Annual Report

France Chicago Center

University of Chicago

2022-2023

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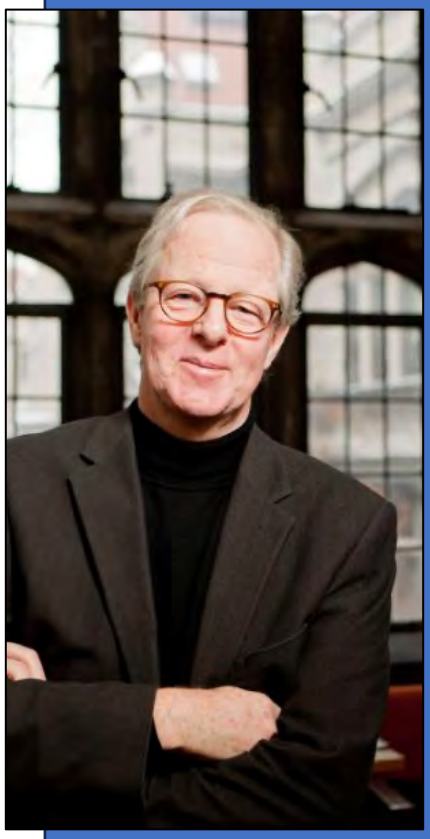
Cover: *Paris-based Quator Diotima—along with pianist, Meng Chieh Liu—during a France Chicago Center-sponsored performance at the Logan Center for the Arts on October 28, 2022. (Photo by Yuanjian Liu)*

Left: *Bassist, Pascal Niggenkemper, during in a live performance of The Bridge 2.5 PANG! at the Logan Center for the Arts on April 20, 2023. (Photo by Alexandre Pierrepont)*

FROM THE EXECUTIVE DIRECTOR



The 2022-2023 academic year marked the France Chicago Center's return to a certain normalcy, with in-person exchanges and interactions became once again the order of the day. FCC's many and varied activities—lectures, conferences, research projects, student travel grants, film showings—resumed with a new sense of their value and the importance and richness of interpersonal connections. The FCC-sponsored Interdisciplinary Workshop on Modern France and the Francophone World resumed its fundamental role as a forum for faculty and students from various departments in the social sciences and the humanities, who share common interests in France and the Francophone world from the early-modern era to the present. Particular thanks go out to out the workshop's faculty directors, Alison James and Paul Cheney, as well as the graduate-student coordinators, Léon Pradeau and Kyra Schulman, for their work in leading the workshop through difficult times and back to a full range of activity.

Our exchange with the *Collège de France* roared back to life with visits to Chicago by medievalist Patrick Boucheron (February) and the historian of the Enlightenment Antoine Lilti (April). Next year, the pace of exchange will further increase with anticipated visits by three eminent scholars from the *Collège*: Dominique Charpin (Assyriology), Denis Duboule (Biology), and Anne Cheng (Sinology). This privileged relationship has gained strength over the years with several members of the *Collège de France* deepening their relationship with the University through return visits to the campus.

FCC is looking forward to the completion of the first full exchange cycle in its new collaboration with the *Institut des Amériques*. After having spent two years on campus in Chicago working primarily with English Department faculty in the context of his doctoral thesis on aspects of the Harlem Renaissance, Adam Bigache will be spending next year as a fellow at the University's International Institute for Research in Paris (IIRP), where he will organize several activities and participate in programmatic planning in anticipation of the opening of the new IIRP in the Fall of 2024. We are looking at this cycle of two years in Chicago followed by a third at the IIRP as a model in

the context of a major expansion of the University's already strong relationship with the French National Research Agency (CNRS). Some 70% of FCC's seed funding collaborations in the sciences engage scholars from the CNRS, making it profoundly complementary to the new and promising IRC Discovery, launched in December of 2022 and spearheaded on the Chicago side by FCC Director, Juan De Pablo in his capacity as Executive Vice President of Science, Innovation, National Laboratories, and Global Initiatives.

