciences on the side. I thought of following this path to graduate school; I loved the almost artistic feel of topology or number theory, but I wasn’t sure I would be happy with such abstract day-to-day work.

My school, which focused on sciences and engineering, encouraged broadness of mind with mandatory “human and social sciences” classes every semester, which we could pick from an eclectic array such as sculpture, opera, history of the military, etc. One of the classes was cognitive science! I had always been interested in the mind, but never knew that there was a whole scientific domain dedicated to its study.

The professor disappointed a number of my comrades who hoped this class would provide a break from our usual equation-filled lectures; instead, in a demonstration of the field’s multidisciplinary positioning between neuroscience, cognition, and computation, he took full advantage of our “mathyness” to describe a complex model of the visual system.

He had an influence on my career in many ways: he introduced me to the field to which I quickly turned; he showed me that, despite the academic consensus around me, cognitive science was indeed a rigorous science and that I had a chance to study the fascinating workings of the mind; and he encouraged me to keep my quantitative background strong through my later process of learning cognitive neuroscience, which has been extremely important to my research.

In your research, you take a neuropsychological approach to understanding learning, decision-making, and executive function. Can you describe some of your current research projects that address these areas?

Given limited cognitive resources, a learning mechanism will need to trade off between incompatible goals: for example, computational complexity versus flexibility, speed versus scope, etc. In different environments, some trade-offs might be more appropriate than others. In one of my current research projects, I hypothesize that working memory and reinforcement learning contribute to learning as two separable cognitive processes that strike different balances among these trade-offs. I attempt to characterize their domains of expertise in learning, and to understand how they interact to produce integrated behavior.

This project involved developing experimental protocols to separate the effects of working memory and reinforcement learning; computational modeling to formalize the computational functions represented by those two systems; and neuropsychological approaches to constrain our understanding of the implementation of these functions in the brain. An ongoing EEG study allows us to better understand the dynamics of their cooperation, and with an ongoing fMRI project, we probe the interactions between the two systems more directly.

Can you tell us the punchline of a publication that you are particularly proud of?

Humans' drive for finding structure that might simplify learning in our environment is strong enough that we create such structure even if it is not immediately helpful, is cognitively demanding, and does not reflect the environment's statistical properties.

I'm proud of that article (published in the journal *Psychological Review* in 2013), but it really needs a one-sentence punchline, because I've been told it's a long, tough read. In this article, I tried to approach the question from many angles, and to provide different independent sources of evidence for an interesting cognitive phenomenon: that we seem to behave suboptimally by expending more effort than necessary to find non-existent structure, which actually ends up creating unhelpful structure. However, this seemingly counterproductive phenomenon can be very helpful when thinking in a longer term, broader sense, because it enables flexible generalization later.

In this publication, we also tried to show how computational modeling at different levels -- a high "function" level versus a lower neural network

"implementation" level -- could be usefully related together to provide complementary benefits in studying a cognitive function.

You will soon be traveling all the way across the country when you move to Berkeley this January. What most excites you about this big transition?

Not having a snow tunnel in front of my house? I probably had to say that, moving from Boston in the winter, but it's not really true. I'm quite excited about the opportunity to start to further my research program in such an interesting academic community at Berkeley, and I really look forward to the stimulating intellectual environment.

I'm also excited to discover what it's like to live in Northern California. I've been told to expect a culture shock (though maybe not quite to the level of my last move, which took me from France all the way to New England)!

“Humans’ drive for finding structure that might simplify learning in our environment is strong enough that we create such structure even if it is not immediately helpful”

Outside of work, what are some things that you like to do for fun?

Depends how much free time I have! In the evenings I like reading fiction and cooking or baking with my husband and friends (I love good food, but I'm a bit picky, so making my own is good). I also love music; when there were opportunities, I've often played cello in chamber music groups, and I also sing. On weekends, we enjoy going outdoors, hiking in the mountains, biking, or swimming.

Where in the World are Cal's PhD Graduates?

Berkeley PhD students go on to do great things. For example, some stay in academia by becoming faculty members or obtaining postdoctoral research positions; some break into industry; some pursue science communication. Providing a taste of this wide variety of opportunities that a degree from Cal confers, three of Berkeley's recent PhD graduates share their updates and reminiscences.

