

Abstracts and Bios

as of 9/18/2026

Luis Alvarez, Adjunct Professor (Merritt College)

Title: Merritt Microscopy Program: Changing Lives Through Community

Abstract: The Merritt Microscopy Program provides an avenue for students to develop new career paths and passions. Opportunities are provided for students to collaborate and gain laboratory skills for use in their next phase of their lives!

Bio: An adjunct professor at Merritt College during the evenings and a staff member of UC Berkeley's Molecular Imaging Center during the day. Luis earned his Bachelor's degree at the University of California, Davis, as well as an optical microscopy certificate from Merritt College. He handles training users on the laser scanning confocal microscopes, as well as, instructing students on microscopic lab practices. Outside of the lab he enjoys spending time with his wife Ana, along with family and friends. They enjoy nature hikes, attending sporting events, and traveling to new destinations.

Julie Auger, Executive Director Research Operations (Salk Institute)

Title: Business Skills Workshop & Recharge Setting Guidelines

Abstract: (see Cassie Sather)

Bio: Julie Auger serves as the Executive Director of Research Operations at the Salk Institute for Biological Studies, where she provides strategic leadership for the institute's shared scientific resources, including core facilities, animal research, and technology initiatives that support world-class biomedical research. She brings more than two decades of experience in shared research resource administration, having previously led core facility programs at the University of California, Davis, the University of Chicago, and the University of California, San Francisco.

With a scientific background in immunology and cell biology and extensive experience directing flow cytometry, antibody production, and immunohistochemistry core facilities, Julie is recognized nationally for advancing operational excellence, business planning, and sustainable management of shared research resources. She is a frequent speaker and educator on business strategy, budgeting, customer engagement, and organizational leadership for research core facilities.

Julie is an active leader within the Association of Biomolecular Resource Facilities (ABRF), and currently serves as Faculty in the ABRF Business Skills Program. She previously served on ABRF's Executive Board, and as its Treasurer.

David Gu, Co-Founder (LabGiant)

Title: What Happens When Every Core Is on the Same Marketplace

Abstract: Core facilities are invisible to many of the researchers who need them most: the lab across campus, the startup down the street, the group at a neighboring institution paying an outside vendor for a service that sits idle twenty minutes away. Most regions have no single place where a researcher can see every core available to them and book it. The capacity goes unused, and the cost recovery goes with it.

This talk describes how such a place was built in Quebec. What started as a single facility listing at McGill grew into a shared marketplace of over 150 core facilities across 18 institutions, where a researcher finds the core,

sends the request, books the time, and gets invoiced without leaving it. The talk covers how it formed, what it did for the cores on it, and what it took from everyone to get there. It ends where it goes next: California, early 2027, and the cores that will already be on it when it opens.

Bio: David Gu co-founded LabGiant, the marketplace where researchers find and book core facilities. It started in one McGill lab and now lists over 150 facilities across major institutions in Canada. Before LabGiant, David built enterprise AI at RBC, worked on medical AI at the Montreal Neurological Institute, and co-founded Hilt, a cybersecurity company valued at over \$50 million.

Kartoosh Heydari, Director, Cancer Research Laboratory FACS Core Facility (UC Berkeley)

Title: From FACS to Hi-D Clinical Trial FACS

Abstract: Invented in the late 1960s, Fluorescence-Activated Cell Sorter (FACS) is recognized by the National Academy of Medicine as a premier engineering breakthrough in medical history. Today, FACS is a cornerstone of translational medicine and cellular therapy, enabling the precise isolation of therapeutic immune cell subsets—such as regulatory T cells (Tregs)—to mitigate life-threatening graft-versus-host disease (GvHD) following stem cell transplantation. Despite its critical clinical utility, standardized, rigorous academic training in advanced flow cytometry has historically been scarce. To bridge this translational gap, UC Berkeley pioneered the first academically accredited FACS curriculum in 2023. This landmark course provides emerging scientists with a structured, expert-led learning environment that standardizes technical education, elevates researcher qualifications, and directly aligns with industry workforce demands. By integrating foundational principles with modern clinical applications and accredited training, this curriculum establishes a reproducible model for workforce development in advanced biomedical technologies.