All these new, wonderful programs and collaborations are built upon solid foundations that have been put in place over time. I take special pleasure in the mention of one of the foremost of these programs. FACCTS (France and Chicago Collaborating in the Sciences) was the brainchild of FCC Director Keith Moffat, a distinguished professor of biochemistry and molecular biology who has played an extraordinary role in FCC's development. Keith is retiring from FCC's directorship at the end of academic year 2022-23. Keith's keen intelligence, devotion and drive have played a major role in FCC's success. His wit and generosity have made it seem to all that worked with him that our efforts were just another way of having fun. But the fun is not over, for Keith will continue to act as a liaison to our *Confrères* program.

My fellow Directors Jennifer Pitts, Juan de Pablo, and Paolo Privitera join me in extending a welcome to FCC's two new Directors: Sarah Hammerschlag, the John Nuveen Professor in the Divinity School and Stephanie Palmer, Associate Professor in the Departments of Organismal Biology & Anatomy and Physics. Sarah and Stephanie are both highly distinguished scholars in their field who have over the years organized major collaborative research initiatives involving French scientists and scholars while playing active roles in advising FCC in its various activities.

Robert J. Morrissey
Benjamin Franklin Professor of French Literature
Department of Romance Languages & Literatures
Executive Director, France Chicago Center

STUDENT MOBILITY

FCC is committed to ensuring that promising and deserving University of Chicago students at all levels and in all disciplines have resources they need to engage in activities in France and the francophone world that will enrich their scholarship, improve their language proficiency, and further their academic and professional goals. For this reason, the France Chicago Center works closely with a broad array of institutional partners[1], invests considerable administrative energies, and devotes over a third of its unrestricted budget to making such opportunities available to the University of Chicago student body.

In 2022-23, FCC student mobility initiatives resulted in 24 students receiving fellowship and travel grant support totaling nearly $125,000, which allowed them to pursue a wide range of research, language study, and internship activities. A list of students and their activities can be found below.

STUDENTS IN THE COLLEGE

Helena Lew-Kiedrowski received a Neuroscience Internship Support Grant in the amount of $6,000 to conduct a summer research internship at the Institut Jacques Monod in Paris under the supervision of Nikos Konstandtinides.

Uma Mani received a Neuroscience Internship Support Grant in the amount of $6,000 to conduct a summer research internship at the Collège de France in Paris under the supervision of Alain Prochiantz.

Cara McQuillen received a Neuroscience Internship Support Grant in the amount of $6,000 to conduct a summer research internship at the Institut Jacques Monod in Paris under the supervision of Maxim Greenberg.

Donna Son received a François Furet Travel Grant in the amount of $2,500 to conduct research at the Bibliothèque Nationale de France (BNF) in Paris.

Tessel Veldhoen received a Neuroscience Internship Support Grant in the amount of $6,000 to conduct a summer research internship at the Collège de France in Paris under the supervision of Isabelle Brunet.

David Zhu received a Neuroscience Internship Support Grant in the amount of $6,000 to conduct a summer research internship at the Collège de France in Paris under the supervision of Fekrije Selimi.

STUDENTS IN THE GRADUATE DIVISIONS

Arwa Arwan, a Ph.D. student in Political Science, received a François Furet Travel Grant in the amount of $2,500 to support her research at the Condorcet Humathèque in Paris.

Anna Berg, a Ph.D. Student in Sociology, received an EHESS Exchange Fellowship in the amount of $14,000 to support her research at the EHESS in Paris.

Nicolae Biea, a Ph.D. student in Political Science, received a Sciences Po Exchange Fellowship in the amount of $14,000 to support his research at Sciences Po in Paris.

Khouloud Gargouri, a Ph.D. student in Romance Languages, received a François Furet Travel Grant in the amount of $2,500 to support her internship and research at the Avignon Theatre Festival in Avignon.

[1] The partners include: The French Ministry of Higher Education and Research, Career Advancement, The Division of the Social Sciences, The Department of Neurobiology, The Harris School of Public Policy, EHESS, and Sciences Po.

Nora Lambert, a Ph.D. student in Art History, received a François Furet Travel Grant in the amount of $2,500 to support her research at the Louvre, the Musée Condé in Chantilly, and the Palais de Papes in Avignon.