Jared Saletin (Cognition, Brain, and Behavior '15)



Since leaving Berkeley, Jared has taken a postdoctoral fellowship at Brown University, returning to his childhood home of Providence, RI. He is now in his second year of a NIMH-funded T32 Child Mental Health training program in the

Department of Psychiatry and Human Behavior at Brown's Alpert Medical School. Jared's work extends the cognitive neuroscience techniques he learned at Berkeley to translational issues of sleep-dependent cognition in typically and atypically (e.g., ADHD) developing adolescence. Berkeley could not have prepared me better for this task.

Reminiscing on his time at Cal, Jared fondly recalls his interactions with the many great mentors and colleagues he had the opportunity to work with. He came to Berkeley's CBB program in the fall of 2008 to work with Professor Matt Walker on questions of sleep-dependent memory. From this base of operations in Matt's lab, Jared had the pleasure of working with and learning from not only Matt, but also a number of other tremendous faculty members in the Department, including his official qualification and dissertation committee members Art Shimamura, Lance Kriegsfeld, Ronald Dahl, as well as Allison Harvey and Silvia Bunge, and many others. Jared states, "It really is the people—both faculty and students—that make the Berkeley Psychology Department such a special place to train and learn." He continues to work with faculty and trainees at Berkeley on collaborative projects, some ongoing (Matt's

lab) and some just beginning (a recently submitted K01 proposal with Silvia Bunge on the mentorship team).

Looking back on these experiences, Jared vividly recalls a rainy cold visitor's weekend almost 8 years ago. "Over drinks and Thai food at Alison Gopnik's house," Jared reminisces, "the late Tom Wickens told me that what makes Berkeley great is the joy the faculty have for each other, and how that trickles down to the students. He was absolutely right. In this spirit, I'd like to give thanks to him, Matt, and the remaining faculty and students for such tremendous past and ongoing experiences. Go Bears!"

Jane Hu (Change, Plasticity, and Development '14)



For recent graduate Jane Hu (CPD '14), professional development seminar Psych 293 was the first step on a path towards a career in science communication.

Inspired by a class on non-academic careers, she joined the editorial staff of the Berkeley Science Review and helped found PsychologiCal, where she honed her skills translating and reporting research. She has joined the outreach and education team at the University of Washington's Institute for Learning and Brain Sciences (I-LABS) in Seattle, where she spends her days communicating child development research to general audiences. She is also a freelance science writer; after graduation, she was awarded a AAAS Mass Media fellowship at Slate magazine, and her work has since appeared in Pacific Standard, Nautilus, Mental Floss, among others.

Carla España (Social-Personality '14)



As a User Experience Researcher at Facebook, Carla uses both quantitative and qualitative research methods to explore ways to improve people's experience on Facebook.

As an undergraduate, Carla attended UC Santa Barbara and double- majored in psychology and French, and had the amazing opportunity to study abroad in France for a year. In 2014, she received her PhD in social psychology from UC Berkeley, where she studied intergroup relations and individuals' perceptions of immigrants and immigration policy in the US. During summers in graduate school, Carla worked in user experience research at Google X and Mozilla. She speaks Spanish and French, and loves traveling and playing soccer.

Carla's PhD in social psychology has proven to be a great asset in her career at Facebook, and the skills she gained in her graduate studies at UC Berkeley are put into practice each day, from designing research studies, to writing surveys and analyzing data, to interviewing Facebook users in the lab. Her training in social psychology has prepared her to think critically about the issues that Facebook users experience, and enables her to examine ways to enhance people's experience on Facebook.

Psychology At the Movies

Behind the scenes and on the screen with Berkeley psychologists

Dr. Christina Maslach in *The Stanford Prison Experiment*

In *The Stanford Prison Experiment*, a recent independent film released last summer of 2015, Berkeley Psychology's very own Professor Emerita **Christina Maslach** (pictured below, left) was portrayed by actress Olivia Thirlby (pictured below, right). A Stanford student at the time that Dr. Phil Zimbardo conducted the infamous prison experiments, Dr. Maslach was the influential voice of reason that persuaded the experimenters to end the study early.



Interview with Dr. Dacher Keltner about consulting on Pixar's *Inside Out*

As an expert in the science of emotion, Dr. **Dacher Keltner** consulted on Pixar's recent box office hit *Inside Out*, a story of a young girl's emotional journey while coping with a major life transition. Dacher shared his experience with the Department's new undergraduate organization, the PsychologiCal Committee, as the first invitee of their faculty speaker series. In this interview, Dacher talked about his research and how he contributed to the making of *Inside Out*. The event is webcast on the Department's YouTube channel.

