France-Berkeley Fund

Annual Report 2025

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Established in 1993 as a partnership with the French Ministry of Foreign Affairs, the France-Berkeley Fund (FBF) promotes and supports scholarly exchange between faculty and research scientists at the University of California and their counterparts in France.

Through its annual grant competition, the France-Berkeley Fund provides seed money for innovative, bi-national collaborations in all disciplines. The Fund's core mission is to advance research of the highest caliber, to foster interdisciplinary inquiry, to encourage new partnerships, and to promote lasting institutional and intellectual cooperation between France and the United States.

FROM THE DIRECTORS

It is a great pleasure to offer our 2025 Final Report. As readers can see, the France-Berkeley Fund has had a busy and exciting year serving researchers whose projects are on-going from last year, as well as welcoming 25 new projects beginning on July 1, 2025. We were excited to hear of the numerous in-person FBF activities, and of the travel to both Berkeley and France that took place over the past year. As I reported last year, we have been extremely fortunate to have Rachaël Longuépée as our Program Manager, who continues to master every aspect of the FBF and then some! Besides managing the on-going projects, the call and initiation of new projects, and the organization of our annual meeting, which took place in Paris on June 2, Rachaël provided expert supervision of our wonderful French and American student assistants in the Undergraduate Research Apprenticeship Program (URAP) at UC Berkeley who conducted very informative interviews with recent FBF awardees. Our thanks and appreciation goes out to Rachaël for a stellar job!

As mentioned, this year's annual meeting took place on June 2 at the Ministère de l'Europe et des Affaires Étrangères in Paris. There we considered the 61 excellent applications (up from 26 last year!), of which we were able to fund 25. With 61 applications we are back to pre-COVID levels. We were encouraged by the increase in applications, which in part resulted from our outreach efforts over the past year, which continue. Following our morning meeting, we met with Paris Sciences et Lettres University (PSL - https://psl.eu/) president Mouhoub El-Mouhoud and Jennifer Heurley, Vice-President for International Relations to discuss a very promising joint award possibility with their Global Seed Initiative that will be announced in our call for new projects in the Fall. The following morning Clément had arranged with Stanislas Dahaene, Scientific Director of Neurospin, for us to visit and discuss potential FBF interest with colleagues at Neurospin at Saclay in the SE Paris banlieue, where we were also generously received by Philippe Chomaz, Directeur Scientifique du Commissariat à l'Énergie Atomique et Aux Énergies Alternatives (CEA), for us to visit and discuss potential FBF interest with colleagues at Neurospin at Saclay in the SE Paris banlieue. Neurospin is an impressive research center for innovation in brain imaging located on the CEA Paris-Saclay site (https://joliot.cea.fr/drf/joliot/en/Pages/research_entities/NeuroSpin.aspx) which involves physicists, mathematicians, neuroscientists and doctors striving to better understand the normal and pathological brain. That afternoon we met with Sylvain Quatravaux, Director of International Affairs at Sciences Po, Paris (https://sciencespo.berkeley.edu/) to discuss potential interest of their faculty in the FBF. Sylvain walked us around the different parts of the impressive Sciences Po campus in the 7e arrondissement with which UC Berkeley has a dual degree program (https://sciencespo.berkeley.edu). Finally, as our last venture in outreach, we met with Dr. Philippe Walter, member of l'Académie des Sciences and director of the Laboratoire Archéologique Moléculaire et Structurale (LAMS) at the Sorbonne (Jussieu campus) in Paris, a joint multidisciplinary research unit of 15 members that conducts research in the fields of physical chemistry and human sciences (https://sciences.sorbonne-universite.fr/structures-de-recherche/lams). Dr. Walter walked us around LAMS, showing us several projects where chemistry has contributed to understanding art, starting from prehistory (we got a tour of the Chauvet cave on a huge screen) up to the Renaissance and beyond. At each visit the colleagues and administrators that we met were very interested in reinforcing and expanding their relationship with Berkeley and the France-Berkeley Fund.

