



UCI Academic
Senate

2022-23

**DISTINGUISHED
FACULTY
AWARDS**

MARCH 1, 2023
NEWKIRK ALUMNI CENTER

PROGRAM

WELCOME REMARKS

ACADEMIC SENATE CHAIR GEORG STRIEDTER

AWARD PRESENTATION

ACADEMIC SENATE BETTER WORLD AWARD

CHANCELLOR'S PROFESSOR CHRISTOPHER C. W. HUGHES

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DISTINGUISHED EARLY-CAREER FACULTY AWARD FOR TEACHING

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DISTINGUISHED FACULTY AWARD FOR TEACHING

PROFESSOR MICHAEL DESSEN

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ASSISTANT PROFESSOR ASAF FERBER

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PROFESSOR OF LAW SWETHAA S. BALLAKRISHNEN

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PROFESSOR JOHN CHAPUT

DISTINGUISHED SENIOR FACULTY AWARD FOR RESEARCH

DISTINGUISHED PROFESSOR ROXANE COHEN SILVER

AWARDS PRESENTED BY ACADEMIC SENATE CHAIR GEORG STRIEDTER

PRESENTATION

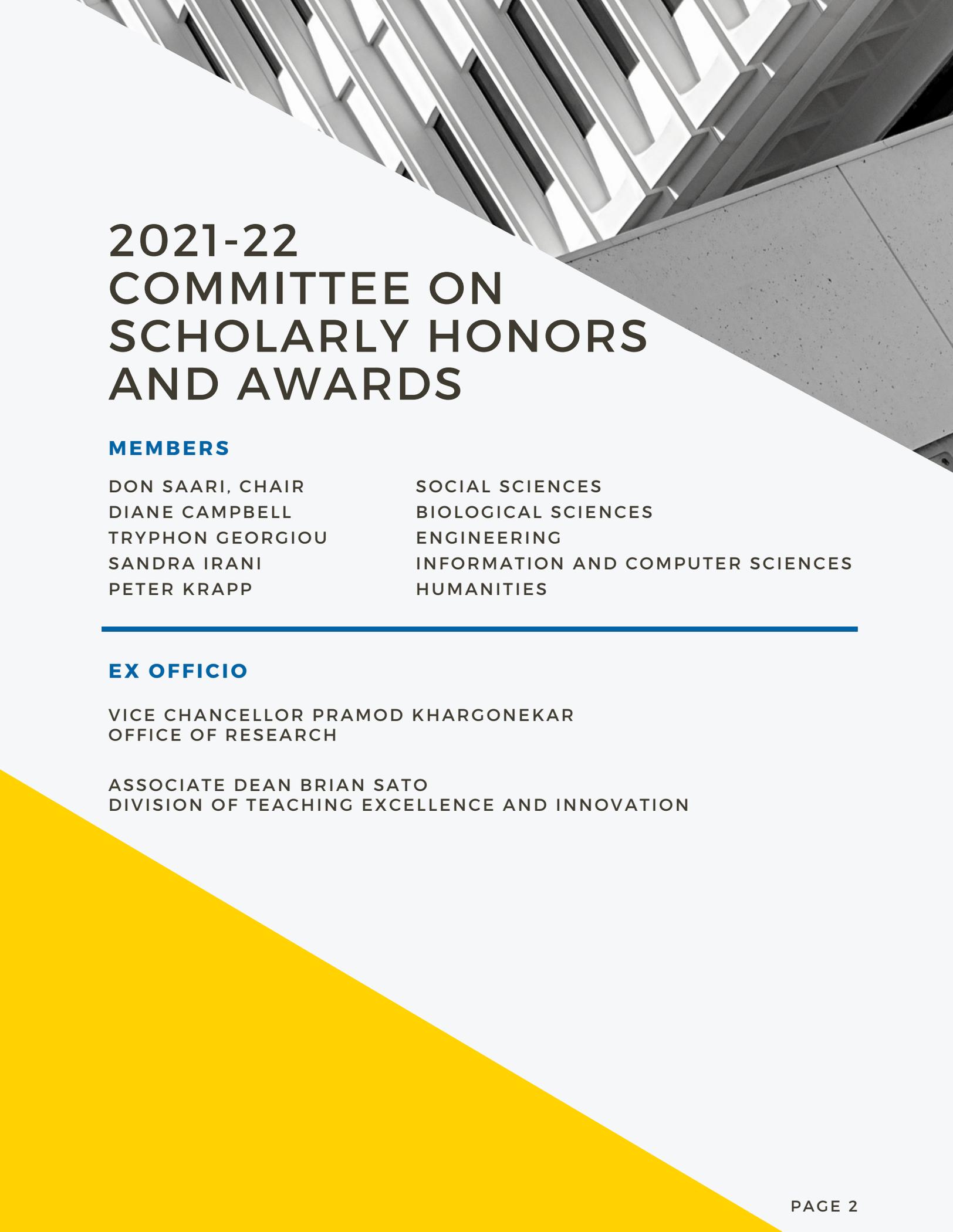
COPING WITH COLLECTIVE TRAUMAS: FROM MASS VIOLENCE TO COVID-19

DISTINGUISHED PROFESSOR ROXANE COHEN SILVER

CLOSING REMARKS

PROVOST AND EXECUTIVE VICE CHANCELLOR HAL S. STERN

RECEPTION



2021-22 COMMITTEE ON SCHOLARLY HONORS AND AWARDS

MEMBERS

DON SAARI, CHAIR
DIANE CAMPBELL
TRYPHON GEORGIU
SANDRA IRANI
PETER KRAPP

SOCIAL SCIENCES
BIOLOGICAL SCIENCES
ENGINEERING
INFORMATION AND COMPUTER SCIENCES
HUMANITIES

EX OFFICIO

VICE CHANCELLOR PRAMOD KHARGONEKAR
OFFICE OF RESEARCH

ASSOCIATE DEAN BRIAN SATO
DIVISION OF TEACHING EXCELLENCE AND INNOVATION



CHRISTOPHER C.W. HUGHES
CHANCELLOR'S PROFESSOR
DEPARTMENT OF MOLECULAR BIOLOGY AND
BIOCHEMISTRY & DEPARTMENT OF BIOMEDICAL
ENGINEERING

ACADEMIC SENATE BETTER WORLD AWARD

My desire to be a scientist of some sort goes back as far as I can remember, and so I feel myself very fortunate to be doing what I love as a career. I am also deeply honored to receive this award – who could not feel proud to be acknowledged for having made a better world, however incrementally!?

I grew up an hour north of London and earned my Bachelor's degree in Biochemistry at University College London, where I was first exposed to research – working on a project to understand how acetylation affects gene expression. The travel bug hit after college and I set off to backpack around Australia and South East Asia for a year. I clearly remember my first interview for a graduate student position when I returned – the professor looked at me, then down at my CV, then up again. “So, I see you’ve wasted the last year...” We went downhill from there. Thankfully my next interview, with the distinguished neuropathologist Peter Lantos, went much better – he appreciated the experience travel gives us and offered me a place in what is now King's College London.

After a brief stint working in Paris, I looked at the job landscape in the U.K. and decided it was not a pretty sight. A postdoc in the U.S. was in order, with a return to a hopefully better environment in a couple of years. That did not go quite as planned. I loved living in Boston, the work under Jordan Pober was exciting, and the scientific environment at Harvard endlessly stimulating. And to cap it all, I met the love of my life there. There was no going back. I did a second postdoc at Yale and then we moved to Irvine to begin a new life – me as an Assistant Professor, Michèle as a postdoc. Jerry Manning was Chair then and provided me with endless wonderful advice, some of it even career related.

My research had gravitated early to the study of blood vessels and it is in this area that I built my lab, working first on how blood vessels interact with the immune system – spoiler, it's really important in people, not so much in mice. Indeed, it was the major discrepancies between the go-to model of mice and how humans work that lead us to write a review called “Of Mice and Not Men” that laid out all the ways the two species differ. It was my last immunology paper and continues to be heavily cited over 18 years later – it's a great get-out-of-jail card for when your mouse experiments don't go quite as you hoped!