Bio: Kartoosh Heydari obtained his MD from Linköping University, Sweden, in 2001. He completed a postdoctoral fellowship with Stanford professors Leonard "Len" and Leonore "Lee" Herzenberg, inventors of FACS (Fluorescence-Activated Cell Sorter) and recipients of the 2006 Kyoto Prize (Japanese Nobel Prize) for the invention. Kartoosh held various senior positions in the biomedical and biotechnology fields at Stanford University, Yale University, and UC Berkeley. From 2018 to 2022, he served as Director of the GMP-FACS Facility and Associate Scientific Director of IND development at Stanford Healthcare-Cellular Therapy Facility (SHC-CTF). Since 2022, Kartoosh has served as Director of the Cancer Research Laboratory FACS Core Facility at UCB, supporting 300+ scientists with his team. In 2023, Kartoosh founded the world's first academically accredited FACS course (14 weeks, 2 units).

Amanda Hoppers, Sr. Field Applications Scientist (New England Biolabs)

Title: Advancing Genomics in Academic Core Facilities with the NEBNext Portfolio

Abstract: This talk highlights how New England Biolabs (NEB) partners with the genomics community to develop practical, innovative solutions for next-generation sequencing (NGS). Attendees will gain an overview of the NEBNext® portfolio, including DNA and RNA library preparation, target enrichment, epigenomics, and long-read sequencing workflows, along with recent innovations designed to improve workflow robustness, reduce bias, support automation, and simplify implementation in shared-resource environments.

The session will also showcase the NEBNext Alliance Program, which fosters collaboration among academic core facilities, technology partners, and NEB scientists to evaluate emerging technologies, share best practices, and accelerate the adoption of new sequencing approaches.

Bio: Amanda has been a Field Applications Scientist at NEB for the past eight years, focusing on the NEBNext NGS Portfolio of products. She resides in Denver, Colorado, and serves customers in the western United States. Before joining NEB, she worked at the Centers for Genomics, Environment and Health at National Jewish Hospital in Denver, and previous to that she worked on Human Papilloma Virus at the CDC in Atlanta.

Jasmin Kassim, Postdoc Fellow (UC San Diego)

Title: From Months to Minutes: Scaling 3D Biomedical Image Analysis with AI

Abstract: Biomedical imaging technologies can now generate terabytes of rich, high-resolution data, yet our ability to quantitatively analyze these images has not kept pace. Many laboratories still rely heavily on manual analysis using tools such as Fiji, making it impractical to quantify more than a small fraction of the data they acquire. This challenge is particularly acute for specialized biological questions, where end-to-end analysis pipelines simply do not exist. As a result, massive imaging datasets may ultimately be represented by measurements from only a limited number of manually selected cells or images—introducing subjectivity, limiting reproducibility, and leaving potentially important biological information unexplored. As imaging datasets continue to grow in scale and complexity, scalable and rigorously validated AI-driven analysis is becoming essential—not simply to save time, but to transform these vast datasets into objective, comprehensive, and reproducible biological insights.

In this talk, I will introduce VASCilia, an open-source, end-to-end AI platform published in PLOS Biology that transforms a labor-intensive 3D microscopy workflow into a scalable computational pipeline. VASCilia integrates five deep-learning models with automated 3D reconstruction and quantitative analysis to take cochlear confocal image stacks from raw data to biologically meaningful measurements. I will walk through how we designed the pipeline, how we tackled one of biomedical AI's biggest challenges—the training-label bottleneck—and how we validated its measurements and generalizability across imaging datasets and species before using it to answer biological questions.

Beyond VASCilia, this work highlights a challenge increasingly facing imaging cores and research laboratories: where can AI make the biggest impact, how can we overcome the training-label bottleneck, and how do we know when an AI-driven analysis is ready to be trusted?

Bio: Senior deep learning and computer vision scientist with more than 10+ years of professional experience — including 6+ years post-Ph.D. dedicated to artificial intelligence, machine learning, biomedical image analysis, and scientific imaging — across academia, government, biotechnology, and healthcare. Independently architects and leads end-to-end AI pipelines for complex biomedical imaging applications through postdoctoral research at UC San Diego, industry research at Akoya Biosciences, and NIH-funded projects. Holds a Ph.D. in Computer Engineering and was honored with the University of Missouri College of Engineering Outstanding Ph.D. Student Award in 2017. Author of 32 peer-reviewed publications, recipient of the 2025 Schmidt AI in Science Postdoctoral Fellowship, and principal organizer of AIMS 2026 after securing \$100,000 in funding from Schmidt Sciences.

