

France-Berkeley Fund

Annual Report
2019-20

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UNIVERSITY OF CALIFORNIA

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(2019-20)

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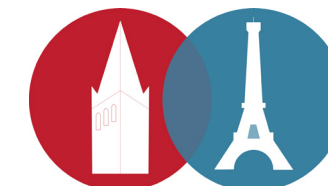
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MINISTÈRE
DE L'EUROPE ET DES
AFFAIRES ÉTRANGÈRES

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

As the France-Berkeley Fund wraps up its twenty-fifth year of supporting innovative research, we find ourselves in a starkly different world than the one we inhabited at our anniversary celebration last September. Since then, COVID-19 has rocked the globe, overseas travel has been interrupted, and in-person exchanges have given way to virtual encounters through computer screens. At the same time, the killing of George Floyd and countless other Black Americans at the hands of police has led to mass protests against systemic racial discrimination, violence, and division, with calls for justice and reform echoing throughout the United States and abroad.

While the unrest continues and the form of our transatlantic interactions may be altered for some time, what hasn't changed is the FBF's commitment to fostering collaborative networks across the disciplines. In spite of the pandemic, we are pleased to support 15 new projects in 2020-21. As in years past, these collaborations span a broad range of topics and fields, including molecular genetics, translation studies, robotics, sociology, linguistics, and more.

Our new cohort of grantees brings the total number of FBF-sponsored projects to nearly 500. Since its inception, the Fund has provided over \$4.7 million in seed funding for joint projects between Berkeley researchers and their colleagues at over 150 French institutions, while allowing scores of graduate students and post-docs to expand their international connections. Supported teams have co-authored hundreds of publications and even launched new joint structures; the newest of these, CNRS Centre Pierre Binétruy, builds on more than 20 years of Paris-Berkeley collaboration in cosmological physics. The results of a recent grantee survey in France reveal that 83% of FBF projects have led to ongoing partnerships that continue well past the initial grant year, attesting to the enormous impact of the Fund over the last 25 years. A full summary of the survey may be found in this report.

To further strengthen these ties, we are thrilled to announce that the Lawrence Berkeley National Laboratory has renewed its partnership with the FBF in 2020-21, with a contribution of \$50,000 towards collaborative projects in the sciences. We are confident that the Lab's support will provide a strong foundation for continued growth, as we further develop the capacity to fund more groundbreaking research in the sciences.

The FBF acknowledges the many partners that make our work possible. We are grateful to the French Ministry of Foreign Affairs, and the UC Berkeley Office of the Vice Chancellor for Research, for their continued subsidies to the program. Sincere thanks go to the many reviewers at Berkeley and in France without whom the annual evaluation process would not happen, and to our dedicated Executive Committee. We also extend a warm welcome to our newest member Jean-Baptiste Bordes (Attaché for Science and Technology at the French Consulate), and to Dr. Natalie Roe, Associate Director of the Physical Sciences at Lawrence Berkeley National Laboratory, who joins the Committee in 2020-21.

During his visit to the Berkeley campus in January 2020—just a few months before the world turned upside down—French Ambassador Philippe Étienne called for collective action and civic engagement among scientists and scholars to address today's global challenges. Amid the upheavals we are facing, this need for cooperation is felt more urgently than ever. The France-Berkeley Fund remains steadfast in its mission to invest in collaboration and partnership, as France and the U.S. continue to work together and learn from each other.

Sincerely,

Larry M. Hyman
Clément Sanchez
Executive Directors

Julia Nelsen
Program Manager

NEWS



From left: FBF Executive Committee members Emmanuel Lebrun-Damiens, Jeroen Dewulf, Julia Nelsen, Larry Hyman, Randy Katz, Juliette Donadieu, and Jean-Baptiste Bordes (photo by Maxime Benallaoua)

FBF@25 On September 5, 2019, the France-Berkeley Fund celebrated its 25th Anniversary. To mark the occasion, members of the FBF Executive Committee, UC Berkeley Deans, and new and former grantees convened for a festive gathering in the Durant Hall Atrium. French Consul General EMMANUEL LEBRUN-DAMIENS and UC Berkeley Vice Chancellor of Research RANDY KATZ made official remarks on the Fund's history and impact, emphasizing the importance of continued collaboration between France and the Berkeley campus.

LBL PARTNERSHIP

We are thrilled to announce a new partnership in 2020-21 between the France-Berkeley Fund and the Lawrence Berkeley National Laboratory. Joining the FBF Executive Committee to represent the Lab is Dr. NATALIE ROE, an internationally known physicist and observational cosmologist, and Associate Director of the Physical Sciences at LBNL. Roe joined Berkeley Lab in 1989 as a postdoctoral fellow and became Director of its Physics Division in 2012, overseeing a broad portfolio of projects including the Dark Energy Spectroscopic Instrument (DESI) at Kitt Peak, Arizona, and the dark matter experiment LUX-ZEPLIN in South Dakota. She has served on the DOE/NSF High Energy Physics Advisory Panel, the Fermilab Physics Advisory Council, and the National Science Foundation MPS Committee of Visitors. Roe is currently a Fellow of the American Association for the Advancement of Science and the American Physical Society, and was previously a member of the CERN Science Policy Committee and Chair of the APS Division of Particles and Fields. A champion of diversity and inclusion and career advancement opportunities, Roe is a founding member of Berkeley Lab's Women Scientists and Engineers Council (WSEC) and an executive sponsor of the Lab's Early Career Employee Resource Group.



Dr. Natalie Roe

CENTRE PIERRE BINÉTRUY



Dr. Alain Schuhl (Director general délégué à la science, CNRS) and Prof. Paul Alivisatos (UC Berkeley Exec. Vice Chancellor and Provost) sign the agreement establishing the Centre Pierre Binétruy on September 27, 2019.

January 1, 2020 marked the official launch of the Pierre Binétruy International Research Laboratory, established jointly by UC Berkeley and the CNRS. The Center, named for the late Université Paris Diderot professor (1955-2017), builds on decades of successful collaborations in the areas of astroparticle and cosmological physics. Headed by Dr. RADEK STOMPOR of the CNRS and Nobel Laureate SAUL PERLMUTTER—whose FBF collaborator Dr. REYNALD PAIN laid the groundwork for this initiative in 2016—the Center will facilitate joint research between the Berkeley Department of Physics and IN2P3 (Institut National de physique nucléaire et de physique des particules).

FRENCH AMBASSADOR VISITS

To kick off 2020, the FBF was pleased to welcome PHILIPPE ÉTIENNE, the French Ambassador to the United States, on his first official visit to California. In his lecture to the campus community, organized by the UC Berkeley Institute of Transportation Studies, Étienne called for French-American cooperation in the context of the 21st century “fourth industrial revolution.”



From top: Ambassador Philippe Étienne addresses the UC Berkeley community in Sibley Auditorium (photo by Tom Lee/Berkeley Engineering); the Ambassador and representatives from the French Consulate in San Francisco with Berkeley faculty and researchers

RECENT PROJECTS



1



2

Sound Waves: Resonances of Virginia Woolf

Colloquium Sponsored by the France Berkeley Fund

Friday October 25th, 2019

Location: 3401 Dwinelle Hall

- 9:15am - Welcome - Coffee and greetings
- 9:30-11:00am - Reflecting on Resonance

Roundtable: Katie Emery Brown (University of California, Berkeley), Claire Davison (Université Sorbonne Nouvelle), Serena Le (University of California, Berkeley), Caroline Pollentier (Université Sorbonne Nouvelle), Namwali Serpell (University of California, Berkeley)

- 11:00am-12:30pm - The Sense of *To the Lighthouse*

Marie Laniel (Université de Picardie – Jules Verne), "Resonant Subjectivity in *To the Lighthouse*"

Namwali Serpell (University of California, Berkeley), "The Furrows: On Rewriting Woolf"

Respondent: Katherine Snyder (University of California, Berkeley)

- 12:30-1:30 - Lunch Break

- 1:30-3:30pm - The Radiophonic Imagination

Claire Davison (Université Sorbonne Nouvelle), "Wave-Lengths of the Heart" – The Radiophonic Relations of Virginia Woolf and Ethel Smyth"

Respondent: Tom McEnaney (University of California, Berkeley)