Sophie Lynch, a Ph.D. student in Cinema & Media Studies, received a François Furet Travel Grant in the amount of $2,500 to support her research at the Musée Rodin in Paris and the Photo Elysée Museum in Lausanne.

Maya Nandakumar, an M.A. student in Political Science, received a François Furet Travel Grant in the amount of $2,500 to support her research reseach and Language Study at the Alliance Française and UNESCO in Paris.

Quynh-Anh Nguyen, a Ph.D. student in Anthropology, received a François Furet Travel Grant in the amount of $2,500 to support her research at the Bibliothèque National de France (BNF) in Paris.

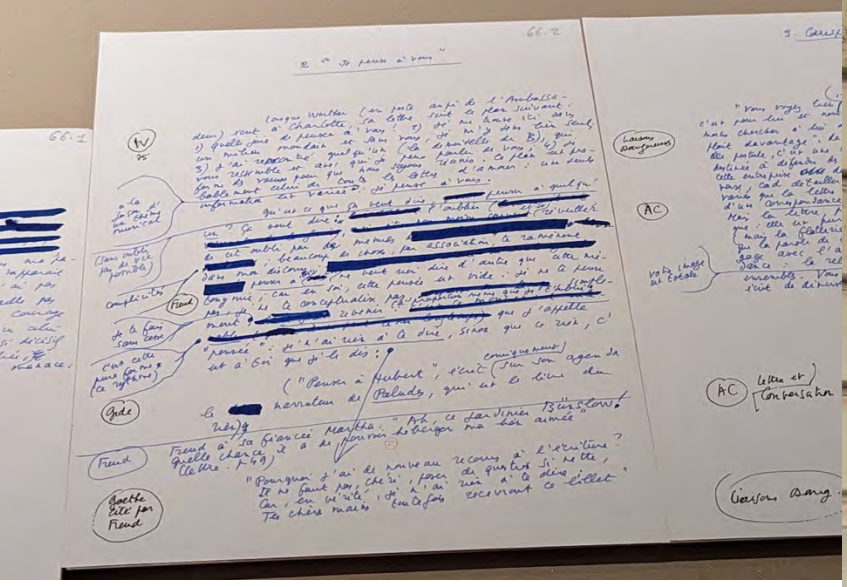
Léon Pradeau, a Ph.D. student in Romance Languages, received a François Furet Travel Grant in the amount of $2,500 to support his research at the Bibliothèque Nationale de France in Paris.

Rachel Tils, a Ph.D. student in History, received a François Furet Travel Grant in the amount of $2,500 to support her research at the Archives nationales d'outre-mer in Aix-en-Provence.

STUDENT IN THE PROFESSIONAL SCHOOLS

Morgan Kincaid, an M.Div. student at the Divinity School, received a François Furet Travel Grant in the amount of $2,500 to support her independent research at the Taizé Community in Taizé.

Harrison Lee, a master's degree student at the Harris School of Public Policy, received an Internship Support Grant in the amount of $6,000 to conduct a summer internship at Marakuja Kivu Research in the Democratic Republic of Congo.



Opposite page*: A performance of Olivier Py's* Ma Jeunesse exaltée *at the Avignon Theater Festival, as photographed by Furet Travel Grant recipient, Lou Gargouri.*

Above: *Manuscript of a text by Roland Barthes encountered in the course of research by Furet Travel Grant recipient, Léon Pradeau.*

Right: *Furet Travel Grant recipient, Darren Williams, in front of the Les Invalides.*

Jindian Li, an M.S.W. degree student at the Crown Family School, received an FCC Internship Support Grant in the amount of $4,000 to conduct a summer internship at the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in Paris.

Dagmawit Mengestu, a master's degree student at the Harris School of Public Policy, received an FCC Internship Support Grant in the amount of $8,000 to conduct a Summer Innovation Policy Internship in Toulouse under the auspices of the French Embassy in the United States.

Hersheena Rajaram, a master's degree student at the Harris School of Public Policy, received an FCC Internship Support Grant in the amount of $6,000 to conduct a summer internship at Marakuja Kivu Research in the Democratic Republic of Congo.