We moved on at this point to look at the molecular mechanisms of how blood vessels are built and how new ones are made when you need them. We established a now widely-used human cell-based blood-vessel-growth-in-a-dish assay, in part due to my growing awareness of the limitations of using mice to model human biology. And then came one of those chance meetings that changes everything. I was introduced to Steve George, a bioengineer, and an incredibly fruitful, now almost 20-year-long collaboration began. Along with Abe Lee we developed lab-grown, living, working blood vessels that could feed any tissue we wanted to grow. These microphysiological systems, or organs-on-chip, are seeing growing use in the pharmaceutical industry as a replacement for some animal studies. We were one of the first 10 groups in the U.S. funded to work on this technology and NIH still supports our efforts. I am proud that our work contributes to the 3Rs movement focused on the ethical use of animals in research, the goals of which are to reduce, refine, and replace.

So that's basic research. But what do you say when your 10-year-old daughter asks you, "Daddy, did you cure anyone today?" Well, no, basic research doesn't work that way. That conversation steered me to working closer to the clinical end of the science-medicine spectrum, and I am gratified to say that through my work with the rare disease charity cureHHT, which supports patients with the vascular disease HHT, I helped to design a clinical trial that showed how a repurposed drug could produce dramatic improvements in quality of life for these patients. So, did I cure them? No, but our work did help them.

And that's what you want to do as a scientist, in however small a way – make a better world.

FUN FACT

I've visited the most northerly and most southerly points of both the U.S. and the U.K.

RENÉE LINK
PROFESSOR OF TEACHING
DEPARTMENT OF CHEMISTRY

**DISTINGUISHED
FACULTY AWARD FOR MENTORSHIP**



I have focused my career in academia around one main goal – paying it forward. Receiving the mentorship award is an honor and a clear signal that I am achieving that goal. My focus on paying forward comes from the realization that although I have worked hard to succeed in my education and career, I would not have made it this far without the help and support of a tremendous number of people along the way. From the elementary and middle school teachers who took the time to help the perpetual new kid in class find her way (I moved constantly in these years, sometimes multiple times in a school year) to the high school teacher who recognized an insatiable hunger to learn chemistry and kept giving more and more challenging work above and beyond what was normal in his class, so many people offered their time and mentorship to ensure I succeeded in incredibly challenging circumstances. My phenomenal luck continued through my undergraduate education. From the community college professor who recognized and fostered my potential despite the fact that I constantly fell asleep in class due to sleep deprivation from working multiple jobs, to the employers in the biotech industry who took a chance on me so that I had the opportunity to work in my field while finishing my undergraduate degree, I would not have been able to become the first in my family to graduate from college without support. From my graduate research advisor who supported my goal of pursuing a teaching-focused career to the leadership of what is now UCI's DTEI (previously IRC, TLTC, and endless other acronyms) who helped me find the path, I have been given incredible opportunities and support to reach this point in my career.