- 3:30-5:00pm - Sound Waves: *The Waves*

Anne Besnault-Levita (Université de Rouen), "Waving – Woolf and Intratextual Resonance"

Alex Ullman (University of California, Berkeley), "Could one not get the waves to be heard all through?" Close Listening to an Adaptation of *The Waves*"

Respondent: Mary Mussman (University of California, Berkeley)

Saturday October 26th, 2019

Location: 300 Wheeler Hall

- 10:00-11:30am - Haptic Modernism

Caroline Pollentier (Université Sorbonne Nouvelle), "Remote Touching: Virginia Woolf and Haptic Resonance"

Marlena Gittleman (University of California, Berkeley), "Orlando in Catalonia: Intertextual Gestures in Maria Aurèlia Capmany's *Quim/Quima*"

Respondent: Atti Viragh (University of California, Berkeley)

- 11:30-1:00pm - Resounding Forward: Woolf's Resonance for African American Modernism

Elizabeth Abel (University of California, Berkeley), "Queer Resonance: Woolf's Voice in Baldwin's Prose"

Adriana Varga (University of Nevada, Reno), "Musical Resonances in the Works of Virginia Woolf and Toni Morrison"

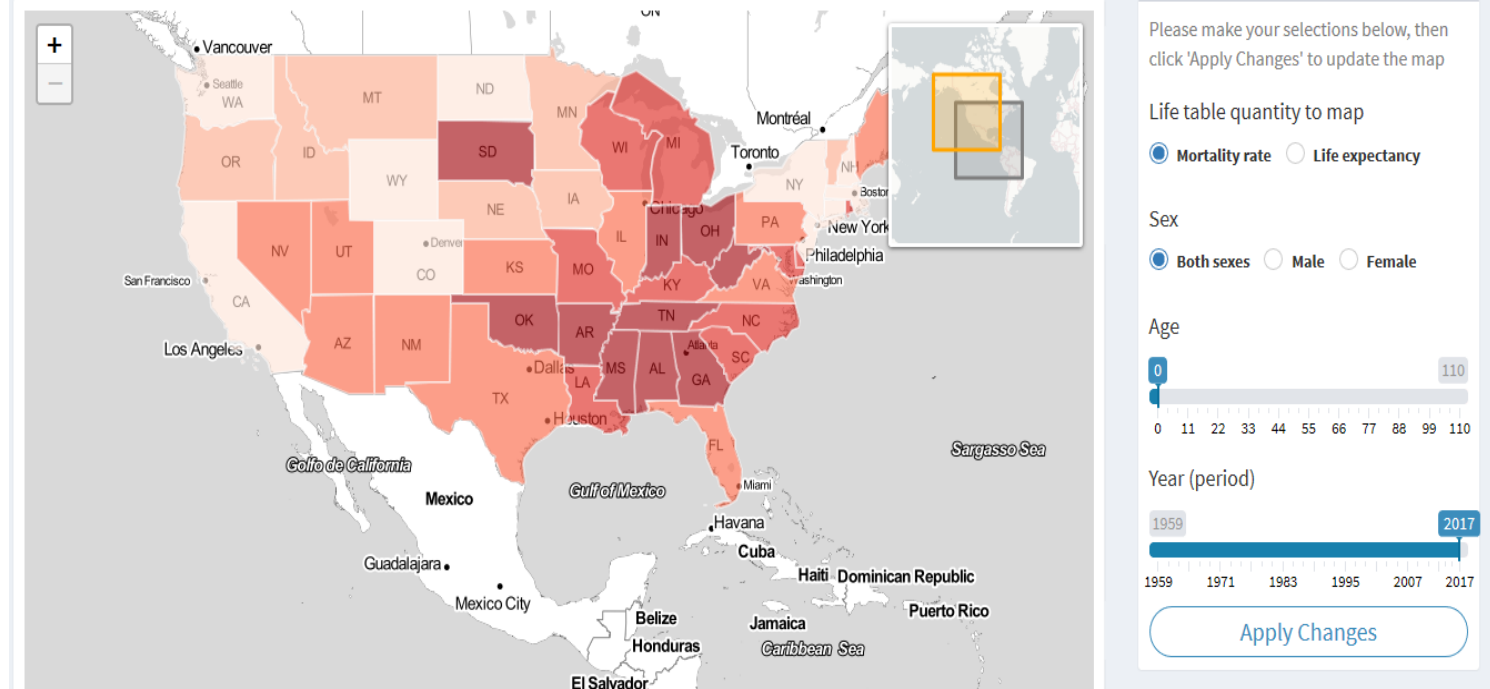
- 1:00-1:30 - Rethinking Resonance: What's Next?

3

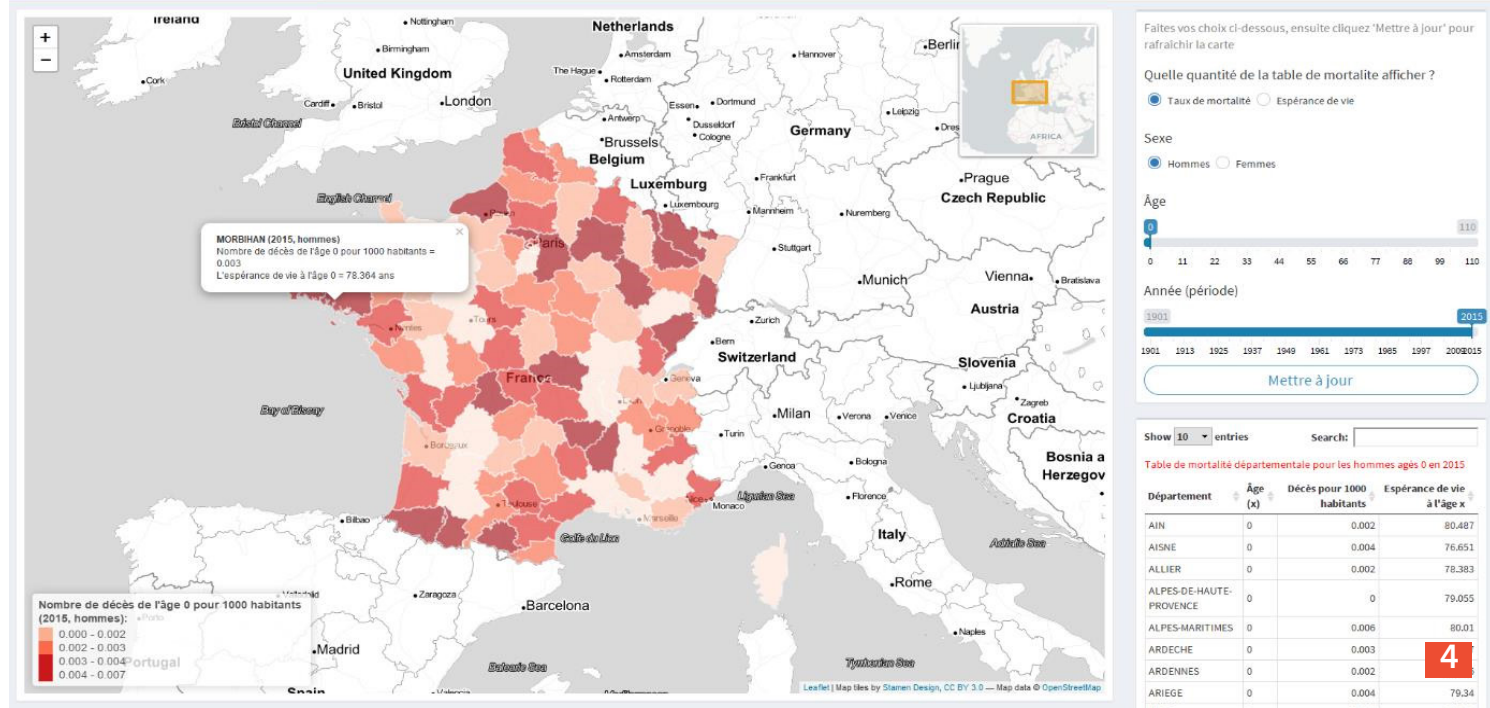
1 + 2 ANNA SERRA-LLOBET (Institute of International Studies, UC Berkeley) and JOHNNY DOUVINET (Université d'Avignon) convened a workshop on flood risk management at UC Berkeley in February 2020. The workshop included Prof. Renaud Vidal (Université Aix-Marseille) along with Berkeley co-PI John Radke, Berkeley faculty and researchers from the natural and social sciences, engineering, and the UC Berkeley Center for for Catastrophic Risk Management, as well as graduate students, postdoctoral scholars, and practitioners involved in land-use and flood management.