Psychology Takes You Places!

Spotlight on undergrad alum Nancy Lewis ('68)



Nancy Lewis graduated with a B.A. in psychology from Cal in 1968 and is now an Emeritus Professor of Geography at the University of Hawaii, as well as the Research Program Director of the East-West Center in Honolulu.

After graduating from UC Berkeley with a psychology degree in 1968, Nancy Lewis spent several years as the Registrar at the College of the Holy Names in Oakland. In 1972, soon after the birth of her son Daren, Nancy returned to Cal for graduate school, earning an MS in geography in 1974, an MS in interdisciplinary health and medical sciences in 1976, and a PhD in geography in 1981. The extended period between '76 and '81 was partly due to an ongoing project of building a 32-foot sailboat, followed by 2.5 years sailing across the Pacific while exploring the human ecology of fish poisoning on a Fulbright Doctoral Dissertation Award. Nancy's undergraduate work in biological psychology prepared her for this doctoral research.

In 1981, Nancy was recruited to the Geography Department at the University of Hawaii at Manoa, where she was the only woman on the geography faculty for 8 years. She also spent 7 years as the Associate Dean of the College of Social Sciences and is now an Emeritus Professor of Geography at UH. In 2001, Nancy left UH for her current position as the Director of the Research Program at the East-West Center. She has spent the last

30-plus years in the field in the Pacific Islands and, more recently, East and Southeast Asia studying human ecology, health and development, gender, "healthy womanhood", climate change and health, and science for public policy.

Among her multitude of achievements, Nancy was a Kellogg National Leadership Fellow in the mid-1980s, served on the Fulbright Committee for Geography, a number of editorial and other boards (including of the UC Berkeley Alumni Chapter in Honolulu, where she met her husband, Mike Herb, Berkeley class of 1958). She is currently president of a regional interdisciplinary science organization, the Pacific Science Association, an elected member of the Society of Women Geographers, and was recently appointed to the new State of Hawaii Committee on Climate Change and Health.

Reminiscing on the impact of her undergraduate psychology education at Cal, Nancy fondly recounts her research assistantship with Dr. Irv Zucker on a project on sperm transport and fertility in rats. The culmination of this project was Nancy's first publication, and Dr. Zucker's acknowledgement of an undergrad--unusual in those days--inspired Nancy's interactions with her own graduate students.



As a 7th-generation San Franciscan, Nancy plans to move back to the Bay Area after retirement. She states, "My educational experiences at Berkeley prepared me for a wonderful professional and personal journey -- one that continues!"

Department News

Books

- Professor **Steve Hinshaw**'s new book, "ADHD: What Everyone Needs to Know", is co-authored with Pulitzer Prize-winner Katherine Ellison. The book, released in November 2015, is part of the Oxford Press "What Everyone Needs to Know" series. As engagingly written exploration of ADHD in question-and-answer format, this exposition of ADHD dispels myths about attention deficits and impulsivity in children, teens, and adults.
- Professors **Dacher Keltner** and **Serena Chen** and co-authors Tim Gilovich from Cornell University and Richard E. Nisbett from the University of Michigan will release the fourth edition of their textbook "Social Psychology" this upcoming August. The textbook focuses on theories and how students can apply social psychology to become critical thinkers about the research they conduct.

Scientists in the Media

- Professor **Steve Palmer** recently published an article in the online journal *Nautilus* about his research on music and color. The article, "What color is this song? Test your Inner Synesthesia", allows readers to participate in an online demonstration to associate colors with five different music clips; more than 38,000 people have participated so far. Last August, he also gave the keynote lecture at the Vision Science and Art Conference (VSAC) in Liverpool, United Kingdom titled "Aesthetic Science: An ecological approach".
- Graduate student **Brett Ford** and her advisor Professor **Iris Mauss** have had their research highlighted in a number of popular news sources, including *The Huffington Post* and *Time Magazine*. In an article published this December in the *Journal of Experimental Psychology: General*, Brett and her team of collaborators explore the paradox of why pursuing happiness makes people from individualistic societies (like the United States and Germany) less happy. In contrast, the pursuit of happiness in collectivistic cultures (like Russia and East Asia) is relatively more successful, partly because people in these cultures seek happiness in a socially engaging manner.
- Two PhD graduates recently gave TED talks about their research. Dr. **Joseph Jay Williams**, currently a research fellow at Harvard, gave a TEDx Talk in Trinidad about personalizing online lessons. Dr. **Jennifer Stellar**, currently a postdoctoral student at the University of Toronto, gave a TEDMED talk about how awe influences physical and mental health.