In my role as Professor of Teaching in Chemistry at UCI, I am in a unique position that allows me to constantly pay forward all the support that was given to me along my journey. I structure my courses in such a way to create a more inclusive and equitable learning experience for students from all backgrounds, and my scholarship focuses on ways to scale these practices for very large courses. I am honest with my students about my own background, challenges, and not-so-perfect grades. Despite teaching massive courses with typical enrollments of over 1,000 students, I also watch for those who have great potential but are in danger of slipping through the cracks in a university system that was never designed for students like us. I serve as an informal mentor to as many of these students as I can find, helping them navigate the

hidden curriculum and university bureaucracy so that they can reach their goals. As a Professor of Teaching, I am privileged to be uniquely situated to impact students through my interactions with future, new, and current faculty. By serving as an informal mentor to graduate students seeking a teaching-focused rather than research-focused career (a pathway for which there is still a lack of formal support) and serving as a resource for my colleagues who are seeking ways to revise their own approaches to teaching to enable success for our ever more diverse student population, I continue to pay forward all the support that was given to me.

FUN FACT

I have a passion for dance, especially partnered social dances like salsa, and have been lucky enough to dance with some of the best in the world.



LONG BUI
ASSOCIATE PROFESSOR
DEPARTMENT OF GLOBAL AND
INTERNATIONAL STUDIES

**DISTINGUISHED
MID-CAREER FACULTY AWARD FOR SERVICE**

I started college as an undergraduate at the University of California, Irvine but found my way back to my alma mater as a faculty member. UCI was the first institution where I experienced some stability since I attended sixteen (16!) schools from K-12. I grew up in Houston, Texas and moved to Orange County as a teenager after “welfare reform” ended government support for poor single-parent families like mine. As the first to go to college in my entire extended family, I had many struggles but also found incredible mentors at UCI, who taught me the value of education and inclusive excellence. Having known poverty and precarity, I support others with similar backgrounds navigating the school system. For this reason, I decided to become a scholar-teacher-activist, understanding that true learning comes from service.

Educational access and equity are goals of mine. I am currently the campuswide director of the First-Generation Faculty Initiative. In this central role, I am responsible for coordinating and bridging all first-gen programming on campus. Working with the Humanities Center, I organized and hosted a book publishing workshop for first-gen authors. I am a member of the Council on Educational Policy, working to redefine teaching conditions after COVID-19, and revamping UCI’s multicultural studies requirement to contain anti-racist language reflective of the times. With a grant from the Office of Inclusive Excellence, I created the first podcast on first-gen faculty. This is my fourth year as director for a program called Summer Academic Enrichment Program (SAEP) to teach first-gen students about research and graduate school.

Beyond first-gen issues, I aim for intersectional advocacy for marginalized populations like women of color and incarcerated people. I organized a popular virtual event about Asian women and hate, featuring all female artists responding to the Atlanta spa shootings. I was faculty advisor to the student group, Prison Education Program (PEP), which trains UCI students to teach and tutor inmates at a local men’s prison. Related to this, I am a committee member for LIFTED, a program that provides a pathway for formerly incarcerated students to transfer to UCI, travelling to the prison at the border and vetting their applications.

To build a more anti-racist future, I am on the advisory committee for the

Diversity, Inclusion, & Racial Healing Ambassador (DIRHA), a program that brings together students from over a dozen local high schools to help them talk about diversity. I also help run Deconstructing Diversity Initiative (DDI), which trains UCI students to practice and teach activism in their respective communities. Through DDI, I traveled with UCI students over the summer, guiding them through a social justice tour. The work parallels my role as the current director of the Center for Truth and Racial Healing. Here, I help devise public events like one that featured Native Americans seeking to heal from their time in the U.S. Indian Boarding School system. My service was recognized when in 2022, I received the first Diversity & Equitable Inclusion Award and DECADE Excellence Award.

Other service commitments include being my home department's current Undergraduate Advisor, supporting majors stuck abroad during the pandemic. I am my department's first and current DECADE mentor, organizing workshops for graduate students on professionalization and networking. I am an editor and curator for Vietnamese Arts and Letters Association's annual film festival. Last year, I was selected to be an official judge to pick street murals for the city of Santa Ana, selecting murals that reflected the spirit of the community.

FUN FACT

I am a professional astrologer, tarot-reader, and fortune-teller.

DAN M. COOPER
DISTINGUISHED PROFESSOR
DEPARTMENT OF PEDIATRICS

**DANIEL G. ALDRICH, JR. DISTINGUISHED
UNIVERSITY SERVICE AWARD**



The Aldrich Award is a high honor, and one that I am deeply grateful for. It is particularly meaningful as my debt and commitment to the University of California is rich and longstanding. I was one of the first undergraduates at the newly established Santa Cruz campus. I graduated in 1970, living through the tumultuous and, nonetheless, invigorating '60s. I heard Timothy Leary in person when he said, "Turn on, tune in, drop out" (uh, I didn't!); got to spend two hours alone in discussion with Edward Teller, father of the hydrogen bomb; helped organize an eight-hour "be-in" with hundreds of UCSC students and faculty led by Rabbi Shlomo Carlebach; helped organize "teach-ins" on the war in Vietnam; and hosted Teatro Campesino educating the community through theater during the United Farm Workers' California Grape Strike. UCSC was UC President Clark Kerr's answer to the lack of undergraduate teaching at premier UC venues like Berkeley. We had no grades; we received written evaluations for each of our courses. I constructed my own major in "community studies" and was able to get university credit for tutoring inner-city kids in Santa Cruz and spending six months working on a kibbutz in Israel.