Yunuen Rodrigues, A master's degree student at the Crown Family School, received an FCC Internship Support Grant in the amount of $4,000 to conduct an internship at the Centre d'Aide aux Familles Latino-Américaines (CAFLA) in Montreal.

Yuqin Wang, a Ph.D. student in the Pritzker School of Molecular Engineering, received support totaling $5,000 to facilitate her travels between the Junhong Chen lab and the partner lab in France (directed by Arlette Vega-Gonzalez) in the context of "Water Decontamination" collaboration undertaken under the auspices of the CNRS research partnership.

Darren Williams, an M.B.A. student at the Booth School of Business, received a François Furet Travel Grant in the amount of $2,500 to support his Language Study at ACCORD language school in Paris and Toulon.

Above: *An outdoor terrace at the Avignon Theater Festival. According to François Furet Grant recipient, Khouloud Gargouri, it is one of the liveliest places in Avignon—where festivalgoers enjoy lunch while being surrounded by street performers, musicians, and actors promoting their plays. (Photo by Khouloud Gargouri.)*

Right: *Detail from a painting attributed to the workshop of Giotto at the Louvre. The photo was taken by Nora Lambert during the course of her François Furet Travel Grant-funded research trip.*

Below: *The Archives Nationales d'Outre-Mer, where François Furet Travel Grant recipient, Rachel Tils, conducted early dissertation research.*

Student Mobility Impact Quotes

"(Through my internship), I was able to pinpoint structural differences in the immigrant resettlement system between the US and Canada. I gained insight into how Canadian law impacts the lives of immigrants on the ground, and why immigrants—documented or undocumented—rarely articulate fear of deportation and family separation, something which has become a central experience in the lives of many immigrants in the US."

Yunuen Rodriguez
M.A. student in the Crown Family School

"Materials at the UNESCO library on repatriation debates have informed a new version of my M.A. paper on the politics of colonial artifacts in France, which I am planning to complete this quarter."

Maya Nandakumar
M.A/Ph.D. student in Political Science

"Among the 26 plays I attended, a solo performance that was voted best solo on stage at Festival Off Avignon 2018 sparked the first idea for my doctoral dissertation. *Gardiennes*, a play written and performed by Fanny Gabon, is a series of monologues illustrating the characters of ten women struggling with abortion. During this cathardic performance, I witnessed spectators crying and asking to hug the performer at the end of the play. As a spectator studying in the United States, where Roe v. Wade had recently been overturned, the relevance of this play moved me beyond words."

Khouloud Gargouri
Ph.D. student in Romance Languages

"The most significant way that I benefited from my time abroad was through access to the audiovisual and newspaper archives at the *Bibliothèque Nationale de France* and *Institut National de l'Audiovisuel*, which allowed me to collect all of the historical evidence for my BA thesis."

Donna Son
Undergraduate student in the College

"During my time in Paris, I was able to meet with various poets, Dominique Fourcade, Anne Portugal (who will both be part of my dissertation corpus), Stéphane Bouquet, Olivier Brossard, and Abigail Lang (my recently declared dissertation co-advisor). My discussions with them were thrilling and they deeply informed the orientation of my future research."

Léon Pradeau
Ph.D. student in Romance Languages

"During my time in France, I discussed my ongoing work and future research plans with scholars at EHESS and Sciences Po, and received particularly helpful feedback from Jen Schradie, Etienne Ollion, and Daniel Cefai. It was particularly useful to learn about research on the *Gilets Jaunes*, as it provides a comparative foil to the movements I am studying."

Anna Berg
Ph.D. student in Sociology

"I am currently developing my second-year paper project for a history Ph.D. and I was able to gather all of the materials I need for the paper during this trip. I also was able to gain a great sense of how French archival materials can speak to the particular questions in which I am interested—specifically those about informal economies and the relationship between small *commerçants* and the various power structures with which they interact (planters, intendants, governors, sugar estates more generally). Even though there is much more to look at in the coming months and years, I now know the general landscape of the archival output of French Antillean colonial administrations during the Ancien-Régime."