Turning to next year, as mentioned, we received an impressive increase of 61 applications, putting us back on track to where we were before COVID. Looking forward to the present academic year, we are delighted to support 25 new projects in 2025-6. (https://fbf.berkeley.edu/people/grant-recipients/grants-awarded-2025): thanks to the generous sponsorship of the French Ministry of Foreign Affairs, the UC Berkeley Office of the Vice Chancellor for Research, as well as the Lawrence Berkeley National Laboratory. This year's cohort showcases the extraordinary diversity of interests and methods that characterizes the FBF from projects on "Non-invasive Molecular Imaging for Heart Failure Diagnosis" to "Simulation-Based Inference via Approximate Bayesian Computation", "Visualizing Gender from Manuscript to Household in the Middle Ages", and "Mathematics and Totalitarianism: a New Perspective ", among many other exciting cutting-edge research projects. We look forward to seeing all of the new projects progress over the grant period. We wish all of our awardees the best of luck in pursuing their research goals. We sincerely thank the many proposal reviewers at Berkeley and in France, together with our Executive Committee, who generously dedicated their time and effort to the evaluation process. We also wish to recognize our French colleagues in the consulate in San Francisco, the Washington Embassy, and the Ministries in Paris for their enthusiastic support and interest in the France-Berkeley Fund—among many others: Mireille Guyet, Counselor for Science and Technology, and Mohamed Bouabdallah, Cultural Counselor at the French Embassy in Washington; Florian Cardinaux, Consul General of France in San Francisco, Emmanuelle Pauliac-Vaujour, Attachée for Science and Technology, and David do Paço, Attaché for Academic Cooperation in the French Consulate in San Francisco, and Christophe Delacourt, Responsable Pôle Expertise et gestion des programmes de coopération internationaux at the Ministère de l'Enseignement Supérieur et de la Recherche.

One last note of thanks is due to our colleagues in the French consulate in San Francisco. We mentioned above our outreach activities in France. We also were active on the California side, contacting previous PIs to enlist them in spreading the latest call for projects. As part of this, we had a wonderful celebration with France-Berkeley-Fund alumni at the Résidence de France on November 1st, 2024, hosted by Florian Cardinaux, Consul General in San Francisco. Working with the consulate, and in particular with Rachaël and David do Paço, Academic Cooperation Attaché, in all 75 attended the spirited (high decibel) "cocktail" that the former FBF PIs and guests thoroughly enjoyed.

We are delighted to wrap up a successful year of fruitful cooperation between researchers and colleagues on both sides of the Atlantic. We very much look forward to another successful year in 2025-2027.

Larry M. Hyman, Berkeley Co-director
Clément Sanchez, France Co-director

FBF NEWS

FBF Website Updates

Visit fbf.berkeley.edu to browse!

IES & FBF Undergraduate Research Apprentice Team

FBF was delighted to have the support of the IES Undergraduate Research Apprentice Team (URAP). The URAP team composed of UC Berkeley students as well as UC Berkeley and SciencesPo dual degree students. The URAP team worked on various projects throughout the year for FBF, including the FBF interview series. FBF would like to thank Eva Dimoski, Julia Meyer, Jared Wilson, Zoe Lemaire, Annelies van Haeften, Sitara Gupta, Lena Beccegato, Lucas Letizgen, May Pusnik-Petrie, Caspar Turner, Emma Levi and Soliana Samson for their contributions to FBF this year!

FBFcontinues interview series!

FBF is continuing an interview series lead by the Undergraduate Research Apprentice Team (URAP). Members of the URAP Team interviewed FBF Principle Investigators to learn more about them and their projects. The interviews can be found on the News section of the FBF website. This year we spotlight Prof. Paola Bacchetta.

An interview with Paola Bacchetta

Annelies van Haeften & Lena Beccegato *May 28, 2025*

Paola Bacchetta is a Professor in the Department of Gender and Women's Studies at UC Berkeley, and the Director of Berkeley's Institute for Gender and Sexuality Research. Her latest project, “Transnational Archiving of Sexualities: Engaging Plural Pasts”, aims to create innovative forms of collective knowledge in the field of archiving. By bringing together academics and practitioners working at the intersection of LGBTQ+ studies and archival theory, the project focuses on three key areas: (1) how archives, broadly conceived, produce knowledge, (2) how dominant archival systems resist alternative narratives, and (3) how we can develop more equitable archival practices to address the needs of our times. We spoke with Professor Bacchetta to delve deeper into her research and the impact of her work, supported by the France-Berkeley Fund (FBF).

Could you introduce yourself and tell us about your academic journey?