Awards & Recognition

- Professor **Iris Mauss** received the 2015 American Psychological Association Distinguished Scientific Award for Early Career Contribution to Social Psychology. The award recognizes Iris's influential work in affective science, including development of advanced methodology, contributions to theory, and groundbreaking empirical findings.
- Professor **Rudy Mendoza-Denton** received the 2015 Chancellor's Award for Advancing Institutional Excellence. The selection committee was inspired by both his extensive scholarly impact and his deep commitment to campus efforts on increasing intergroup awareness, addressing bias, and supporting underserved populations.
- At the 2015 annual meeting of the Society for Psychophysiological Research held in Seattle, Washington, Professor **Bob Levenson** received the Distinguished Contributions to Psychophysiology Award, honoring his scientific contributions to the field, his mentoring, and his service to the Society for Psychophysiological Research.
- Professor **Bob Knight** has been awarded the 2015 Faculty Award for Excellence in Postdoctoral Mentoring. Sponsored by the Berkeley Postdoctoral Association and the vice chancellor for research, the award acknowledges faculty "who have gone above and beyond their academic obligations by fostering the professional and scientific development of postdoctoral researchers, while providing guidance, support, and a successful work environment".
- Professor **Silvia Bunge** received the Jacobs Foundation Advanced Career Research Fellowship, awarded to the most innovative mid-career researchers working on child and youth development, along with an Alexander von Humboldt Research Award.
- In recognition of his innumerable contributions to applied psychological research, Professor **Steve Hinshaw** received the 2016 James McKeen Cattell Fellow Award from the Association for Psychological Science.
- Honoring his extensive intellectual contributions to psychology, the Association for Psychological Science recognized Professor **Rich Ivry** in awarding him the 2016 William James Fellow Award.

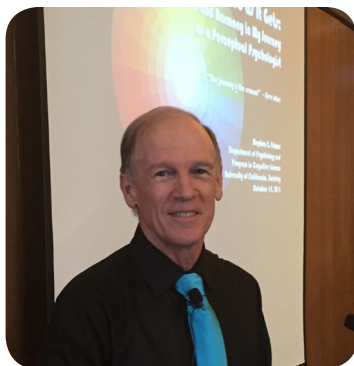
- Professor **Lucia Jacobs** is one of seven co-PIs on a team of researchers who received a \$6.4 million grant from the National Science Foundation to study how animals use their sense of smell for spatial navigation. The team is studying how odors move in landscapes, as well as how animals extract spatial and temporal cues from odors in the environment.
- Graduate student **Aya Williams** (Clinical) has recently received the APAGS/Psi Chi Junior Scientist Fellowship.
- Graduate student **Jonathan Reeves** (Clinical) received the Frank W. Putnam Trauma Research Scholars award sponsored by the International Society for Traumatic Stress Studies.

Department Events

- This year, the Department's Fall Faculty Series commenced in early September with **Bob Knight's** lecture, titled "Frontal Cortex Physiology and Human Behavior".



Later in the month, **Sheri Johnson** spoke about "Reward Sensitivity in Bipolar Disorder: Toward a More Specific Model".



On October 14th, **Steve Palmer** delivered the Distinguished Research Lecture with a talk titled "As Good as it Gets: Structure and Harmony in my Journey as a Perceptual Psychologist".

Serena Chen will wrap up the series in January with her talk, "The Power to be Me: How Power Shapes Perceptions and Expressions of the Self".

Professor Serena Chen Gives Homecoming Lecture on Self-Compassion



Are you being too hard on yourself? It may be time to pause for a moment and give yourself a "mental hug". As part of this year's Reunion and Parents Weekend at Homecoming, Dr. Serena Chen presented research on self-compassion, which involves taking a kind attitude toward yourself in order to avoid getting swept up in waves of negativity. Self-compassion involves three components: being kind toward yourself (rather than self-critical); taking a mindful, balanced approach toward your negative emotions; and recognizing that your plight is part of a shared human experience.

Speaking to an auditorium full of Berkeley parents, alumni, students, and other interested listeners, Serena described a series of studies demonstrating that self-compassion encourages people to improve themselves. For example, in one study, participants were first given a 'rigged' test: it was deliberately designed so that everyone would fail abysmally. Afterward, a subset of participants were induced to think about their failure with a self-compassionate mindset. In a later phase of the study, these were the people who spent longer studying for what they thought would be a second difficult test. Thus, it seems that reflecting upon a past setback with a nonjudgmental, kind attitude toward yourself motivates you to improve in the future.