Rachel Tils
Ph.D. student in History

"The most significant intellectual reward of my stay at Sciences Po has been the chance to receive feedback on my work from scholars from an academic tradition quite distinct from the American one. I was struck, in particular, by the different interpretations of French thinkers (such as Michel Foucault) by American and French academics

respectively. I hope to integrate this plurality of perspectives both in my current dissertation research and in my future work."

Nicolae Biea
Ph.D. student in Political Science

"Beyond the essential role this trip played in shaping the direction of my future research and creating concrete ties with the community, since returning from France, I discovered that my time there helped shape the trajectory of my final quarter of classes and qualifying exams. While at Taizé, I was able to access the books the brothers have published on Christian mysticism, theology, and ethics. Looking at the list of citations in those texts confirmed for me that I would need to engage in more extensive reading on 20th-century nouvelle théologie, its ties to patristic sources, and its influence on Vatican II."

Morgan Kinkaid
M.Div. student at the Divinity School

"During my time at UNESCO in Paris, I gained a deep understanding of the workings of a complex international organization and the collaborative nature of addressing global challenges. Witnessing the coordination and consultation among different international organizations has expanded my perspective on the collective efforts aimed at protecting the rights of people with disabilities."

Jindian Li
M.A. student in the Crown Family School

"I was able to visit the Condorcet Humathèque archives located in Aubervilliers, where I collected useful documents for my dissertation. In particular, I found an interview with Aime Cesaire conducted by the journal *Tribune Marxiste* in 1958, which shows his abiding engagement with Marxism from an anti-colonial standpoint, and which hasn't been discussed at all by the existing bibliography. I also found documentation such as newspapers clips, fliers, and posters, which are related to the stances of French socialist and communist parties in regards to Algeria during the the 1960s. These archives will allow me to tell a richer and more sophisticated account of the entanglements of the French left and anti-colonial politics."

Arwa Awan
Ph.D. student in Political Science

"In addition to making progress on my spoken French, this trip allowed me to explore Paris, soaking it up like a sponge with a profound appreciation for the efforts made to preserve this rich culture and history. The François Furet Travel Grant I received afforded me the opportunity to live, learn, and laugh in France in a way that would not have otherwise been possible. I was welcomed and guided by so many former strangers! I found France to be a second home."

Darren Williams
M.B.A. student in the Booth School of Business

"The intellectual benefits of my time in France center largely on the trip's critical contributions to my dissertation. Seeing certain artworks in person, even if they are digitized, is invaluable to art historians because reproductions flatten and homogenize artworks, obscuring their richness and potential for further research."

Nora Lambert
Ph.D. student in Art History

"I am so grateful to have had the chance to meet with so many wonderful researchers and curators in Paris, and to see firsthand the works of photography and film that are at the center of my dissertation project. I am sure that my relationships with some of the people I have met are only beginning, and I look forward to collaborating and continuing to share conversations with many people during the upcoming years. Moreover, even every-day life experiences in Paris have helped me with research. Since I am interested in vernacular forms of photography, browsing the city's *marchés aux puces* led me to find many blurred photographs for just a few Euros, as well as to see in person many magic lanterns and a praxinoscope by Émile Reynaud (an early optical toy from the late 19th century and an important precursor of cinema)."

Sophie Lynch
Ph.D. student in Cinema & Media Studies

THE HUMAN & SOCIAL SCIENCES

FCC's activities in the humanities and social sciences are as broad as they are diverse. In addition to the student fellowship and travel grants offered to students in the humanities and social sciences described in the previous section, the pages that follow summarize activities FCC organized and supported during the 2022-23 year.