Paola Bacchetta: I was born in the U.S., but the majority of my education took place in France. I also spent time studying in India and Italy, although all my degrees come from French institutions. My undergraduate studies were in International Relations, with an emphasis on psychology, which I deeply enjoyed. Over time, my focus shifted to sociology and law. My academic journey has also seen a transition from postcolonial to decolonial theory, with a consistent emphasis on gender and sexuality.

While my connection to France remains strong, I have been teaching at UC Berkeley for two decades, and my academic home is here. Currently, I co-direct the Decolonizing Sexualities Network with Sandeep Bakshi, which is supported by the France-Berkeley Fund. My involvement in archiving has spanned several years, and I also teach queer archiving practices.

An interview with Paola Bacchetta (continued)

Why did you choose to pursue your education in France, and why psychology rather than gender?

PB: When I was a student in France, there were no academic courses on gender—none at all. Today, there are several institutions where it’s taught, but back then, even feminist studies were not institutionalized. French feminism was recognized, but the academic system in France moves very slowly when it comes to institutional change. In contrast, institutions in the U.S. are far more open to faculty initiatives. For instance, if I wanted to propose a program on decolonial studies here, I would likely receive support.

Although my formal studies did not focus on gender, I explored it through art and activism. I was heavily involved in the feminist movement and worked with the Maison des Femmes, a feminist collective in Paris. Gender has been a core part of my focus from the very beginning.

Why is queer archiving such an important endeavor for you?

PB: I spent many years living outside the U.S., and for a period, I was in political exile abroad. My involvement in various movements during that time profoundly shaped my perspective. When I returned to the U.S., I was shocked to see how much of that history—people, activities, analysis, art, and activism—had been erased or misrepresented in archives.

Recognizing the gaps in representation, I approached my former collective, Tactics, and proposed creating an archive of our work. While I am not a historian, I felt it was essential to document what we could, even if it meant starting with just our group’s experiences. It took about five years to assemble the archive, which preserves our activities, reflections, and contributions.

During this process, I noticed the absence of comprehensive LGBT archives in France. The Maison des Femmes maintained a lesbian archive, but that was the only substantial resource at the time. It became clear to me how critical it is for collectives to manage their own archiving, as no one else could fully understand what to preserve. This realization led us to make queer archiving a central focus of the Decolonizing Sexualities project in Paris.

Why do narratives of People of Color often go missing in archives?

PB: People of Color are often excluded from archival narratives because they are not perceived as having anything valuable to contribute. Even when individuals interview or study collectives, they rarely seek out voices from People of Color unless they themselves belong to those communities.

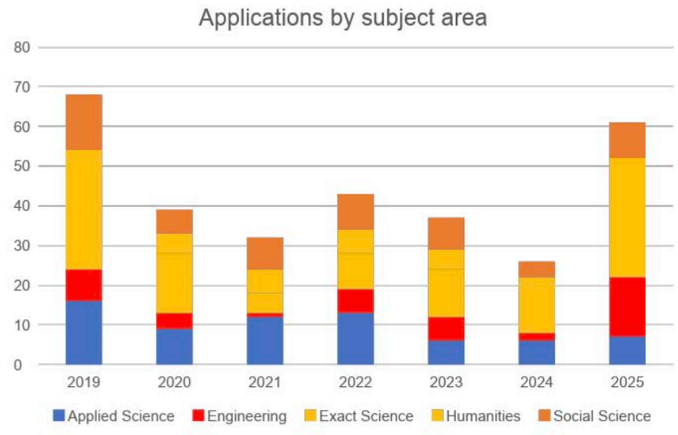
In the French lesbian archives, for instance, contributions from People of Color were minimal—not necessarily due to conscious neglect but because of ingrained biases and assumptions about whose stories matter. To address this, we worked to decenter whiteness and amplify the voices of queer People of Color. This was made possible through the solidarity of queer communities in both France and the U.S. Today, the LGBT archives in France have taken significant steps to document and include the stories of queers of color.

Continues at https://fbf.berkeley.edu/news/interview-paola-bacchetta

NEW COLLABORATIONS

The FBF is pleased to sponsor 25 outstanding projects in 2025-27, with awards totaling $320,397.