3 ELIZABETH ABEL (Department of English, UC Berkeley) and CLAIRE DAVISON (Université Sorbonne Nouvelle - Paris 3) (FBF '19) organized a colloquium on "Sound Waves: Resonances of Virginia Woolf" at UC Berkeley in October 2019, with scholars and students from the fields of English literature, romance languages, and sound studies.

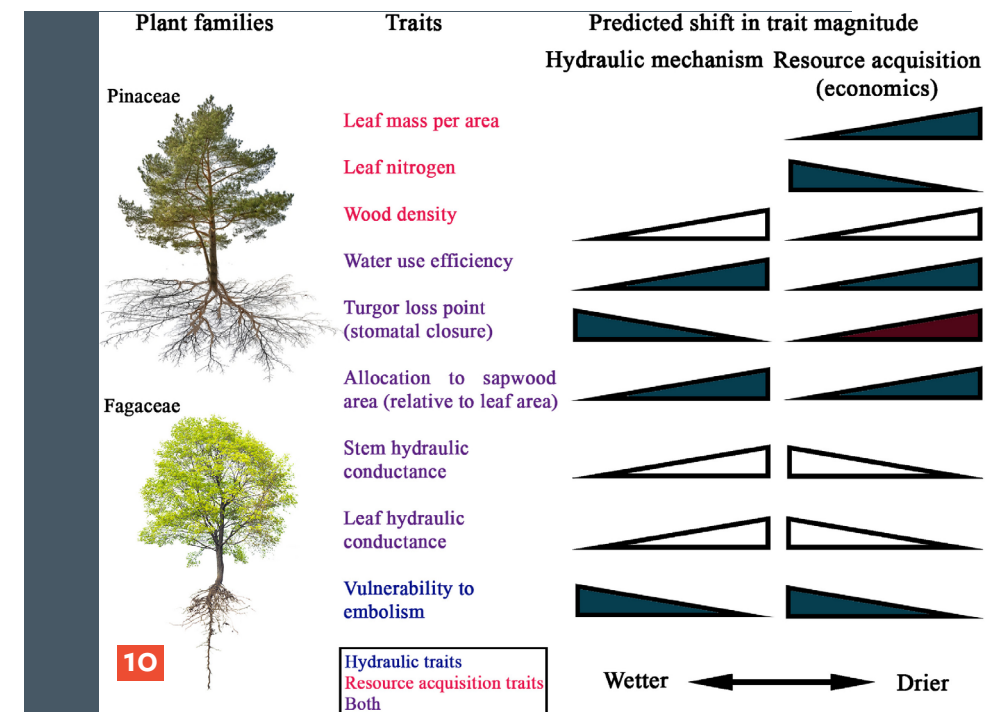
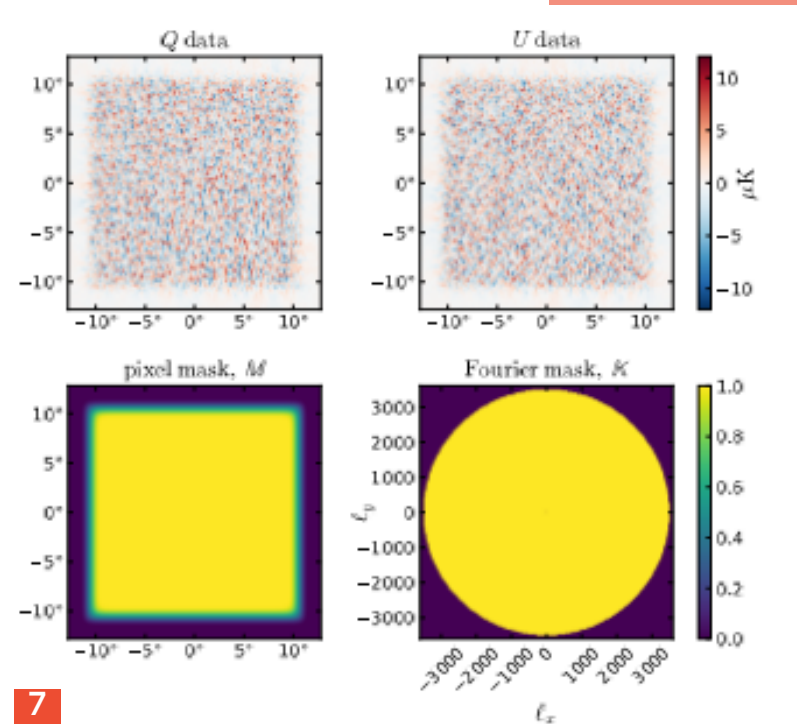
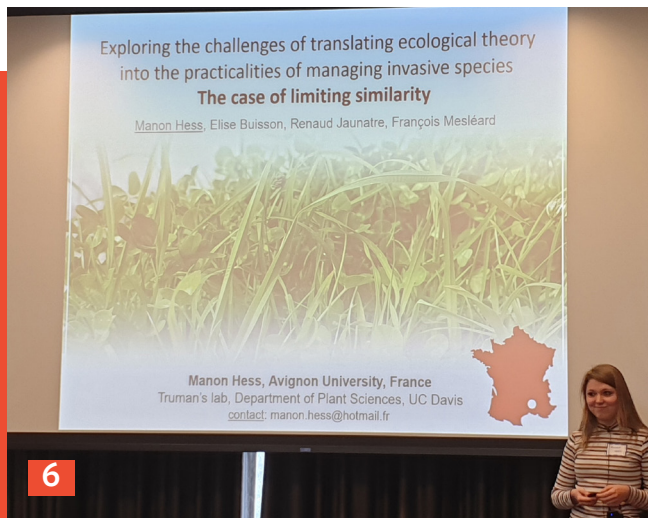
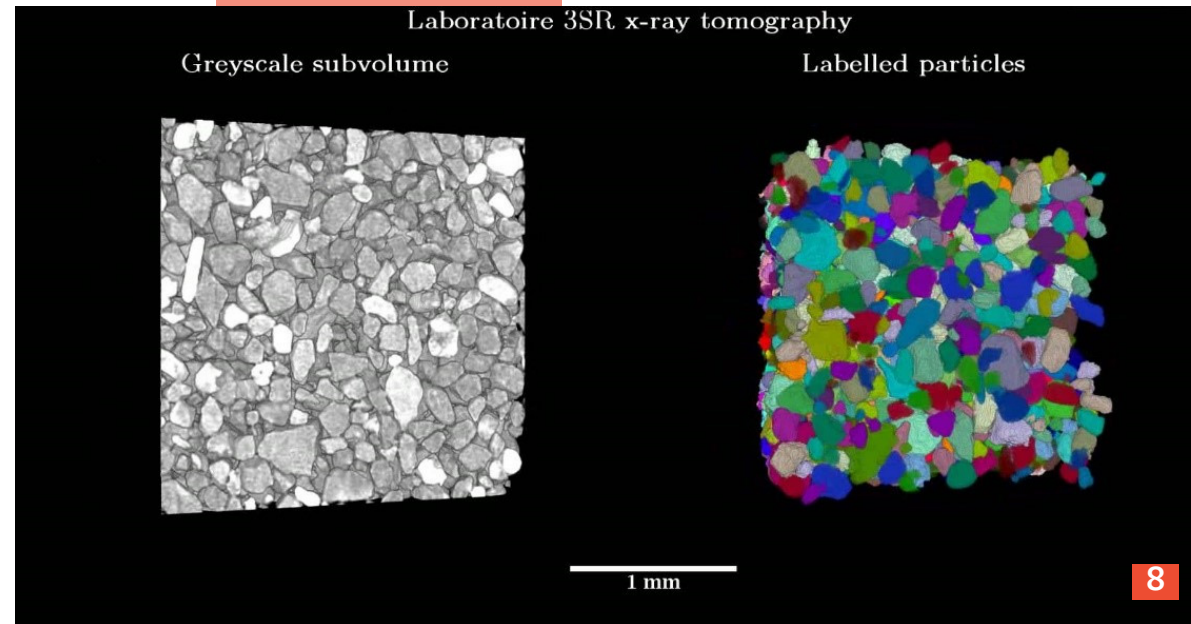
USA Human Mortality Database



French Mortality Database



4 MAGALI BARBIERI (Department of Demography, UC Berkeley) and HIPPOLYTE D'ALBIS (Paris School of Economics) have constructed two comparable databases of mortality indicators at the local level for France and for the United States. The goal of their project is to investigate the contribution of geographic variations in mortality in diverging life expectancy trends between the two countries. The top image shows the U.S. Human Mortality Database, available at usa.mortality.org. The bottom image is a screenshot of the Shiny App prototype built to visualize mortality information in the French database.