David Killilea, Program Manager (UC San Francisco)

Title: A Core Journey – Possibility to Adversity to Community

Abstract: The UCSF MLK Research Core Facility provided flow cytometry, microscopy, and spectrometry services to researchers in the East Bay. Following its recent closure, an alternative model is being developed to maintain access to the specialized instrumentation and expertise beyond traditional research services. The emerging model integrates research collaborations, educational programs, and community partnerships, with plans to develop more sustainable external analytical services and internal workforce-development programs. This journey demonstrates how core expertise can continue to serve the broader community even when the traditional core structures change. These approaches can extend the impact of core facilities beyond their traditional research missions while preserving valuable infrastructure for research, education, and community engagement.

Bio: Dr. Killilea is a research scientist with broad interests in mineral metabolism and whole grains as a source of shortfall nutrients. He also serves as Program Manager for the UCSF Summer Student Research Program which provides biomedical research internships and mentorship to students from groups historically underrepresented in biomedical research. Previously, Dr. Killilea managed the UCSF MLK Research Core Facility that provided specialized analytical support to researchers at UCSF and beyond.

Kristin Kleinhofer, Patient Advocate and Speaker (Independent)

Title: The Power of Shared Resources: A Patient's Story of Hope, Survival, and the People Behind the Cores Who Made It Possible

Abstract: Acute lymphoblastic leukemia survivor and patient advocate Kristin Kleinhofer shares how cancer research and clinical trials gave her a path forward after standard treatments failed. Drawing on her experiences with CAR T-cell therapy and a double umbilical cord blood stem cell transplant, Kristin connects the work performed behind the scenes to its ultimate human impact: remission, more time, and hope.

Years after her treatment, Kristin met members from several Shared Resources cores at Fred Hutch whose work supported her trials. Through those encounters, she gained a new understanding of the specialized expertise, technology, and collaboration that help move discoveries to patients. Her story reminds us that behind every specimen, cell therapy product, data point, and scientific advance is a person. This presentation offers a deeply personal perspective on why Shared Resources matter and honors the many professionals whose work patients may never witness but whose collective contributions can change—and save—lives.

Bio: Kristin Kleinhofer is an acute lymphoblastic leukemia survivor, patient advocate, and speaker. After her leukemia returned and further chemotherapy failed to produce a lasting remission, she participated in a phase I/II CAR T-cell clinical trial at Fred Hutch Cancer Center. The treatment brought her leukemia into remission, allowing her to receive a double umbilical cord blood stem cell transplant in 2015.

Now 11 years in remission, Kristin is deeply grateful for cancer research and the many people working behind the scenes whose dedication helped make her survival possible. She is passionate about paying that gift forward by mentoring fellow cancer patients and their caregivers, sharing trusted resources and messages of hope, and partnering with nonprofits focused on cancer research and patient support. Through her advocacy, she helps researchers and healthcare professionals see the human impact of their work while bringing greater visibility to the often-unseen contributions of clinical, research, and Shared Resources teams.

Kristin believes that when cancer research helps save a life, its impact can ripple outward—creating hope, support, and possibility for many others.

Greg Kronmal, Senior Executive Sales Specialist (Illumina)

Title: The genome and beyond: Unlocking deeper biology through multiomic & multimodal analysis

Abstract: tbd

Bio: Greg Kronmal is a Senior Executive Sequencing Specialist at Illumina, where he supports researchers in the San Francisco and East Bay Area in advancing their projects through sequencing and the many NGS methods and applications. Prior to joining Illumina, he spent 19 years at Applied Biosystems/Thermo Fisher in a similar role, specializing in Sanger sequencing, qPCR, dPCR, NGS, and microarrays. With a BS in Biochemistry from the University of California, Davis, Greg has dedicated over 25 years outside the lab to assisting in the success of his customers' research endeavors.