VISITING SCHOLARS

Justine Lévêque (Champs-Elysées Film Festival) October 2022, hosted by Sylvie Goutas and Alice McLean (RLL)

Olivier Guez (Author), November 2022, Hosted by Alison James (RLL)

Patrick Boucheron (Collège de France), February 2023, hosted by Daisy Delogu (RLL)

Luke Sunderland (Durham University), March 2023, hosted by Daisy Delogu (RLL)

Antoine Lilti (Collège de France), April 2023, hosted by Robert Morrissey (RLL) and Paul Cheney (History)

Philippe Fontaine (ENS Paris-Saclay), April 2023, hosted by Joel Isaac (Social Thought)

Jean-Baptiste Fleury (Sorbonne University), April 2023, hosted Joel Isaacs (Social Thought)

Agathe Meridjen (Université Paris Nanterre), April 2023, hosted by Robert Morrissey (RLL)

Laurent Cuvelier (Universit de Tours) April 2023, hosted by Paul Cheney (History)

Thomas Ramonda (Sciences Po Aix), April 2023, hosted by Robert Morrissey (RLL)

Michael Sonenscher (Kings College, Cambridge), May 2023, hosted by Paul Cheney (History)

Rebecca Spang (Indiana University), May 2023, hosted by Paul Cheney (History)

Olivia Rosenthal (Author), May 2023, hosted by Alison James (RLL)

Iris de Rode (CNRS), June 2023, hosted by Paul Cheney (History)

COLLOQUIA & PUBLIC LECTURES

Modernism in the Black Transatlantic, a one-day workshop organized by Ken Warren and Adam Bigache. November 2, 2022, the Social Sciences Tea Room, SSRB #201

The Disappearance of Josef Mengele, Olivier Guez (author), in conversation with Alison James (RLL), Nov. 7, 2022, Seminary Coop Bookstore

La Peste aux Etats-Unis, a talk with Patrick Boucheron (Collège de France), in conversation with Daisy Delogu (RLL) on February 17, 2023, Alliance Française de Chicago

Elements and Edges: Inhabitable and Uninhabitable Worlds in Medieval Encyclopedias, a paper presented by Luke Sunderland during a session of the Medieval Studies Workshop. March 28, 2023, Cobb #319

Power on Trial: Public Opinion and Political Legitimacy from the Enlightenment to the Napoleonic Era and its Modern Implications, organized by Robert Morrissey (RLL), Maximilien Novak (RLL), and Ryan Brown (RLL). April 14-15, 2023, The Franke Institute for the Humanities

The Committee System and the Social Sciences at the University of Chicago after World War II, organized by Philippe Fontaine (ENS Paris-Saclay) and Joel Isaac (University of Chicago), May 2, 2023, Wieboldt #207

Capitalism: The Story Behind the Word, organized by Joel Isaac (Social Thought), May 15, 2023, Neubauer Collegium

Révolution française & American Revolutions, with Iris de Rode (CNRS) and Paul Cheney (History), June 8, 2023, at the Alliance Française de Chicago

Morning session of Modernism in the Black Transatlantic, Nov. 2, 2022.

Workshop on Modern France & the Francophone World

Katie Jarvis (Associate Professor of History, Notre Dame University) presented her paper entitled "The Frontage Road to Nineteenth-Century Capitalism: How Local Justice Transformed Credit Relationships in Revolutionary Paris," October 21, 2022.

Arthur Clement (Ph.D. Candidate in History) presented a chapter from his dissertation entitles "Reexamining sécularisation and laïcisation: The Case of Eliminating the Catholic Faculties of Theology from the State University in the Early Third Republic." November 4, 2022.

Amine Bouhayat (Ph.D. Candidate in RLL, UChicago) Presented a chapter from his dissertation entitled "Les relations internationales dans le théâtre de Pierre Corneille." November 18, 2022.

Ryan Brown (Ph.D. Candidate in RLL, UChicago) presented a chapter of his dissertation entitled "In Defense of the Self: Proof, Public Opinion, and the Art of Autobiography in the works of Rousseau and Voltaire." December 2, 2022.

Léo Dekowski (l'Université de Paris-Cergy) presented his paper entitled "Une généalogie de la facilité dans les théories et pratiques poétiques françaises." January 13, 2023.

Leila Blackbird (Ph.D. Candidate in History) presented her chapter "A Gendered Frontier: Métissage and Indigenous Enslavement in 18th-Century Basse-Louisiane." January 27, 2023.

Rachel Tils (Ph.D. Student in History) presented her dissertation proposal entitled "Enslaved Marketers, Policing, and Commercial Connections in the Eighteenth-Century French Atlantic." February 17, 2023.