5 + 6 TRUMAN YOUNG (Department of Plant Sciences, UC Davis) and ELISE BUISSON (Avignon Université) organized a workshop on priority effects in restoration and invasive species control field experiments at the Society for Ecological Restoration World Conference in September 2019. (Also pictured are collaborators Manon Hess, Cara Nelson, Judith Sarneel, And Renaud Jaunatre.) Hess presented a session on ecological theory and invasive species management at the 13th Annual UC Davis Graduate Student Symposium in Ecology in February 2020. **7** A recent paper co-authored by BENJAMIN WANDEL (Institut Lagrange de Paris) shows simulated data and mask choices used in the search for primordial gravitational waves in the Cosmic Microwave Background (CMB). **8** Using the 3-D X-Ray Computed Tomography device, collaborators NICHOLAS SITAR (Civil & Environmental Engineering, UC Berkeley) and CINO VIGGIANI (Université Grenoble

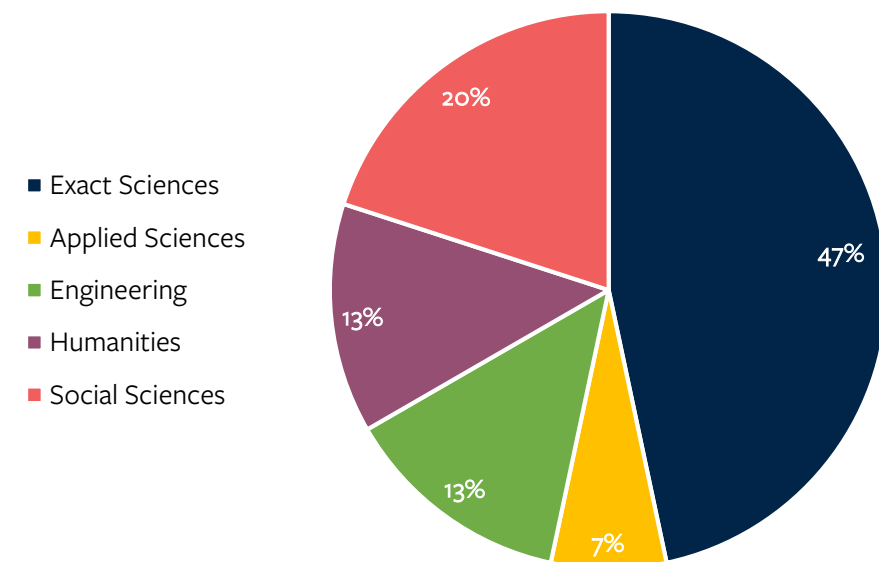
Alpes) tested natural sandy shoal deposits and hydraulic fill material, in order to study the depositional structure, strength, and stress-strain behavior of these materials. **9** PhD student GUILLAUME CHESNEAU (INRAe - Beaucouzé) and postdoctoral fellow LAUREN LUI (UC Berkeley/LBNL) helped make mutant libraries of bacterial isolates during a visit to Berkeley in spring 2019. With PIs ADAM ARKIN (QB3, UC Berkeley) and MATTHIEU BARRET (INRAe - Beaucouzé), the team has developed a synthetic community to reduce the growth and transmission of bacterial pathogen *Xanthomonas campestris* in radish seeds. **10** The labs of TODD DAWSON (Integrative Biology, UC Berkeley) and SYLVAIN DELZON (Université Bordeaux) seek to reconcile an ongoing debate about plant vulnerability to xylem embolism, examining the relationship between leaf or stem specific hydraulic conductivity and species distributions.

NEW COLLABORATIONS

The FBF is pleased to sponsor **15 projects** in 2020-21, with awards totaling **\$163,300**



Funded projects by area of research (2020-21 grant cycle)



UNCONVENTIONAL STEROID SIGNALING IN THE CHOROID PLEXUS: IMPLICATION IN TRAUMATIC BRAIN INJURY

Polina LISHKO, Department of Molecular & Cellular Biology, UC Berkeley
Dimitra GKIKA, Laboratoire de Physiologie cellulaire, Université de Lille - Sciences et Technologies

Choroid plexus (CP) epithelia main function consists in producing and regulating cerebrospinal fluid (CSF). Such regulation is achieved through transepithelial solute transport via plasma membrane ion channels and transporters. Interestingly, steroids and specially progesterone has been shown to exert potent neuroprotective action. Since fluid secretion in CP is under control of ion channels and transporters, we aim to explore whether progesterone can modulate Transient Receptor Potential channel activity directly in an unconventional manner meaning a rapid non genomic way. The outcome of this research may be of interest for treatment of CSF malfunctions such as traumatic brain injury.



ANALYSIS OF THE IMPACTS OF INFORMATION-BASED ROUTING ON CITY CONGESTION AND OPTIMAL REMEDIATIONS

Alexandre BAYEN, Institute of Transportation Studies / Department of Electrical Engineering and Computer Sciences, UC Berkeley
Eric GOUBAULT, Informatique, École Polytechnique

The goal of this project is to co-develop joint methods in the field of control/ optimization and systems verification in the context of large-scale networks. The project will apply the results to a specific problem in transportation engineering: the impact of traffic information on large scale mobility patterns in urban environments. Specifically, it will analyze the recent impacts of routing apps such as Waze, Google maps, Apple traffic etc. on residential street congestion. Finally it will apply the findings to two cities, one in the US, Fremont, CA (in a joint partnership with UC Berkeley), and Neuilly sur Seine in France (through a Ministère de la Transition écologique et Solidaire connection via École Polytechnique).



M3: MARVELOUS MICRO-MOTES

Kristofer PISTER, Department of Electrical Engineering and Computer Sciences, UC Berkeley
Thomas WATTEYNE, EVA Team, INRIA Paris

Micro-motes are a breakthrough technology which offers communication and computation capabilities in a single-chip design the size of a grain of rice. Our long-term vision is to use micromotes at the heart of micro-robots to form swarms of coordinated ant-sized micro-robots. These swarms can carry out missions in small and hard-to-reach places. One example is exploring and mapping the internal structure of a collapsed building after an earthquake. A micro-mote has no stable crystal oscillator, only an unstable internal oscillating circuit. This requires us to completely re-think time-keeping by using the network as a time source. This research changes the foundations of lowpower wireless and opens up new research domains on micro-motes and micro-robots.





PHOTO-GENERATED MOLECULE-BASED MAGNETS

David HARRIS, Chemistry, UC Berkeley
Rodolphe CLÉRAC, CNRS / Centre de Recherche Paul Pascal, Bordeaux

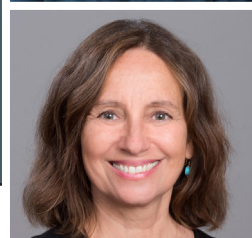
This project aims to develop molecule-based permanent magnets through a combination of chemical synthesis and photomagnetism. This work will leverage and combine the expertise in the synthesis of molecule-based magnets of co-PI Dr. D. Harris, a project scientist at the University of California, Berkeley (UCB), with the expertise in photomagnetism of co-PI Dr. R. Clérac, a CNRS researcher at the Centre de Recherche Paul Pascal (CRPP) in Bordeaux. In addition to the scientific goals, we expect this project will provide a rich intellectual experience for the involved students, by both affording them expertise in a new area of science and the opportunity to mentor a visiting student, and will bring new knowledge bases to UCB and CRPP in order to broaden the research scopes of the two institutions.