Aaron Larson, Director of Operations, Shared Research Resources (Seattle Children's Research Institute)

Title: Automated Core Facility Charges: Integrating the API to create core requests for users and ensure reliable revenue capture

Abstract: Managing user-submitted requests in frequently used core facilities often creates a persistent tension between researcher productivity and operational viability. This session presents a real-world case study of how our core facility successfully eliminated manual user-submitted online requests by integrating an API using Microsoft Power Platform tools.

We will detail the full development lifecycle, from gathering community-driven user requirements to configuring automated workflows that dynamically calculate tiered pricing for internal and external users. Attendees will gain a scalable, reproducible blueprint for leveraging technology to eliminate billing leaks, reduce data entry errors, and scale administrative governance across any core facility type.

Bio: Aaron has been the Director of Operations, Shared Research Resources (SRR) at Seattle Children's Research Institute since the SRR program's inception in 2022. Before joining SCRI, Aaron worked in core facilities operations at OHSU between 2016-2022.

Kevin Mack, Assistant Director, Costing Policy & Analysis (UC Berkeley)

Title: Recharge at UC Berkeley

Abstract: Recharge setting and guidelines panel

Bio: Over 17 years of experience in higher education serving in roles as a graduate assistant, consultant and dedicated staff. Key functions currently are costing policy and analysis including recharge rates, composite benefit rates, and facility and administrative (F&A) indirect rates and proposals. Other areas of experience include financial planning & analysis, budget modeling and forecasting, key controls quarterly reporting, training & engagement, outreach & change management, and benchmarking. I share a passion for advancing the strategic, financial and operational aspects of a university's academic, administrative and auxiliary functions.

Uri Manor, Associate Professor (St. Jude Children's Research Hospital)

Title: Novel Molecular and Computational Tools for Imaging Organelle Dynamics

Abstract: The acquisition and analysis of high-resolution microscopy data are constrained by two fundamental bottlenecks: the physical trade-offs between speed, resolution, and phototoxicity during acquisition, and the prohibitive time required for dense, expert-level manual annotation during downstream 3D analysis.

To address these limitations, we have developed an integrated suite of open-source, "biologist-friendly" deep learning tools designed to overcome critical imaging barriers and accelerate biological discovery. Tailored to the needs of shared research environments and core facilities, this presentation will highlight technologies that fundamentally reimagine data acquisition and annotation:

Point-Scanning Super-Resolution (PSSR): An AI framework that restores undersampled images, simultaneously increasing pixel resolution and signal-to-noise ratio.

Minimizing Phototoxicity: By applying a multi-frame approach (PSSR-MF), we can capture transient organelle dynamics—such as mitochondrial fission—with a >60x lower laser dose, significantly reducing phototoxicity-induced artifacts in live-cell imaging.

Sparse-to-Dense 3D Segmentation: A novel bootstrapping workflow that generates high-quality dense 3D reconstructions from remarkably minimal input.

Reducing Annotation Time: Requiring only 10-30 minutes of non-expert 2D annotation on a single image slice, this method reduces human annotation effort by three orders of magnitude while achieving an accuracy comparable to models trained on thousands of hours of expert-traced data.

Together, these accessible software platforms drastically reduce manual effort and computational costs. By addressing the most resource-intensive steps of modern microscopy, these tools empower core users to perform large-scale super-resolution and connectomics studies, forming a powerful foundation for quantitative, high-throughput analysis of organelle dynamics.

Bio: Dr. Uri Manor is currently an Associate Member in the Department of Imaging Sciences at St. Jude Children's Research Hospital. Previously, he was the inaugural Director of the Goddell Family Technology Sandbox, an Associate Professor of Cell and Developmental Biology, and Dr. David V. Goddell Chancellor's Endowed Chair in Biological Sciences at UC San Diego. As a person born with severe-to-profound hearing loss, Uri has always been fascinated by the biological mechanisms of health and disease. As a beneficiary of hearing aids, without which his life would be entirely different, Uri has a deep-seated gratitude and enthusiasm for the power of technology to treat disease and make the world a better place for everyone. Uri's research is thus perhaps unsurprisingly focused on the development and application of new technologies that facilitate a better understanding of how biological systems work in health and disease, and the treatment thereof. Major areas of focus are deep learning-based imaging methods, the cytoskeleton, and organelle dynamics in neurodegeneration, hearing loss, and cancer.