With this odd background, I too was surprised to then be accepted for medical school at UC San Francisco. UCSF was a great experience. I did continue my UCSC spirit of adventure and was able to spend time working with physicians in public health activities in the mountains of Oaxaca, in remote villages.

Service to society was a major guiding principle of many of my UCSC and med school contemporaries. Growing up in the age of "if you are not part of the solution, you are part of the problem" was a powerful and abiding influence on all that I have done. After med school and an internship at San Francisco General Hospital, I had the unique opportunity to train for a year at the newly re-opened Hadassah Hospital, Mount Scopus, in Jerusalem.

I completed my pediatrics training at NYU/Bellevue Medical Center. I had never thought that I would be characterized as a "physician-scientist." My goal was to complete my pediatrics training and save the world by working as a pediatrician in some aspect of public health. But I distinctly remember as a pediatric resident sitting at the bedside of a 12-year-old boy dying of cystic fibrosis (then, an almost invariably fatal congenital lung disease) with our whole

team, helpless, all realizing that we had nothing left to offer this child and his family.

A few days later I came upon an ad for openings in what was then a brand-new subspecialty, pediatric pulmonology, at Columbia University. The fellowship was described as very research focused, and a bit daunting. What was compelling was the idea that maybe I could help discover something that could improve therapy for kids with CF and avoid the tragedy I had just witnessed. Dr. Robert Mellins, leader of the Columbia program, somehow knew exactly what to say to me. "Dan, look, I get you. The point about spending a lot of time in the lab, no matter what you end up doing, you will be a better physician for it." And he was right.

I was then recruited to Harbor-UCLA Medical Center where I worked closely with pioneering exercise scientists Drs. Brian Whipp and Karlman Wasserman. This theme, the interaction of exercise, growth, and development in health and disease, has fueled my research career for the past 4-5 decades.

I also had the wonderful opportunity of becoming a faculty member in the Harbor-UCLA Department of Pediatrics, led by one of the truly great pediatric mentors, Dr. Joe St. Geme. In 1992, in collaboration with the MLK-Drew Medical Center and CHOC Children's Hospital, we established the first ACGME accredited postdoctoral training fellowship in pediatric critical care medicine in the state of California. A major aim of the fellowship was to encourage the recruitment of excellent pediatricians from underrepresented minority communities.

I was recruited to UCI by Dean Tom Cesario and Pediatrics Chair Ira Lott in 1997. One of the first tasks I was asked to undertake was to obtain an NIH General Clinical Research Center (GCRC) grant. GCRC grants were considered a true mark of distinction for academic health centers and provided key infrastructure for human and clinical research, largely funded by the NIH.

I served as Chair of the UCI Department of Pediatrics from 2010-2015. I was tasked with the challenge of bridging the gap between the only free-standing children's hospital in our region and UCI's Department of Pediatrics. Natural partners, a generation of unhealthy competition and infighting had prevented these two institutions from meaningful collaboration. I oversaw the first formal clinical and academic agreement between these two institutions in two decades. The affiliation continues to develop and is accelerating toward the goal of collaboratively creating a world class children's health center.

The GCRCs evolved into the Clinical Translational Science Awards (CTSA). We

established the UC Irvine Institute for Clinical and Translational Science (ICTS) in 2008 and led the team that successfully transitioned from the GCRC to the CTSA. The ICTS became an official NIH CTSA in 2010. Our team successfully renewed the CTSA in 2015 and 2019. The UCI ICTS mantra is “from lab to life” and echoes the goal of the CTSA program which the NIH sees as an institutional multidisciplinary enterprise designed to accelerate the implementation of biomedical discovery into clinical care. During the COVID-19 pandemic, the ICTS helped lead the UCI-CHOC Healthy School Restart program which worked with schools throughout our region to minimize adverse consequences of the COVID-19 pandemic.

Undoubtedly, however, my greatest accomplishment was to have (through great good fortune) somehow convinced a remarkable individual, Katherine, to agree to become my partner and companion and to have raised with her two lovely children, Emma and Nora.

FUN FACT

I really enjoy mountain biking in Bommer Canyon while listening to audiobooks about the quantum mechanics of time and space.



CELIA LOUISE FAIOLA
ASSOCIATE PROFESSOR
DEPARTMENT OF ECOLOGY AND
EVOLUTIONARY BIOLOGY

**DISTINGUISHED
EARLY-CAREER FACULTY AWARD FOR TEACHING**

I am incredibly honored to receive the Distinguished Early-Career Faculty Award for Teaching. I am in awe of the inspiring professors I have met across UCI's campus, and it is truly humbling to be recognized with this award while standing amongst so many exceptional educators.

I grew up in a small rural town in the Pacific Northwest, granddaughter of three public schoolteachers who were beloved by their small community. I was raised to deeply value public institutions of learning and honor their power as the foundation for an equitable society. My grandfather, Ronald Braun, was particularly influential in shaping my research and teaching interests. He taught high school biology and was an avid naturalist. Some of my earliest memories include hiking around the Idaho mountains together. We never moved very quickly because every observation had to be promptly recorded in his field notebook. How long did the snow persist each spring? Which alpine flowers were blooming and where? What size were the elk herds this year? It took us a long time to get anywhere, but the destination was never the goal anyway. The experience was the goal. I loved spending time outdoors and learning about the natural world.