MECHANISM OF HOMOLGY SEARCH DURING GENETIC RECOMBINATION

Wolf-Dietrich Heyer, Microbiology and Molecular Genetics, UC Davis
Aurèle Piazza, Laboratoire de Biologie et Modélisation de la Cellule (LBMC), École Normale Supérieure de Lyon

Homologous recombination is a universal DNA break repair mechanism that uniquely employs an intact homologous DNA molecule as a template for repair. Despite its importance for genome maintenance, the basic mechanism by which this homologous molecule is identified amidst the genome remains elusive. We tackle this fundamental gap in our understanding of homologous recombination, as well as the poorly characterized role in this process of conserved protein of clinical significance. To this end, we combine in vitro protein biochemistry (Heyer lab) and novel physical assays to monitor intermediates and steps of the repair reaction in cells (Piazza lab).



THE EVOLUTION OF SPECIFICITY IN PARALLEL PATHWAYS OF SIGNALING IN ANIMAL CELLS

John KURIYAN, Chemistry / Molecular & Cellular Biology, UC Berkeley
Jacqueline CHERFILS, Laboratoire de Biologie et Pharmacologie Appliquée, CNRS / École Normale Supérieure Paris-Saclay

Small GTPases are small protein switches that cycle between ON states and OFF states and are key stop or go deciders in many important cellular tasks, such as growth or death. There are many distinct versions of these proteins in cells, each with a specific task or pathway. This project will investigate why proteins that interact with a GTPase in one pathway are specifically paired to their distinct GTPase and do not cross talk with GTPases in other pathways. This is a key unanswered question of major biomedical importance.

LANGLANDS DUALITY AND SPECTRA OF QUANTUM INTEGRABLE SYSTEMS

Edward FRENKEL, Department of Mathematics, UC Berkeley
David HERNANDEZ, UFR de Mathématiques/IMJ-PRG, Université de Paris

The category of finite-dimensional representations of a quantum affine algebra is one of the most studied objects in quantum groups theory with remarkable applications in various branches of Mathematics and Physics. However many important and fundamental questions remain unsolved in this field. The aim of this research project is to make advances in the understanding of the category as well as of its applications to quantum integrable systems and in the context of the Langlands program.



EVOLUTION OF GUSTATORY PREFERENCES IN HERBIVOROUS INSECTS

Noah WHITEMAN, Integrative Biology, UC Berkeley
Frédéric MARION-POLL, Evolution, Génomes, Comportement, Ecologie (EGCE), AgroParisTech

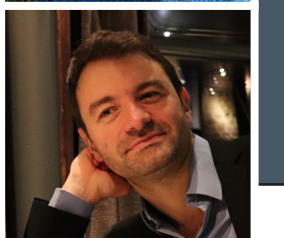
Plant-feeding insects are extraordinarily diverse as a result of their co-diversification with their host plants over 400 million years. One of the major adaptations necessary for herbivorous feeding is the ability to preferentially feed on the appropriate host plants, but how taste evolves in herbivorous insects is not well understood at molecular genetic and neurophysiological levels. Our research project will closely examine how chemoreceptors expressed in the peripheral nervous system have evolved to change neural responses, and how this ultimately shifts behavioral responses to toxic plant compounds from aversion to attraction. This research takes an integrative approach combining behavioral experimentation, comparative genetic analyses, and electrophysiology.



CYLINDRIC PARTITIONS

Sylvie CORTEEL, Mathematics, UC Berkeley
Jérémy BOUTTIER, Institut de physique théorique, CEA Saclay / Laboratoire de physique, École Normale Supérieure de Lyon

This research project is at the interface between enumerative combinatorics and mathematical physics. It is centered on cylindric partitions, which are combinatorial objects that are connected with different fields: hypergeometric identities, string theory, probability theory and nonequilibrium statistical physics.





A SYSTEM BIOLOGY APPROACH TO UNDERSTAND THE HEALTH BENEFITS OF POLYPHENOLS

Patricia OTEIZA, Department of Nutrition, UC Davis
Dragan MILENKOVIC, Unité de Nutrition Humaine, INRAE, Université de Clermont Auvergne



This new trans-Atlantic collaborative network will aim to answer questions regarding the health effects of polyphenol consumption on cardiometabolic health. We aim to evaluate the capacity of polyphenols to prevent dysfunctions induced by western-type diet consumption that result in the development of CVD and metabolic diseases. Our project will initiate scientific exchanges aiming to define a new research strategy on polyphenols and human health by performing integrated system biology analyses of existing knowledge but also by using mutual knowledge more integrated analyses of results that are being obtained in ongoing projects in both laboratories.

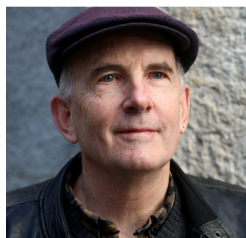


THE FUNCTION AND HISTORICAL EVOLUTION OF AUGMENTS IN THE BANTU LANGUAGES

Peter JENKS, Department of Linguistics, UC Berkeley
Mark VAN DE VELDE, Langage, Langues et Cultures d'Afrique Noir, CNRS / Institut national des langues et civilisations orientales (Inalco)



This project aims at gaining insight into the augment, a mysterious grammatical element found in the Bantu languages of Africa. The role of the augment has been compared to that of a definite article in English or French, but this comparison is at best an approximation. We will approach the topic from the different theoretical and methodological perspectives of synchronic generative grammar and historical linguistics.



TRANSLATION OF POETRY: INTERDISCIPLINARY PERSPECTIVES

Timothy HAMPTON, Department of Comparative Literature, UC Berkeley
Daniel HENKEL, Université Paris 8, Vincennes - Saint-Denis



Long thought as something humanists did in the margins of their other work, it has now become clear that both the practice and the theory of translation are central to the role of the humanities as we move into an increasingly multi-cultural global culture, and as new technologies reshape how we use language. This project involves organizing a workshop to study the intersection of literary form and history--manifested in poetry--with the disciplines of linguistics and translation studies. We will collaborate on panels and discussions about the linguistic, literary, philosophical, and cultural problems involved in the translation of poetry, and on translation as a conceptual node in the re-imagination of the humanities.

THE LEGALIZATION OF ORGANIZATIONAL LIFE IN FRANCE AND THE UNITED STATES: TENSIONS BETWEEN INDIVIDUAL RIGHTS AND THE COLLECTIVE GOOD

Calvin MORRILL, Department of Sociology / School of Law, UC Berkeley
Jérôme PÉLISSE, Département de Sociologie / Centre de sociologie des organisations (CSO), Sciences Po Paris



Project participants will contribute to a grounded theoretical framework along two dimensions: a macro-sociolegal analysis of the relationship between ideas about rights and the collective good in two different legal systems (civil law in France and common law in the United States) and systematic analyses of ideas about rights and the collective good via paired-comparisons of organizations in different sectors across the two countries, specifically private corporations, public schools and urban housing agencies, and non-profit religious organizations.

THE EMERGENCE OF PUBLIC CONTROVERSIES IN SCIENCE, TECHNOLOGY & MEDICINE: A NEW METHODOLOGICAL PARADIGM

Elena CONIS, Graduate School of Journalism, UC Berkeley
Laura DRAETTA, Télécom Paris Graduate School of Engineering, IP Paris



Our project offers an empirical study of public controversies regarding science, technology and medicine. We focus on emblematic case studies in environmental ethics (pesticides), bioethics (vaccines), data ethics (facial recognition) and innovation ethics (smart meters). Our study aims to develop an integrated methodological paradigm for analyzing public controversies regarding science, technology and medicine and theorizing the role of the media, scientific community and government policy in determining the course and outcome of such controversies.