Lauren Neves, Science & Technology Advisor (10x Genomics)

Title: Single-Cell, Spatial, and Beyond: Building Your Core's Next Toolkit

Abstract: This talk explores three complementary technologies for modern biology labs: 10x Single-Cell Flex for high-throughput, customizable projects; 10x Spatial for uncompromised resolution in tissue context; and 10x Multiome for simultaneous gene expression and chromatin analysis. Learn how they can expand the capabilities you can offer your customers.

Bio: Dr. Lauren Neves is the science and technology advisor at 10x Genomics, supporting users in Northern California and Los Angeles. Lauren originally joined 10x in 2022 as a field application scientist, bringing 10 years of extensive molecular biology knowledge across academia and life science tool providers.

Holly Schroth, Ph.D. (UC Berkeley, Haas School of Business)

Title: Negotiation and Influence: The Art of Working with People to Get Things Done

Abstract: On the job and in our personal lives, we all need a broad array of negotiation and influence skills to get our solutions accepted and implemented. You will be introduced to negotiation frameworks based on social psychology that will help you to effectively navigate relationships, problem-solve, and build trust with others. By understanding these frameworks, you will build confidence and be able to create value to achieve mutually satisfying agreements.

Specifically, you will learn how to:

- o plan and prepare for a negotiation (a key skill for successful negotiation)
- o make an opening offer/proposal, negotiate using packages, make effective concessions, and successfully conclude a negotiation
- o start a negotiation conversation, get people to open up, share information without leaving yourself vulnerable, and ask questions to get honest responses
- o use language to project confidence and trustworthiness while avoiding language that causes defensive and hostile reactions
- o build trust and manage non-verbal language cues as well as negotiate in virtual environments

Come prepared to gain greater confidence in your ability to negotiate with anyone, anywhere!

Bio: Holly Schroth has been a member of the faculty of the Haas School of Business, University of California, Berkeley since 1992. She teaches courses in Negotiations and Conflict Resolution and Organizational Behavior to undergraduates, MBAs and executives. She has a Ph.D. in social psychology, specializing in social cognition from the University of California, Santa Barbara.

She has won several teaching awards including being voted “America’s favorite professor” by a Business Week online poll of undergraduates across the United States.

In addition to teaching, she is a trainer, consultant and keynote speaker on negotiation issues to variety of organizations in the United States and abroad. She has published several articles on negotiation and procedural justice and is one of the leading authors of negotiation exercise materials which are used worldwide by educators.

Ben Smith, Director, CRL-MIC (UC Berkeley)

Title: Expanding Beyond Imaging: Technology Development as a Strategic Service for Core Sustainability

Abstract: As more and more individual labs purchase advanced imaging systems, core facilities face mounting pressure to justify their value amid increasing costs and shrinking funding pools. Diversifying core services is one path toward continued sustainability.

This talk introduces technology development services as a strategy for expanding a core's institutional value. By engineering custom imaging solutions tailored to a specific researcher's goals, cores offer substantial savings over commercial systems while also accelerating the investigator's competitiveness for funding. This new funding then flows back into the core. Equally important, this collaboration establishes core personnel as essential to a lab's long-term research goals, transforming them from service providers to research collaborators.

The institutional payoff compounds over time as researchers experience the value of custom instrumentation firsthand. Awareness of the core and its services spreads organically, which translates into stronger faculty support and recognition of the core as integral to the university's research mission.

Bio: Ben Smith is the director of the Molecular Imaging Center (MIC) at the University of California, Berkeley. His primary responsibilities are to operate an institutional core facility that includes 19 advanced light microscopy systems. He also assists on a diverse array of research projects, designs and builds custom optical and electrical systems, writes quantitative image processing algorithms, teaches classes on image processing, and conducts community outreach. Between his PhD research and post-graduate work he has published papers in fields as diverse as nanocomposite engineering, chemistry, cell biology, and plant biology, including first-author papers in the fields of cell biology, microbiology, ophthalmology, and nanocomposites.