As an undergraduate, I planned to follow in my grandfather's footsteps and become a high school science teacher. All my plans changed after I was hired as an undergraduate research assistant to study the health impacts of ultrafine atmospheric aerosols – tiny particles suspended in the air all around us. I was fascinated by the complexity of these particles -- these little things we cannot see without the aid of microscopes, composed of thousands of different compounds with influences on both human and ecosystem health. I have been studying atmospheric aerosols ever since, with a particular emphasis on plant-aerosol interactions in a changing climate. I completed my Ph.D. in the Laboratory for Atmospheric Research at Washington State University in 2014 and moved to Kuopio, Finland for my postdoctoral work in the Aerosol Physics Research Group. I started my career at UCI in 2016 in the Ecology and Evolutionary Biology (EEB) Department as part of a cluster hire in atmospheric chemistry, an initiative led by Professor Barbara Finlayson-Pitts in Chemistry. I am so thankful to have found a home at UCI and particularly grateful that EEB was willing to hire me, someone with a research focus that defies boundaries

set by traditional disciplines.

My teaching philosophy is heavily inspired by my early research experiences as an undergraduate. I had always excelled in my courses, but never truly understood scientific inquiry until I engaged in authentic research. I was disappointed that my coursework had not prepared me to be a scientist. I design my courses to remind students that “science” is not learning about all the cool research someone else has done; it’s about the process of building off previous work to generate new knowledge by doing your own very cool research! As such, I integrate opportunities for authentic inquiry into all my courses with an emphasis on data literacy and creative problem-solving. I use a specifications grading framework where final grades are directly tied to mastery of course learning objectives. There are no points or partial credit. I aim for my classes to provide students a space for scientific creativity to explore their world, the safety they need to learn from mistakes, opportunities to revise and grow, and scaffolding to equip them with the tools they need to do so. It is a genuine pleasure to work with the wonderful students at UCI.

FUN FACT

I watched Titanic in the movie theater more than 10 times because it was the only movie playing in my town for over a year. The sound of Celine Dion still produces an involuntary shudder.

MICHAEL DESSEN
PROFESSOR
DEPARTMENT OF MUSIC

**DISTINGUISHED
FACULTY AWARD FOR TEACHING**



From early childhood, I felt a visceral connection with music, first learning by ear in family settings, and later immersing myself in trombone performance and European classical music. While deepening those studies at a conservatory, my experiences with peers outside the classroom expanded my musical worlds, and by the time I graduated, I was fascinated with composition, improvisation, jazz, salsa, electronics, experimental and avant-garde musics, Indian music, West African music - the list was endless.

Feeling that vastness, I had no interest in specialized graduate programs and avoided them for years, until one day when I learned that composer-saxophonist Yusef Lateef was teaching in a master's program at a nearby university. I jumped at the chance to study with him. An iconic figure in jazz who refused to use that word, Lateef profoundly influenced me through his ability to integrate divergent ideas and practices in a highly individual way. Witnessing his status as an under-valued adjunct instructor also opened my eyes to the stakes of inclusion in academic institutions.

I was soon drawn to UC San Diego by the chance to study in a new Ph.D. program called Critical Studies and Experimental Practices with George E. Lewis and Anthony Davis, two other innovative Black American composer-improvisers who had an equally deep impact on me. There, I was introduced to a wide range of theoretical scholarship and musical practices, including the legacies of "creative music," a term used by African American musicians in the 1960s and '70s to articulate an interwoven sense of artistic mobility and political agency. In parallel, I composed and performed my own music with a growing network of collaborators, and also spent endless nights freelancing in bars and weddings with diverse bands to supplement my income.

All those experiences expanded my perspective again, but not only through new sounds: I was also pushed to confront new ways of thinking about the cultural work that music does in the world, including how music making is mediated by race, gender, and class. That critical training helped ground my emerging professional values, and also gave me richer tools for understanding my life experiences, which include growing up in the south in the aftermath of the Civil Rights Movement as a white person, and falling in love with a

Venezuelan artist and being part of her Latin American immigrant family for 30 years.

As a composer-improviser, trombonist, and technologist, I create highly interactive, improvisatory music inspired especially by "jazz" and adjacent traditions, and I also explore the potentials of telematic/networked music performance and other real-time technologies. My writing and teaching interests grow from the ethical and poetic implications of those artistic practices and the communities surrounding them. In recent years, I have also focused on working with youth in ways inspired by Connected Learning frameworks, particularly as co-director of Telematic Bridges/Puentes Telemáticos, an intercultural, telepresent music program that connects music students from Santa Ana High School with peers in Manizales, Colombia.

I joined the UCI faculty in 2006, and immediately collaborated with several colleagues to design a new MFA (now Ph.D.) program called Integrated Composition, Improvisation and Technology (ICIT), seeking together to animate the field with new models of graduate music training. Helping grow ICIT has been a joyful, ongoing learning experience, and the same is true of my undergraduate teaching, where I offer courses on a variety of topics for both music majors and GE students. Working at UCI is truly a privilege, and I am extremely grateful to receive this teaching award.