Kyra Schulman (Ph.D. Student in History) presented a chapter from her dissertation entitled "From Flâneuses to the Frontlines: Jewish Women's Everyday Lives from the Vichy-Era to the Decolonial Age." March 10, 2023.

Khouloud Gargouri, (Ph.D. Candidate in French and Francophone Studies) presented a chapter from her dissertation entitles "Female Solo Performance or 'Les seules en scène' in France: Storytelling and Narratives of Empowerment." March 31, 2023.

Planning session for the 2023-24 academic year. April 21, 2023.

Samar Miled (Ph.D. Candidate in French and Francophone Studies, Duke University) presented a chapter from his dissertation entitled "Cultural Affirmation in Tunisian Francophone Literature." April 28, 2023.

Léon Pradeau (Ph.D. Student in RL&L) presented a chapter from his dissertation entitled "Prosthetic Verse: The (re)Construction of Bodies in Postmodern French Poetry." May 12, 2023.

Institut des Amériques Partnership

The MOU between the University of Chicago and the *Institut des Amériques* (spearheaded by FCC) provides the framework for a three-year Chicago residence for visiting Ph.D. student from France. The first two years of this residency is to take place on the Chicago campus; the final year on UChicago's Paris campus. The selected student becomes the coordinator of an "International Hub" housed at the University of Chicago. During the three-year residency, they are expected to advance their dissertation research and writing while creating and expanding networks and organizing a series of workshop and colloquia—including a major conference in Paris. This initiative is also supported by the Karla Scherer Center for American Studies, The Division of the Humanities, English Department, the Center for the Study of Race, Politics & Culture, and the *Institut des Amériques*.

In the spring of 2021, Adam Bigache, a Ph.D. student at the University of Aix Marseille doing dissertation work the Harlem Renaissance (with guidance from Ken Warren) was selected

from a pool of 16 applicants from a national call launched by the Institut des Amériques. Mr. Bigache's Ph.D. contract if funded in full by the French Ministry of Higher Education and Research.

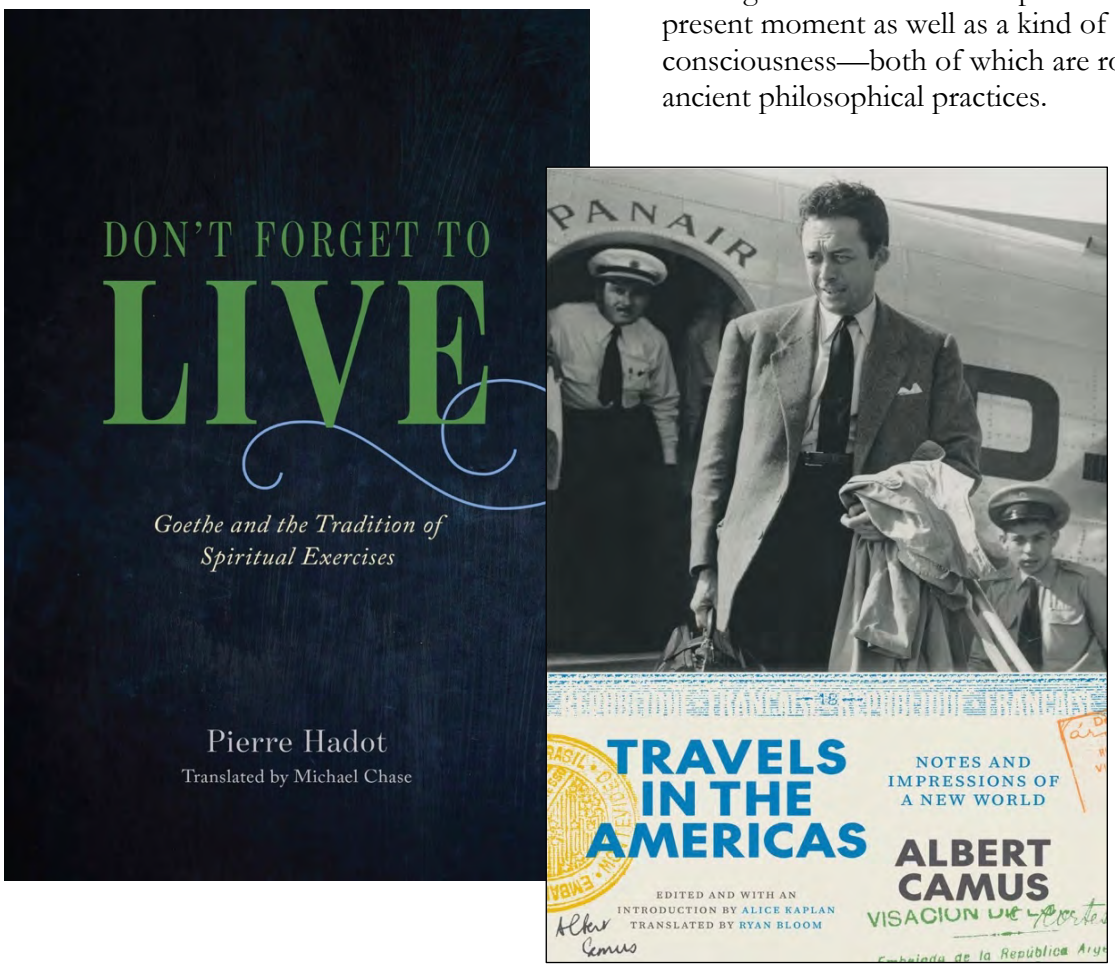
This year, Adam Bigache organized a very successful *Journée d'étude* on the theme of "Modernism in the Black Transatlantic" which took place on Nov. 2, 2022, in the Social Sciences Tea Room. Photo below. He leveraged this experience to draft and help submit a UC-IIRP faculty grant proposal for a much larger conference at the Center in Paris next year. Next year he will be in Paris completing his his dissertation and organizing a major conference that will be a capstone to his dissertation and help solidify a nascent collaboration between the University of Chicago and the *Institut des Amériques* around broader questions about American Studies.