Totalitarianism
Amblyopia
Biofabrication
Latent spaces
Germanium
Astrophysics
Immigration
Quantum sensing
Dense nuclear matter
Coordination compounds
Pedagogy
Biomedical egineering
Operating system



Natural hydrogen for a future carbon neutral economy: An Earth science-centered workshop
Daniel Stolper, UC Berkeley
Laurent Truche, Université Grenoble Alpes

This project aims to fund a 3 days workshop at UC Berkeley, between groups at UC Berkeley and France (Université Grenoble Alpes and Mantle8) that are experts in the geology and geochemistry of serpentinization and molecular hydrogen, including expertise in experiments, theory, and field work to discuss the state of the art of natural hydrogen production with a focus on the mechanism of hydrogen generation. From this workshop, we will propose potential collaborative research projects that could lead to follow on funding and collaboration. We will additionally include members from industry so that this key perspective is included.

Non-invasive Molecular Imaging for Heart Failure Diagnosis
Moriel Vandsburger, UC Berkeley
Frank Kober, CNRS Marseille

Heart failure is currently treated as a mechanical problem, instead of the complex biochemistry problem hidden beneath the surface. In order to both truly understand the mechanisms of heart failure and potentially unlock novel treatments, a new tool box of molecular diagnostics is needed. In this proposal the investigators seek to work together to fuse 2 molecular imaging techniques in order to validate a clinically viable non-invasive diagnostic of biochemistry in the heart.

BioWeave: Fabricating Interactive Biohybrid Systems Through Living Growth
Lining Yao, UC Berkeley
Marc Teyssier, De Vinci Higher Education

BioWeave explores the creation of biohybrid robots using bacterial cellulose, a renewable and biodegradable material. Combining human-computer interaction, biofabrication, and robotics, the project develops interactive systems that grow, sense, adapt, and decompose naturally, mimicking living organisms' life cycles. This collaboration will result in scientific publications and public exhibitions, fostering discussions on sustainable and biohybrid technologies.

Unifying Memory & CPU Management Subsystems
Natacha Crooks, UC Berkeley
Alain Tchana, Grenoble INP - UGA

This proposal outlines a collaborative effort between Professor Natacha Crooks (UC Berkeley, EECS) and Professor Alain Tchana (Grenoble INP - UGA). This collaboration seeks to harness their complementary expertise to tackle key challenges at the intersection of distributed system resilience and operating system efficiency. The project involves one Ph.D. student (Micah Murray) and the principal investigators (Natacha Crooks) from UC Berkeley, and two professors (Alain Tchana and Renaud Lachaize), their Ph.D. student Jordan Gounou and two Master 2 interns from University of Yaoundé I in Cameroon (Franck Feuwo and Fideline Ngoufack).

Quantum light emitters in silicon
Boubacar Kante, UC Berkeley
Anais Dreau, Universite de Montpellier

Silicon photonics, with its scalability, compatibility with CMOS (Complementary Metal Oxide Semiconductor) fabrication processes, and mature technological infrastructure, provides an ideal platform for advancing quantum technologies. The novelty of this proposal lies in systematically addressing these challenges by developing a pathway for deterministic creation of different families of spin-active color centers in silicon and integrating them into advanced photonic devices.

A novel microfluidic platform for high-throughput functional screening of human organoids
Aaron Streets UC Berkeley
Charles Baroud, Ecole Polytechnique

Human organoids are 3D cell cultures derived from human stem cells, and have recently emerged as a powerful research platform for accurately recapitulating the physiology of the human body, without the investment and limitations of clinical trials. To harness the potential to translate organoid research into precision medicine, it is necessary to perform large-scale molecular screens, such as combinatorial drug screens, or functional genetic screens, on organoids or immune cells interacting with organoids. Here, we propose to combine a high-throughput microfluidic organoid cultivation system developed in the Baroud lab at École Polytechnique, with an optically active high-throughput screening platform developed in the Streets lab at UC Berkeley, to yield a scalable and cost effective approach for high-throughput functional screening of human organoids.

Advancing Space-Borne Diagnostics for Plasma in Magnetized Environments
Trevor Bowen, UC Berkeley
Karine Issautier, Observatoire de Paris - Paris Sciences et Lettres

The goal of this project is to advance an observational technique, known as quasithermal noise (QTN), that can be implemented on NASA and ESA funded space missions to study plasma. QTN emissions are well understood and often applied as a tool in environments where the magnetic field is weak; however, in environments where magnetic field is sufficiently strong, the QTN signatures are complicated and not entirely well understood. By implementing the theory of magnetized QTN directly in instrument design for two NASA missions meant to study the ionosphere, this project will advance our understanding of magnetized QTN signatures and enable their use as a diagnostic of ionospheric plasma.