FUN FACT

I've held numerous and wildly different non-music jobs, and I think I was at least competent at all of them, except for one: as a vacuum cleaner salesperson, I was a total failure.



ASAF FERBER
ASSISTANT PROFESSOR
DEPARTMENT OF MATHEMATICS

**DISTINGUISHED
EARLY-CAREER FACULTY AWARD FOR RESEARCH**

I am truly honored to receive the distinguished early-career award. I would like to thank all my collaborators, students, and friends for many productive interactions, fruitful exchange of ideas, and many joint results. Without you I would definitely not receive this prize.

When I started at Tel Aviv University, I chose a math major without really knowing what I was in for. I just felt comfortable with math in high school. In my freshman year, I took some basic classes just for credit, but I wasn't as interested in math as I was in having a good time in Tel Aviv. It was only at the end of the second year of my studies, when I took a class on set theory, that something changed in my attitude. That's when I decided to start dedicating most of my time to learning and understanding math.

I started taking more classes, and after graduating, hungry for more, I signed up for a master's program in set theory. During my master's, I explored other areas of math and fell in love with combinatorics, the art of counting. While it sounds simple, its depth and beauty led me to take it up as my main research interest.

As a Ph.D. student I was into positional games, which involve two players with perfect information (think Chess, HEX, Tic-Tac-Toe and its generalizations, and more). Even though it is known (in theory) that in such games one of the players can always achieve at least a draw, I really enjoyed developing general methods to efficiently win such games. As a postdoc I broadened my research interests and started working on problems at the intersection of probability and graph theory, such as embedding large structures in random/pseudorandom networks, and also got into the area of (combinatorial) random matrices, developing new combinatorial tools to tackle some classical problems.

Just a few months after starting at UCI, the pandemic started. During the lockdown, I formed an online research group with students and collaborators from all around the world, where we met quite frequently to exchange ideas and discuss open problems. This initiative, which lasted for around two years, resulted in quite a few publications in various areas of discrete mathematics, and some of my favorite projects I've worked on. This prize is partially given to

me thanks to the results and achievements we collaboratively obtained during these meetings, and I'm grateful to all the participants, including those who did not end up as co-authors on the projects.

I have always been motivated to learn new topics and to broaden my knowledge, and I have especially loved working with graduate and undergraduate students, guiding them through their first steps in academia and teaching them, and myself, new topics and methods. As a result, some of my best papers are with the younger generation and my most satisfactory achievement is by far the fact that my name is mentioned as an influential person on quite a few Ph.D. dissertations! (I still keep copies of a few such dissertations on a bookshelf in my office.) I hope that one of the up-and-coming young researchers I've worked with will be up here accepting this award soon.

In general, I believe in hard work and persistence, and I never lose patience or motivation while thinking about problems for a long time, even if it seems like I have made no significant progress. Recently I have started learning and thinking about problems in quantum computation. Who knows, maybe my next prize will be due to my contribution in this area!

FUN FACT

Since I moved to Southern California, I started training in Muay Thai. I sometimes come to class wearing makeup in order to hide a black eye.

SWETHAA S. BALLAKRISHNEN

PROFESSOR OF LAW
SCHOOL OF LAW

**DISTINGUISHED
EARLY-CAREER FACULTY AWARD FOR RESEARCH**



I am an interdisciplinary scholar who started my tenure-track career at the School of Law in 2019. Primarily oriented within a socio-legal praxis, I write and teach about law's connection to actors, institutions, and relationships at the periphery, broadly defined. Over the last several years, this research agenda has focused on the lived experience of different kinds of diverse actors within professional organizations and the educational pipelines that lead to them. Particularly, I have been (and remain) interested in critically examining the commitments that organizations have towards equity, diversity, and inclusion (“EDI”) by investigating how minority actors claim agency, navigate, and excel within these structures. Although the methods (e.g., ethnography, interviews, survey data, content and network analysis), sites (e.g., global law firms, legal process outsourcing units, law schools), and identities of interest (e.g., gender, immigrant, racial, religious, queer) have varied across my projects, three main – and interrelated – strains of inquiry have framed their broader focus.

The first strain has been to locate the ways in which professional sites create and dismantle new kinds of structural hierarchies by paying attention to who is being excluded with any policy of inclusion and vice versa. For example, my research on international students shows that policies in law schools exclude these students even as they rely on them. On the other hand, my research on large law firms in India reveals how these firms were oases of gender parity despite not having an agenda to be inclusive to women. The second strain within this research has been to observe the dissonance between intention and action by tracking both the ways in which organizational inequalities persist despite performance and projection of an equity rhetoric, as well as to notice positive outcomes and progress produced without intention. For example, colleagues and I argue that most organizations start with good intentions of wanting to make a change, but are struck by the structural ennui of the conditions they are embedded in. We suggest that rather than tackling this intention with difference blindness – as, we find, most law firms adopt – having more committed bias awareness could help reduce the decoupling between intention and action. In contrast, in large law firms in India, the decoupling worked in the opposite direction – it was the lack of intention that allowed for the production of seemingly feminist outcomes. Finally, the third strain has been an analytical approach rooted in grounded ethnography and critical race

theory that is centered around the experience of minority actors within the contexts of inquiry rather than to add them as additional points of analysis. This departure from older models of research in organizational sociology which tests success from the organization's viewpoint is intentional. By centering the experience of the minority actors as the starting point of analysis, I use their narrative as the standard by which to gauge organizational or policy "success."