THE EFFECT OF CULTURE ON INDIVIDUAL PERCEPTUAL MECHANISMS

David WHITNEY, Department of Psychology, UC Berkeley
Mark WEXLER, Integrative Neuroscience and Cognition Center, CNRS / Université de Paris

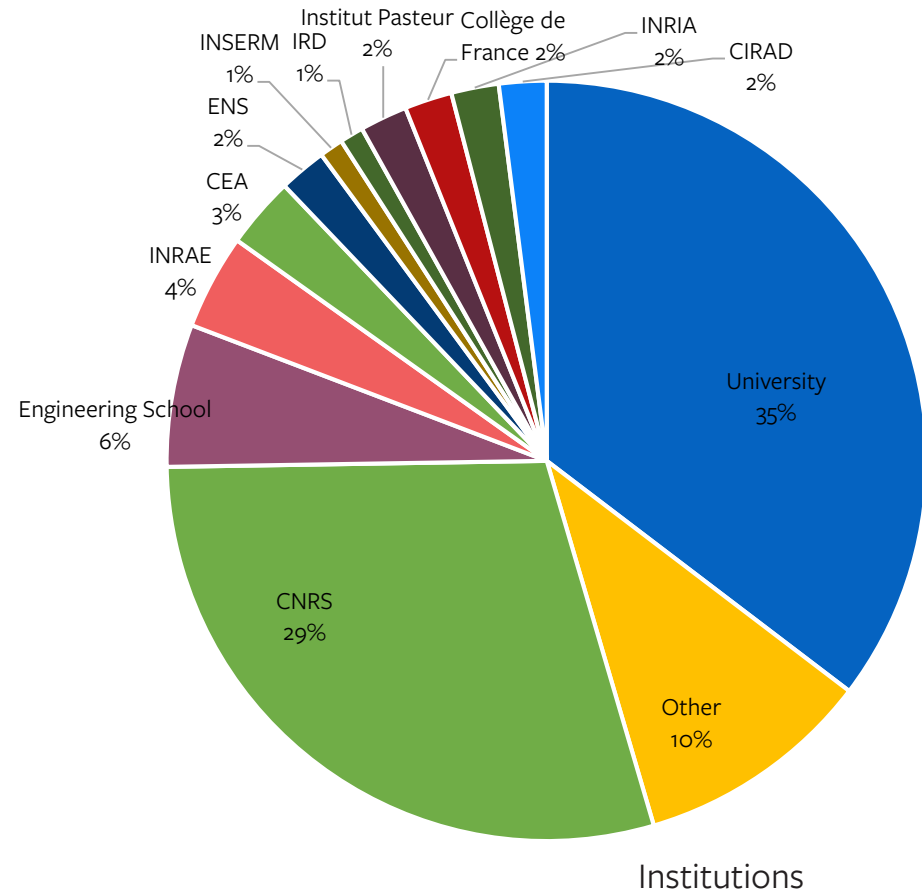


The goal of our project is to examine how culture, as represented by language, can affect low-level perceptual function--in our case hearing. Although studies of low-level perception have assumed that it is largely universal, there have been reports that lower-level perceptual function varies between cultures. Here we put forward and test the hypothesis that the effect of language milieu on perception is via a process called ensemble perception.

FBF IMPACT SURVEY

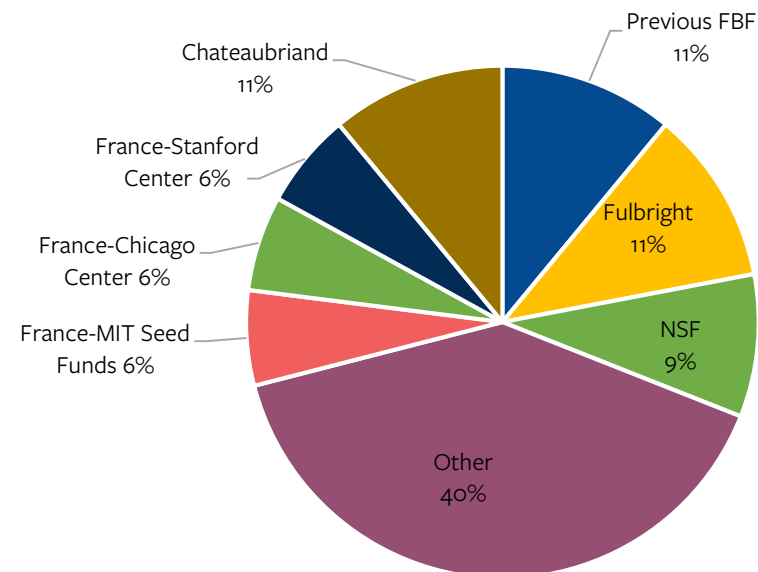
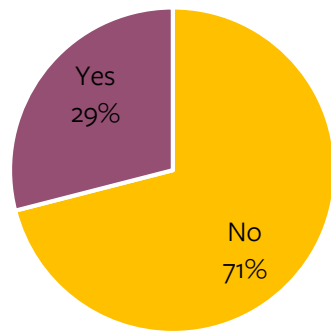
From February to May 2020, the Office for Science and Technology of the Embassy of France in the United States conducted a survey among past France-based FBF grantees to measure the program's scientific impact over the past ten years (2008-18). Yves Frénot and Carrina Lacorata coordinated the survey, with the collaboration of Christophe Delacourt and Robert Gardette (French Ministry of Higher Education, Research and Innovation) and of FBF Program Manager Julia Nelsen. The following are key results presented at the FBF Executive Committee Annual Meeting in June 2020.

- **Target: French Principal Investigators of 235* projects funded 2008-18**
*243 projects in total; 235 questionnaires sent
- **Average response rate: 46% (109 of 235 grantees surveyed)**

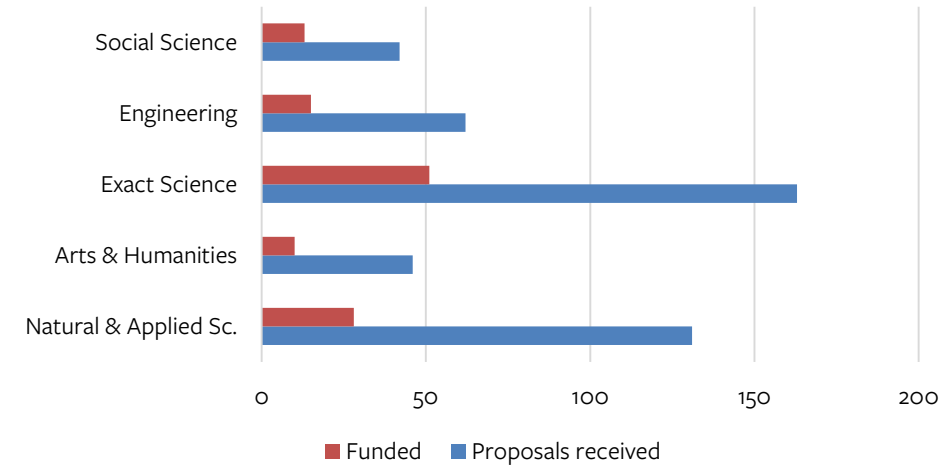


ABOUT THE FRENCH GRANTEES

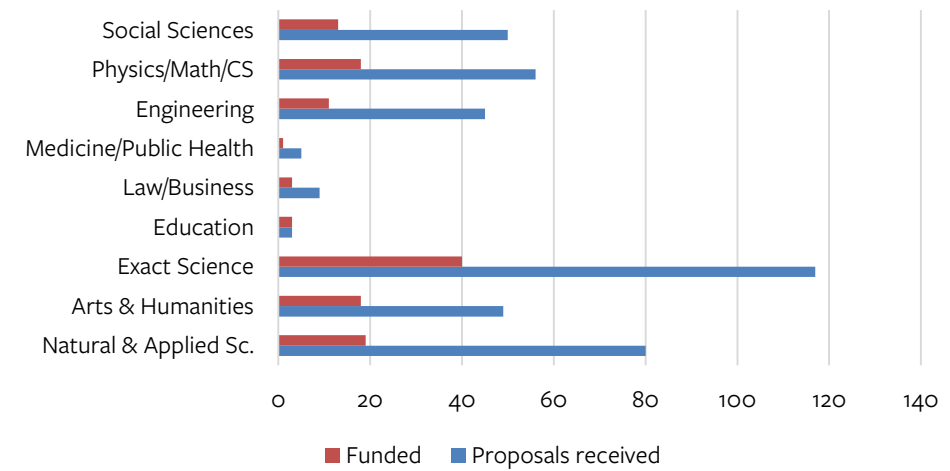
Previous collaboration with a US partner?