New Theoretical Frontiers in Gravitational Scattering
Jaroslav Trnka, UC Davis
Julio Parra-Martinez, Institut des Hautes Études Scientifiques (IHES)

In the last several years, there has been enormous progress in our theoretical understanding of fundamental laws of Nature. One of the most surprising discoveries is the connection between dynamics of particle interactions and new mathematical structures related to abstract geometric objects. This proposal aims to search for the geometric picture for gravitational interactions and push the state of the art in our theoretical understanding of gravitational scattering processes, with a view towards their application to precision gravitational wave predictions.

Transport of Quarkyonic Matter
Volker Koch, Lawrence-Berkeley National Laboratory
Marlene Nahrgang, IMT Atlantique, Nantes

Explore the existence and properties of Quarkyonic Matter which consists of free quarks at small momenta but hadrons at large momenta. Develop a dynamical kinetic theory for Quarkyonic Matter in order to be able to test this hypothesis with heavy ion collisions experiments and observations of neutron stars and their mergers.

Amorphous Germanium Silicon Alloys for Li-ion Battery Anodes (GEST)
Susan Kauzlarich, UC Davis
Glenna Drisko, ENS de Lyon

GEST aspires to create, through a straightforward, scalable process, high-capacity amorphous tin-doped germanium silicon alloyed particles; and to process these particles into an electrode, to assess the specific capacity, electrical conductivity, the ionic conductivity and the cyclability of the anode material.

Simulation-Based Inference via Approximate Bayesian Computation
Ryan Giordano, UC Berkeley
Christian Robert, Université Paris-Dauphine

This project introduces a novel simulation-based inference method to efficiently estimate low-dimensional marginal posteriors without the computational burden of full high-dimensional inference. Our approach leverages Approximate Bayesian Computation (ABC), a widely used simulation-based method across various fields, and Neural Ratio Estimation (NRE), a deep learning approach using neural networks, to enhance accuracy and robustness while remaining computationally efficient. Additionally, we refine Simulation-Based Calibration (SBC), an intuitive validity check for Bayesian inference methods, to provide stronger validation in practical applications. This approach has broad implications across disciplines such as economics, genetics, cosmology, epidemiology, and public policy, where reliable and scalable Bayesian inference is essential.

Light-Controlled Magnetic Properties in Lanthanide-Phthalocyanine Complexes
Jeffrey R. Long, UC Berkeley
Corine Mathoniere, Université de Bordeaux

This project aims to develop light-controllable molecular magnets by combining lanthanide chemistry and photomagnetism. It is based on a collaboration between the University of California at Berkeley (UCB) and the Centre de recherche Paul Pascal (CRPP) in France, led by Jeffrey Long and Corine Mathonière. The aim is to create lanthanide complexes with photosensitive ligands to improve magnetic coupling and achieve higher blocking temperatures, opening up prospects for data storage and spintronics. The project includes student exchanges and collaborative experiments to strengthen skills in chemical synthesis and photomagnetic measurements.

Attosecond Sum-Frequency Spectroscopy for symmetry-broken quantum materials
Stephen Leone, UC Berkeley
Romain Geneaux, CEA Paris-Saclay

Attosecond spectroscopy is able to capture the fastest dynamics taking place in materials. Here we propose to extend this powerful technique in order to probe the dynamic symmetries of solids with unprecedented sensitivity. This will be done by combining attosecond and laser pulses in ways that can sense the slightest changes of symmetry (e.g. chirality, ferroelectricity or magnetic ordering) on attosecond timescales.

Motivic cohomology and logarithmic geometry
Martin Olsson, UC Berkeley
Matthew Morrow, Université Paris-Saclay

This project concerns several questions at the frontiers of algebraic K-theory, motivic cohomology, syntomic cohomology, stacks, and logarithmic geometry. The PIs will leverage newly developed tools establishing a tight connection between algebraic K-theory and p-adic cohomology theories to investigate classical questions in K-theory. The project involves a sustained period of collaboration between the two PIs along with other invited researchers in the area.