The last few years at UCI have offered me the resources and community to significantly commit to these interrelated strains of inquiry. In 2021, for example, my first monograph, *Accidental Feminism* (Princeton University Press), won honors from the Law and Society Association and the American Sociological Association in addition to getting shortlisted for India's biggest nonfiction book award. But beyond the impact UCI Law's institutional structures have had on my academic output (two national grants, three books, six articles, and five book chapters since 2019), I have felt valued by my amazing colleagues and inspired by their commitments. It is this alchemy of factors that makes it especially humbling to receive this early-career award.

FUN FACT

(I don't know if it is interesting...) I am petrified of birds, and not in a cute way. And no, it is not because I saw the Hitchcock movie.



JOHN CHAPUT
PROFESSOR

DEPARTMENT OF PHARMACEUTICAL SCIENCE

**DISTINGUISHED
MID-CAREER FACULTY AWARD FOR RESEARCH**

I am honored to receive the Distinguished Mid-Career Award for Research for my contributions to the fields of chemical and synthetic biology. These past years have taken me on an exciting and unanticipated journey from the earliest stages of my career, where scientific ideas were the mere musings of a dreamer, to the present time, in which hard-earned results are now tiptoeing on the doorstep of commercialization. Of course, none of this would have been possible if not for the hard work and dedication of all the past and present students in my lab, many of whom have gone on to successful careers of their own. So just as I'm touched by the generosity of my colleagues, I am also grateful for the drive and determination of my students, who continue to embrace the concept of team science as a driving force for transformation.

My lab is one of the few places in the world where students can study the evolution of artificial genetic polymers—synthetic forms of genetic sequences that contain an alternative sugar in place of the natural sugar found in DNA. So just as the D in DNA stands for deoxyribose, our polymers are often referred to as XNA, where X is a placeholder for your favorite sugar. For us, it's threose nucleic acid or TNA. Across the lab, students are busy synthesizing TNA building blocks, evolving enzymes called polymerases that allow us to convert sequence information back and forth between DNA and TNA, determining the 3D structures of TNA polymerases, and exploiting a growing toolkit of reagents to establish practical applications that benefit humanity. For students interested in drug discovery, this setting offers an ideal environment for interdisciplinary training in oligonucleotide therapeutics.

As a scholar, I am best known for my contribution to the discovery that the concepts of heredity and evolution are not limited to DNA and RNA, but instead represent a general property of linear polymers that are capable of information storage. This breakthrough led to a new area of synthetic biology called synthetic genetics, where researchers are exploring the 'genetics' of XNA polymers in laboratory experiments. In my lab, for example, we apply the principles of Darwinian evolution to produce affinity reagents called aptamers that mimic antibodies by binding to a desired target, such as a disease-associated protein. Over the years, we have refined this artisan tradecraft to the point that we can now generate TNA aptamers to nearly any target of interest.

Since TNA is invisible to the enzymes that degrade DNA and RNA, this approach offers a path for creating reagents that could soon compete with therapeutic antibodies in biomedical applications.

My work on TNA aptamers has attracted attention from a major technology company that is interested in creating more effective aptamers by combining our Darwinian evolution process with their machine learning (ML) capabilities. In a recent publication, we showed how an ML-based approach inspired by neural networks could be used to predict the sequence of a TNA aptamer that can bind a target with the same activity observed for a top experimental sequence. Moving forward, we are working to accelerate the discovery of TNA aptamers by attempting to mimic the evolutionary process in a computer. If successful, this approach could lead to a better and more cost-effective alternative to therapeutic antibodies, which are a hugely successful but extremely expensive class of drugs.

Elsewhere in the lab, students are developing gene silencing agents that prevent disease-causing proteins from being made inside our cells. Our approach to this problem involves a specific type of reagent called DNA enzymes (DNAzymes) that are able to recognize genetic mistakes that arise as we age. Working with a startup company, we are applying our knowledge of chemistry to design DNAzymes that function as drugs against targets that are currently thought to be undruggable. If successful, this approach could offer a new paradigm for personalized medicine.

Although the path I have taken may seem straightforward, in reality, there were many twists and turns along the way that could have easily led to different outcomes. In this regard, I was fortunate to have a collection of mentors that helped me think more deeply about science and the problems I found most interesting. My journey began at Creighton University, where Martin Hulce encouraged me to pursue a Ph.D. in Chemistry. Then as a graduate student at UC Riverside, Chris Switzer taught me the art of chemical synthesis and how to prepare synthetic DNA molecules with properties mimicking those of natural DNA. Recognizing the growing convergence between chemistry and biology, I was drawn to the biological sciences, as I pursued my postdoctoral training in the Departments of Molecular Biology and Genetics at Harvard Medical School. Working under the direction of Jack Szostak, I learned the intricacies of protein evolution and developed early methods for replicating XNA polymers. Armed with the knowledge of how to build molecules that are not commercially available and evolve enzymes to recognize them, I began my independent academic career at Arizona State University (ASU) in 2004. As a spousal hire, I moved my lab to UCI in 2015 to focus on biomedical applications of evolvable XNA polymers.