Amy Spowles, Professor and Director of the Humboldt-CIRM Shared Resources Laboratory (California Polytechnic Institute Humboldt)

Title: The Humboldt-CIRM SRL: Opportunities and Challenges in Building a Stem-Cell Modeling Core Facility in one of California’s Most Remote and Geographically Isolated Areas

Abstract: In 2024, the California Institute for Regenerative Medicine (CIRM) funded 11 Shared Resource Laboratories (SRLs) to provide the scientific resources, cutting-edge technologies, and education needed to support stem cell-based modeling research and training across California. The Humboldt-CIRM SRL is housed at California State Polytechnic University, Humboldt (Cal Poly Humboldt), located ~300 miles from the nearest R1 biomedical research institution and the only CIRM SRL within the California State University system. The newly renovated facility provides scientists, students, clinicians, and community members in this rural region with access to dedicated laboratory space, equipment, and cell lines to conduct their work. Standardized protocols are integrated into both university coursework and immersive educational experiences for learners

from middle school through graduate school who are interested in joining the growing cellular and gene therapy workforce. Community programming gives regional medical professionals and residents the knowledge needed to make informed decisions about whether and how to engage with current and future advances in regenerative medicine. This presentation will review the Humboldt-CIRM SRL program and discuss the opportunities and challenges of launching a stem cell research and training core facility in one of the most remote areas of California.

Bio: Dr Sprowles is a Professor of Cellular Biology and the Director of the Humboldt-CIRM SRL. As an architect and director of the Humboldt CIRM Bridges Program, she has mentored hundreds of students in biomedical science and regenerative medicine since 2008. Professor Sprowles has served as PI/Program Director of the Humboldt Howard Hughes Medical Institute (HHMI) Inclusive Excellence '17 program, Co-Director of the Humboldt HSI STEM grant, Co-PI NSF INCLUDES Transcending Barriers Planning Grant and the Humboldt CSU STEM NET Faculty Advisor. She has is a long standing member of the CSUBIOTECH Faculty Consensus Group and currently serves as the Chair of the CSUBIOTECH Education Committee. She is also the academic coordinator for the UC Davis School of Medicine Huwighurruk Tribal Health Postbaccalaureate Program. She is a recipient of the 2020 CSU Faculty Innovation and Leadership Award and the 2026 recipient of the CSUBIOTECH Andreoli Service Award, which honors a California State University (CSU) faculty member who has made outstanding contributions to the development of biotechnology programs in the CSU system.

Adeela Syed, Associate Project Scientist & Manager, Optical Biology Core (UC Irvine)

Title: The Core of It All: Science, Mentorship & Responsible AI

Abstract: I have been in science since the 1990s, when finding a paper meant going to the library with a copy card. Then came email, the internet, and the smartphone. Now, AI is the next shift. AI is changing how we work, allowing results to be generated faster and with fewer barriers. As manager of the UCI Optical Biology Core, I use AI daily to run the core more effectively, including building resources like the OBC website and mentoring researchers while helping them get started with image analysis workflows. This talk is about that balance and why mentorship matters more now than ever.

Bio: Adeela Syed, PhD, is Associate Project Scientist and Manager of the Optical Biology Core at the University of California, Irvine. She has led the core since 2011, expanding it into a multi-platform imaging facility and training over 1,500 researchers. She holds a PhD in Biochemistry from UCLA and dual BS degrees from UC Irvine. Adeela co-organizes major imaging workshops, including FLAIR and AIM, in collaboration with colleagues at UC Irvine and UC Berkeley. Her talk focuses on using AI to improve core operations, develop user resources, and mentor researchers in responsible image analysis.

Rajesh Uthamanthil, AVP, Research and Innovation (Seattle Children's Research Institute)

Title: Regional Partnership for Core Sustainability

Abstract: Regional partnerships can help research core facilities manage rising costs, coordinate equipment investments, and expand access to technologies and expertise. This presentation will explore such opportunities and relevance to early discussions to build such a program in Seattle area. Seattle's exploratory efforts focus on identifying complementary strengths and opportunities to share resources and avoid unnecessary duplication. The session will highlight practical considerations for building trust, aligning institutional priorities, and translating informal conversations into sustainable collaboration.

Bio: Dr. Raj Uthamanthil is AVP, Research and Innovation, at Seattle Children's Research Institute, where he leads shared research resources program. His work focuses on strengthening research infrastructure, expanding access to emerging technologies, and building partnerships among core facilities and investigators. He is currently exploring opportunities to use technology/digital transformation as well as partnerships to support sustainable core operations.