Functional analyses of negative regulators of acetyl-CoA carboxylase in the oleaginous green alga, Auxenochlorella protothecoides
Sabeeha Merchant, UC Berkeley
Yonghua Li-Beisson, Aix-Marseille University, CEA Cadarache

We seek to understand the functions of two proteins, CTI1 and CGL80, that are involved in production of lipids (oils) in plants and algae. We will use a technique called "reverse genetics", to make genetic mutations that prevent synthesis of the proteins in a green alga called Auxenochlorella protothecoides. Studying how growth and oil synthesis are affected in the absence of these proteins will help us to understand how the proteins function normally. We will also investigate where the proteins are located in the cell, and how they interact with other proteins that are involved in making lipids.

Instrumental systematics for the next generation of Cosmic Microwave Background experiments
Clara Vergès, Lawrence-Berkeley National Laboratory
Josquin Errard, Université Paris Cité/CNRS IN2P3

This project aims to develop new methods for analysing data from cosmological surveys. It builds on existing research to address new challenges from the latest and upcoming cosmic microwave background (CMB) telescopes. These new techniques are needed to fully take advantage of the enhanced sensitivity of future experiments, and advance our understanding of the Universe's history and évolution.

Ultrasensitive Nanoscale Quantum Sensors through sub-THz Electron Spin Control
Ashok Ajoy, UC Berkeley
Kong Ooi Tan, École Normale Supérieure

This project focuses on enhancing the sensitivity of 13C-based nuclear quantum sensors through precise electron control in high magnetic fields. By decoupling the electron spins from nearby nuclei, we aim to extend the coherence times of the 13C nuclei, thereby boosting the sensor's overall sensitivity. Additionally, we will employ high-field electron control to optically read out the sensor's signal from the bulk 13C nuclei, using nuclei near the electron with specific hyperfine shifts as intermediaries. This shift to optical readout will further amplify the sensitivity and enable quantum sensing at sub-microscale levels.

PISA: Podoconiosis: Soil Spectromicroscopy and Biological Assays to Quantify Human Exposure to Nanophase Aluminosilicate Minerals in Volcanic Soil
Benjamin Gilbert, UC Berkeley, Lawrence-Berkeley National Laboratory
Laurent Charlet, University of Grenoble Alpes

Soils that develop from volcanic rock and ash are fertile but can cause a lymphatic disease, podoconiosis, to agricultural workers. We hypothesize that abundant nanoscale aluminosilicate minerals in these soils, might cause podoconiosis. The present France-Berkeley project adopts an interdisciplinary approach, combining a biological study of the onset of Podoconiosis disease with a geochemical study of soil particles present in the soils. The research initiated by the present FBF grant be used to develop larger projects which will be submitted jointly by the two teams

Visualizing Gender from Manuscript to Household in the Middle Ages
Henry Ravenhall, UC Berkeley
Maud Pérez-Simon, Université Sorbonne Nouvelle - Paris 3

A growing body of research has shown the prevalence of paintings that decorated ceilings in aristocratic and merchant households in late medieval western Europe. This fascinating archive of material—for the most part undocumented—promises to shed light both on the kinds of images in circulation across the thirteenth to fifteenth centuries and on the social and ideological functions of paintings in domestic spaces. This collaborative project—conjoining Pérez-Simon's expertise on painted ceilings and text-image relations with Ravenhall's research on gendered reading and the sensorial aspects of manuscript culture—examines the implications of different modes of engaging with "image objects" in medieval household settings.

The Latent Spaces of Culture
Hannes Bajohr, UC Berkeley
Antonio Somaini, Sorbonne Nouvelle, Paris

Latent spaces, the mathematical structures behind AI, allow machines to analyze and create complex content like text, images, and sound. This project, a partnership between UC Berkeley and Sorbonne Nouvelle, explores how these spaces influence creativity, memory, and cultural representation. It examines how AI can reinforce biases, create new forms, and reshape storytelling and style. Events like a Paris workshop and a Berkeley exhibition showcase how artists and scholars are engaging with AI's cultural impact.

From Great Replacement to grand remplacement. Transatlantic rhetorics and intersectional politics
Debarati Sanyal, UC Berkeley
Eric Fassin, Paris 8

The conspiracy theory of population replacement, le grand remplacement, originates in France but the slogan and its variants are now part of mainstram political discourse on migrants and minorities in the US and elsewhere. We propose to examine the differences between its uses in France and the United States, notably (1) the articulations of racism and xenophobia with antisemitism in the United States; (2) the colonial origins of contemporary discourses of "replacement" in France, its settler-colonial variants in the US and the different histories that fuel discourses of demographic replacement in their parallels or intersections. (3) The political efficacy of "great replacement" in mobilizing racism and xenophobia lies in its intersectional nature. We will examine how it moves from immigration to diversity to a critique of 'wokeness'. Finally, we will explore artistic, cultural and political counter-imaginaries to the phantasm of demographic replacement.