Proposals received vs. funded projects, 2008-2012



Proposals received vs. funded projects, 2013-2018



ABOUT THE PROJECTS

29%

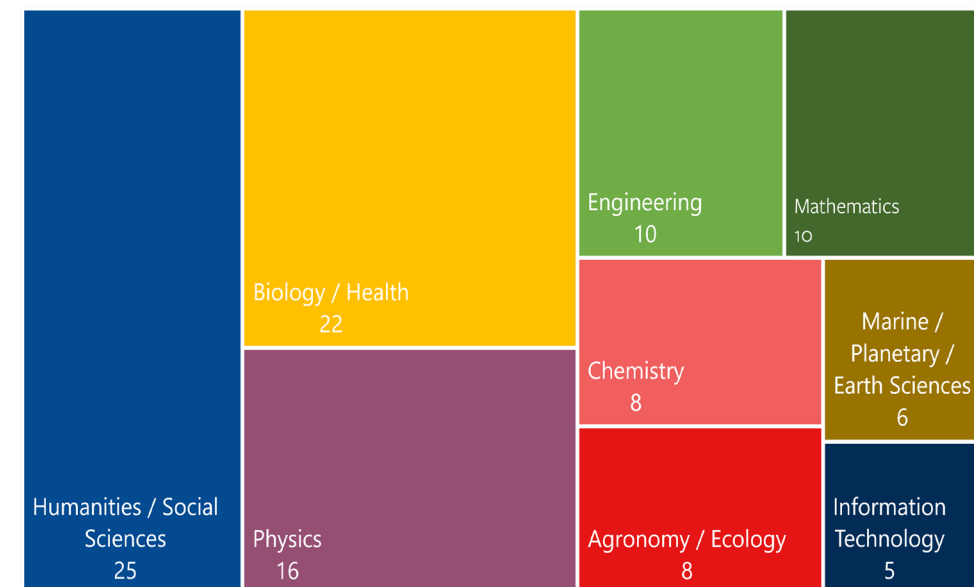
Average of projects funded vs. proposals received (2008-18)

\$10k

Average funding per project

Funded projects by area of research

*based on 109 survey respondents



46 Masters students involved in 32 projects

74 PhD students involved in 50 projects

104 Post-docs involved in 70 projects

SCIENTIFIC PRODUCTION (2008-17)*

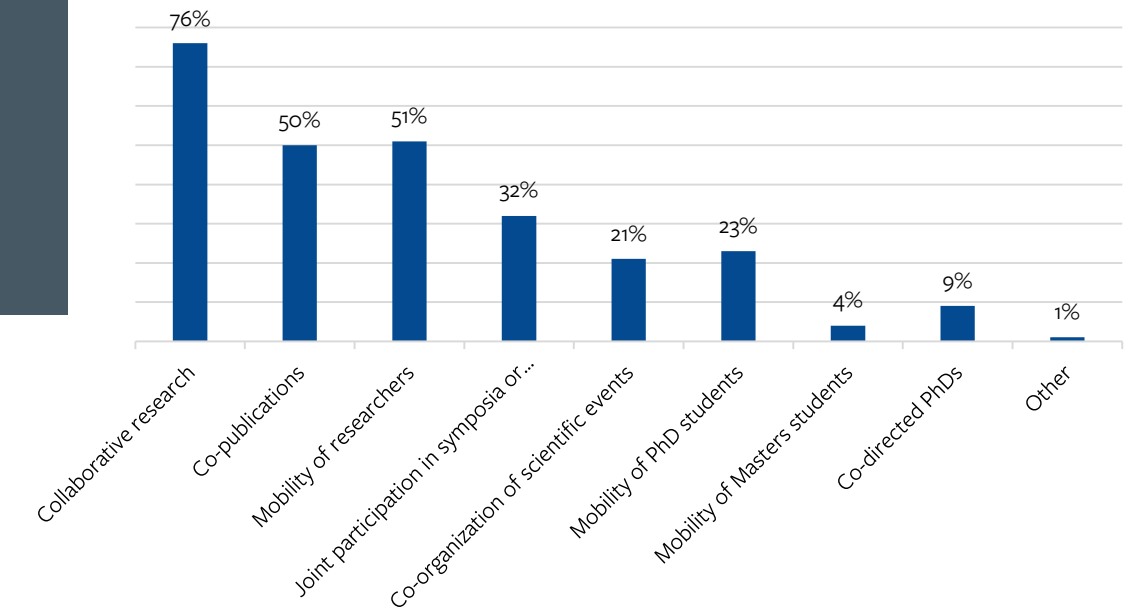
*Projects begun in 2018 not considered; data based on 95 funded projects

	Number of funded projects by research area	Number of copublications	Ratio of copublications by research area	Ratio of projects producing at least one co-publication	Mean number of co-publications per project
Mathematics	10	17	11%	60%	1.7
Physics	15	38	25%	40%	2.5
Marine / Earth / Planetary Sci.	6	12	8%	100%	2.0
Chemistry	6	14	9%	67%	2.3
Biology and Health	18	16	10%	56%	0.9
Humanities	20	34	22%	50%	1.7
Engineering Sciences	10	13	8%	70%	1.3
Information Technology	4	3	2%	25%	0.8
Agronomy / Ecology	6	7	5%	83%	1.2
TOTAL	95	154	100%	62%	1.6

83%

of FBF projects continued past initial grant year

Type of collaboration after initial grant year



38.1

Overall average annual number of co-publications

62%

of funded projects led to at least one co-publication

3

new joint structures created through FBF collaborations



• IRL (ex UMI), **Centre Pierre Binétruy**, in the area of cosmological and astroparticle physics

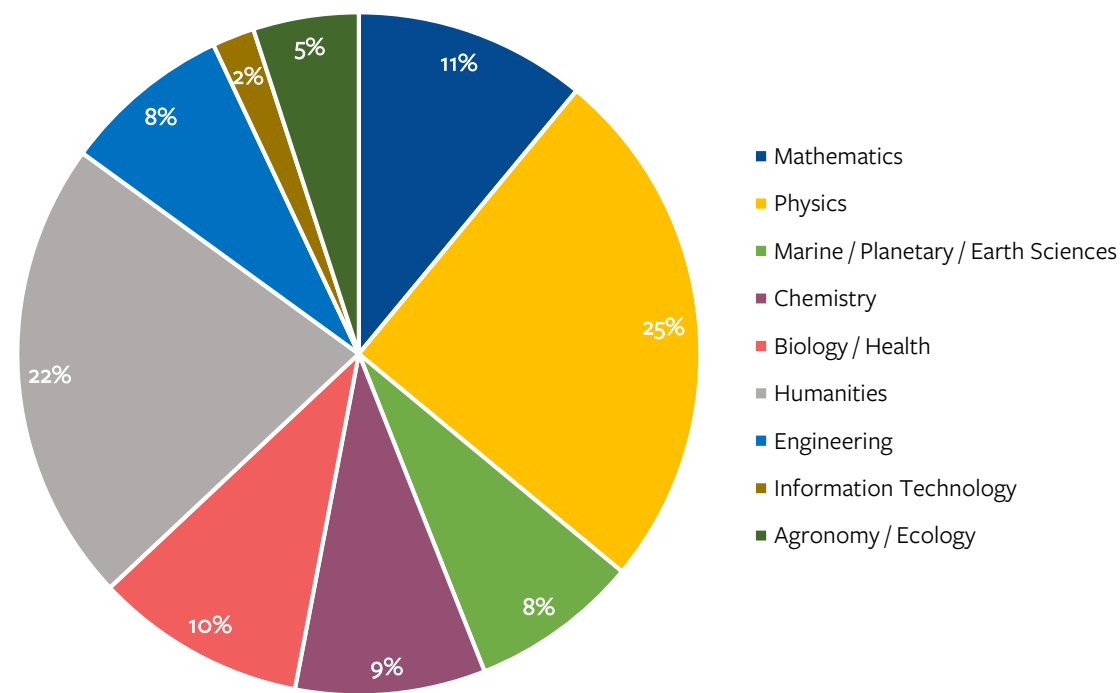


• IRN (ex GDRI) **QUADMARTS** - Quantitative Detection of Molecular And Radical Trace Species