I have authored more than 100 articles in scientific journals and hold several patents that are licensed to companies. I have made appearances on the Science Channel, including a notable episode on 'Through the Wormhole' with Morgan Freeman. I am an AAAS Fellow and member of the American Chemical Society, Sigma Xi Honor Society, and an overseas fellow of the Royal Society of Medicine. I am a recipient of the NIH EUREKA Award, W.M. Keck Foundation Award, Arizona Technology Enterprise Achievement Award, ASU Faculty Award for Excellence in Defining Edge Research, UCI Athalie R. Clarke Research Achievement Award, and now the UCI Distinguished Mid-Career Faculty Award for Research, for which I am truly honored and grateful.

FUN FACT

I enjoy rebuilding antique Wurlitzer jukeboxes.

ROXANE COHEN SILVER
DISTINGUISHED PROFESSOR
DEPARTMENT OF PSYCHOLOGICAL SCIENCE

**DISTINGUISHED
SENIOR FACULTY AWARD FOR RESEARCH**



I am honored and humbled to be included among the list of distinguished past recipients of this award and I am extremely appreciative of my colleagues' recognition of my research. I grew up in Skokie, Illinois, which at the time was the home of the largest number of concentration camp survivors in the world outside Israel. Although no one from my family was directly affected by the Holocaust, my worldview was nonetheless shaped by watching men with numbers etched into their arms scooping coleslaw at the local deli. I am the oldest daughter of an electrical engineer and a homemaker, and I asked existential questions at an early age. Whether demanding an explanation from my mother of the purpose of life when my grandfather died or puzzling over the draw of Pentecostal churches in the suburbs of Chicago (which I visited with my born-again high school friends who thought they might successfully convert me to Christianity), I was always questioning the validity of what I was told and was rarely satisfied with the answers I received. My mother tried to get me interested in ballet classes and piano lessons. But I was far more interested in practicing long division problems (which I learned from my father), debating my parents about stereotypes, analyzing social situations, and making friends with children who were very different from me. Indeed, I was a budding social psychologist before I knew the name for it.

There are many reasons why I began to focus early in my career on studying how individuals cope with traumatic life experiences. When I was in high school, my best friend's father died within three months of learning that he had a brain tumor - and I did not know how to help her cope with the loss. I also wanted to understand how Holocaust survivors were able to be such productive members of my community. While in graduate school and encouraged by my advisor Camille Wortman, I began a review of the literature on Kubler-Ross's stages of dying. As in my childhood when I was reluctant to accept what I was told just because others said it was true, I continued to look unsuccessfully for research evidence to support the stage theory. Three years later in 1980, our chapter "Coping with Undesirable Life Events" was published, a topic that Wortman and I would return to and update three times over the next two decades. In this work we challenged existing views of a one-size-fits-all model of how individuals cope with stressful life events. We argued against an orderly sequence of stages of emotional response. We asserted that one

should not expect “recovery” according to a specific timetable.

I began my academic career in Ontario, Canada, as an assistant professor of psychology at the University of Waterloo. In the late 1980s my close friend and former graduate school officemate convinced me to move to UCLA for a visiting year. Unexpectedly, I loved the West Coast. In 1989, I joined the School of Social Ecology at UC Irvine, and I have remained here for the bulk of my career.

Over the decades, my work on coping with stressful life events has taken an interdisciplinary approach, drawing primarily from social, health, and clinical psychology, as well as from related areas such as public health, psychiatry, and medicine. I rarely study samples of “convenience.” Instead, one might reasonably argue that I select samples of inconvenience—adult survivors of childhood incest experiences, spinal-cord-injured patients, the recently bereaved, and so forth. The September 11, 2001, terrorist attacks were a turning point for me as they brought a long-standing focus of my work -- understanding how people cope with unpredictable and uncontrollable community-wide disasters -- into the public eye. And the stress of 2020 and beyond – the COVID-19 pandemic, the economic fallout, the belated racial reckoning, climate-related disasters, and mass violence events – has brought to the forefront of our consciousness the importance of understanding how to facilitate successful coping and foster resilience in the midst of compounding collective traumas.

Over the years, I have been privileged to have received generous funding from the National Science Foundation to facilitate my research. I have also had the support and incredible assistance of dozens of colleagues and outstanding students in conducting my research. But most of all, I had the support of my family – parents, siblings, husband, and children – who perhaps did not understand but nonetheless tolerated my intensity and passion in the pursuit of answers.

FUN FACT

I am the last to adopt new technologies. I have four old Blackberry phones in my desk drawer, and I was probably the only person in Southern California to use a Blackberry throughout the pandemic. Sadly, my last Blackberry died around midnight on December 31, 2021. That has been one of the more stressful aspects of the past year for me.

PRESENTATION

COPING WITH COLLECTIVE TRAUMAS: FROM MASS VIOLENCE TO COVID-19 **ROXANE COHEN SILVER, PH.D.**

At some point, most people encounter stressful events that can have a major impact on the course and direction of their lives. Decades of research have demonstrated that these traumatic experiences can have both acute and long-term mental and physical health consequences. This lecture will describe a program of research on coping with community disasters such as mass violence events (e.g., terrorist attacks) and infectious disease outbreaks (e.g., COVID-19) and the important role played by the media in psychological response to these collective traumas. I will report findings demonstrating how repeated exposure to news coverage of these events is linked to acute and post-traumatic stress responses and physical health problems over time. Data also suggest the effects of this media coverage may be cumulative: trauma-related media exposure perpetuates a cycle of high distress and media use over time. Finally, I will focus on the unique combination of stressors experienced by individuals across the U.S. since early 2020 and discuss how to facilitate resilience in the face of COVID-19 and its aftermath.