Civic Organizations' Innovative, Compensatory, or Exclusionary Dynamics in Education
Jose Eos Trinidad, UC Berkeley
Christof Brandtner, Emlyon Business School

How do organizations outside schools influence education? Quantitative studies of nonprofits in general suggest the positive potentials of having a dense collection of civic organizations in an area. However, qualitative studies of education philanthropy and nonprofits suggest the potential risks associated with the enlarged role of private organizations in public education. This research project aims to create the first longitudinal national dataset of school support and education-specific nonprofits to answer questions about their variety, distribution, effects on student outcomes, and contribution to education innovation or inequalities. Combining data from the National Center for Charitable Statistics, Stanford Education Data Archive, American Community Survey, and Common Core of Data, the project will draw on the methodological expertise of a team in France (led by Christof Brandtner, a leading quantitative scholar of nonprofits in their local context) and the content expertise of a team in UC Berkeley (led by Jose Eos Trinidad, a pioneering scholar in the study of education ecosystems).

Mathematics and Totalitarianism: a New Perspective
Massimo Mazzotti, UC Berkeley
Andrew Arana, Université de Lorraine

Recent work in the history and philosophy of mathematics has argued that the reasons for technical choices in mathematics, and in other formal knowledges, can be mathematical and political at the same time. Such work runs counter to a widely-held belief that mathematics is fundamentally apolitical. The project described in this proposal will build up on these seminal works to address the specific question of the creation and use of mathematical knowledge in the context of totalitarian regimes during the twentieth century.

Redundancy masking in amblyopia
Dennis Levi, UC Berkeley
Bilge Sayim, École normale supérieure (ENS), CNRS

In this project, we will investigate amblyopia, a neurodevelopmental disorder of spatial vision which is one of the principal causes of unilateral vision loss in both children and adults. In particular, we will study to what extent a recently discovered phenomenon called “redundancy masking” occurs in amblyopia and how it relates to visual capacities such as the discrimination of fine details. Combining clinical and basic vision research as proposed in our project promises to better understand amblyopia, and how the visual system copes with the abundant information in complex visual environments.

What is a river? Temporary rivers governance and conservation challenges in France and California
Theodore (Ted) Grantham, UC Berkeley
Joana Guerrin, INRAE

This project enables a collaboration between Freshwater Ecology (UC Berkeley) and Political Science (INRAE) to highlight the challenges temporary rivers face in California and in France. It focuses on the analysis of managers' perceptions of temporary rivers, on the political and legal process of river definition, and on the confrontation between official river definition and science-based temporary river characteristics. This comparative and interdisciplinary project associates two PhD scholars developing research on temporary rivers in their own country, to benefit from a cross-country comparison.

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SUPPORT OUR WORK

"The project has deepened our working relationship and also enhanced or established relationships for all who have participated in it. We are certain that these connections will bear fruit in other contexts in the years ahead."

- TODD HICKEY (Classics, UC Berkeley) and JEAN-LUC FOURNET (Collège de France / EPHE)

"The France-Berkeley Fund has been fantastic support for the initiation of this research trajectory. Without it, this project could not have proceeded in this collaborative fashion. It has advanced the research career of a Berkeley junior faculty member, provided valuable training for a Berkeley PhD, and led to an academic research position for a recent French PhD. These collaborative relationships will be sustained into the future."

- NICHOLAS SWANSON-HYSELL (Earth & Planetary Sciences, UC Berkeley) and YVES GODDÉRIS (Observatoire Midi-Pyrénées, CNRS / Université Toulouse)

"This has been an invaluable experience for the junior researchers involved and it has directly facilitated the establishment of larger-reach projects between Lyon and Berkeley."

- MARY FIRESTONE (Environmental Science, Policy & Management, UC Berkeley) and GRAEME NICOL (Laboratoire Ampère, Université de Lyon)

The France-Berkeley Fund is committed to advancing innovative research and international exchange across the humanities and sciences. Help ampllify our work by making a gift to our grant fund. Gifts to the FBF help sustain cutting-edge collaborations that bring together faculty, researchers, and junior scholars from UC Berkeley and institutions throughout France.

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