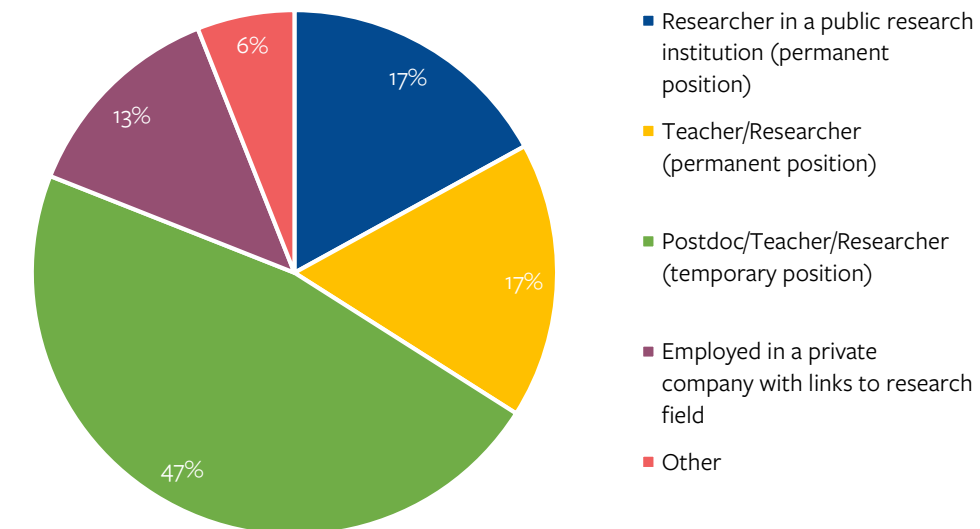


• **Inria-EVA** (with Prof. Steven Glaser's team at UC Berkeley) through REALMS associate team

Percentage of co-publications per scientific domain (2008-17)



Positions for junior researchers secured thanks to FBF projects



76%

of respondents believe the FBF had a positive impact on the career paths of junior researchers



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)

” 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 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)

For the past 25 years, the France-Berkeley Fund has advanced innovative research and international exchange across the humanities and sciences. Help amplify our work by making a gift to our grant fund, Gifts to the FBF go directly to help sustain cutting-edge collaborations that bring together faculty, researchers, and junior scholars from UC Berkeley and institutions throughout France.

To learn more and make a gift, visit

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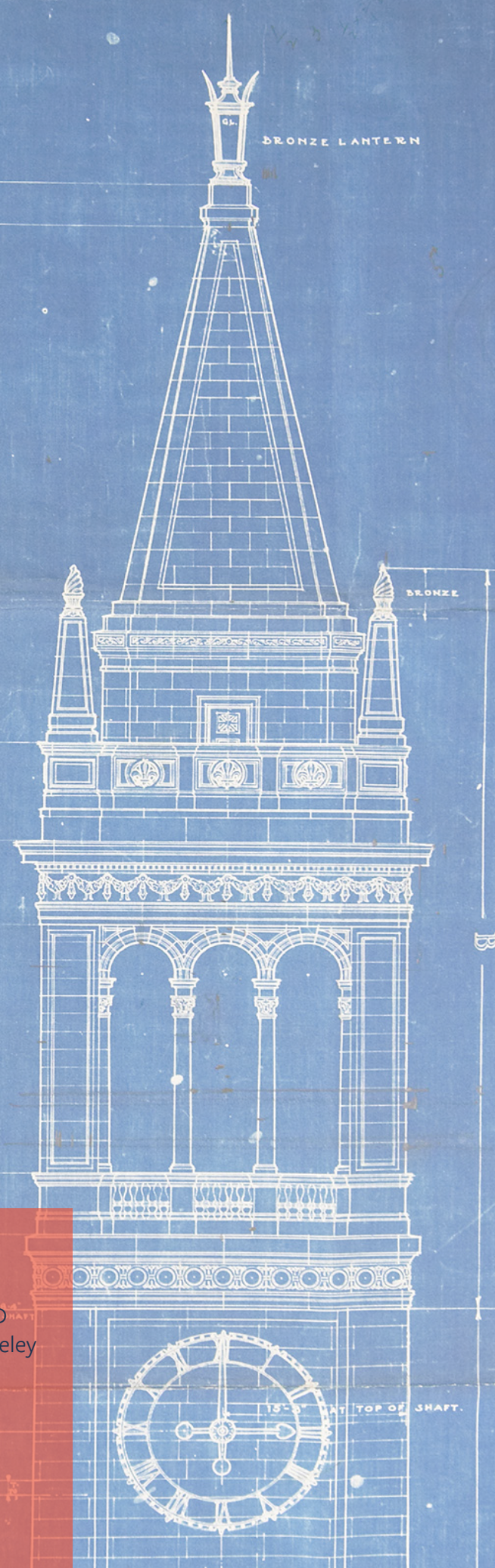
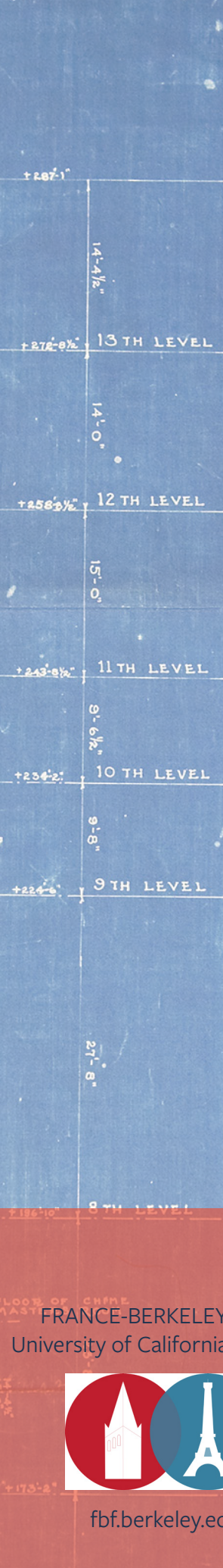
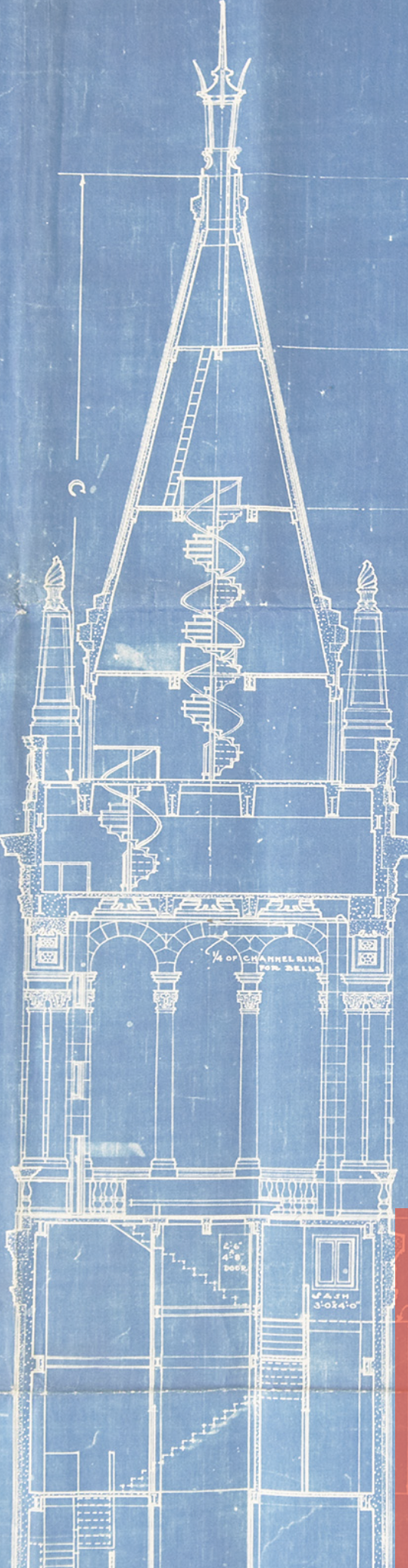
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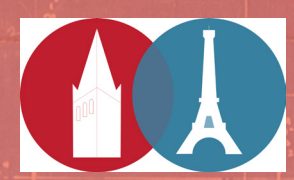
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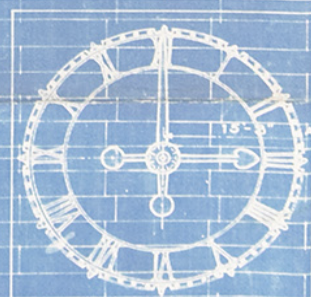
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