Meet Some of the Psychology Department's First-Year Graduate Students

Nicholas Angelides (Cognitive Neuroscience)



Nicholas works with Professor Ming Hsu in the Neuroeconomics Lab. His research aims to characterize and modulate the neural mechanisms underlying competitive and cooperative social and economic behavior.

Previous to Berkeley, he received a master's degree from the University of Oxford and a bachelor's degree from Rutgers University, where he was captain of the varsity men's crew team.

Maria Eckstein (Cognitive Neuroscience)

After spending a year in Paris, France, and working as an au-pair, Maria started studying ancient languages and cognitive science, transferring to psychology a year later. She specialized in developmental psycholo-



gy and clinical neuropsychology and later added a philosophy major, focusing on the history of science and philosophy of the mind. Before starting graduate school in Berkeley, she studied neuroscience at the Graduate School of Systemic Neurosciences in Munich, Germany and conducted research on decision-making strategies, applying reinforcement learning and machine learning techniques. Here in Berkeley, she works with Silvia Bunge on reasoning and problem-solving in the brain. Whenever she is not busy she enjoys hiking, climbing, sailing, or playing the violin.

Vinitha Rangarajan (Cognitive Neuroscience)



Vinitha attended UC San Diego as an undergrad and now works with Professor Bob Knight. She studies the neural basis of visual perception in order to understand the cortical networks that support these functions. In

her free time, she also writes a cooking blog.

Niki Gumport (Clinical)

Niki attended Stanford University as an undergraduate and currently works with Professor Allison Harvey. Her research interests include treatment development, depression, and implementation of science. Her hobbies include baking cookies and running.



Paul Krueger (Cognitive Neuroscience)



Paul attended Brown University as an undergraduate and spent an additional three years as an RA at Princeton. Now working with Professor Sonia Bishop, he is interested in decision-making

and emotion using computational behavioral modeling and neuroimaging. He really enjoys getting outside and camping.

Paul Connor (Social/Personality)

Paul works with Drs. Dacher Keltner and Serena Chen. He completed his undergraduate degree at the University of Melbourne, Australia, where his research focused on climate change communication and the relationship between awe and pro-environmental attitudes and behaviors. His current research interests include intercultural differences in the experience of awe, and the psychological effects of economic inequality and social class. His 'go-to' fun fact is that he speaks Indonesian, which is actually not that fun to him unless someone else happens to speak Indonesian as well. If anyone in the department knows how to speak Indonesian he would like to know.

**Caitlin Eggleston (Clinical)**

After completing her undergraduate studies at Stanford, Caitlin now works with Dr. Allison Harvey. Her research interests include sleep, emotion, and adolescence. She enjoys running and is currently training to run a marathon next year.

**Allison Diamond (Clinical)**

Allie grew up in Boston and completed her undergrad studies in neuroscience at Wesleyan University. Now working with Professor Aaron Fisher, she is interested in developing treatments for mood and anxiety

disorders, as well as investigating the role of memory changes in the development of such disorders. In her free time, Allie enjoys exploring the beautiful hiking spots near Cal.

Jennifer Pearlstein (Clinical)

Jennifer is originally from St. Louis, Missouri and completed her undergraduate studies at Truman State University. She spent the past few years at Stanford University researching early intervention and prevention

for youth at high risk for bipolar disorder. She now works with Professor Sheri Johnson studying mechanisms of emotional impulsivity and cognitive control and how these in turn drive mania and depression, particularly in the context of stress.

Joe Winer (Cognitive Neuroscience)

Joe attended McGill University for undergrad. He works with Professors Matt Walker and Bill Jagust studying sleep and memory in aging, and the connection between sleep and Alzheimer's.

On weekends he goes for walks or plays bass guitar in his laundry room.



PsychologiCAL
3210 Tolman Hall
Department of Psychology
University of California
Berkeley, CA 94720-1650



To kick off the fall semester, the Psychology Department hosted a hot dog fest outside Tolman Hall. The event was a great opportunity for undergraduate students to meet fellow psychology majors and to chat with faculty members, including new department chair Ann Kring (pictured above).

Editor-in-Chief
Amanda Wang

Faculty Editor
Silvia Bunge

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3210 Tolman Hall