France Chicago Collection

In 2021, the France Chicago Center and University of Chicago Press announced a partnership that resulted in the creation of the "France Chicago Collection," a series that brings seminal works written in French to an anglophone audience. In 2023, two new titles appeared in this series.

Travels in the Americas: Notes and Impression of a New World, by Albert Camus (translated by Ryan Bloom), records the impressions, frustrations, joys and longings experienced by the young Albert Camus during his March 1946 travels in North America, when he was still relatively unknows, and his 1949 travels to South America, after he had become an international celebrity.

Don't Forget to Live, by Pierre Hadot (translated by Michael Chase), explores Goethe's relationship with ancient spiritual exercises as he sought both an intense experience of the present moment as well as a kind of cosmic consciousness—both of which are rooted in ancient philosophical practices.



Covers of two volumes that were published in the France Chicago Collection in 2023.

THE ARTS

In addition to promoting intellectual and scholarly exchange, FCC is also committed to fostering a dynamic UChicago artistic environment with a distinctly French flavor, and also to increasing awareness within our community of France's many contributions in the arts. To that end, working with our many partners, FCC organizes and sponsors a range of artistic programs and events. Our activities in this area during the 2022-23 academic year are summarized below.

CONCERTS

Music from Paris I, a performance of the music of Boulez, Pesson, and Debussy by Quator Diotima. Organized with and through UChicago Presents, October 26, 2022, at the Logan Center Performance Hall.

Music from Paris II, a performance of the music of Stravinsky, Szymanowski, and Bartok by Quator Diotima. Organized with and through UChicago Presents, October 27, 2022, at the Logan Center Performance Hall.

Music from Paris III, a performance of the music of Dutilleux, Ravel, and Franck by Quator Diotima with pianist Meng Chieh Liu. Organized with and through UChicago Presents, October 28, 2022, at the Logan Center Performance Hall.

The Bridge: Temple of Enthusiasm, a performance by Marvin Tate (voice, poetry), Erwan Keravec (bagpipes), Gerrit Hatcher (tenor saxophone) Lia Kohl (cello), and Gaspar Claus (cello), followed by a discussion moderated by Jennifer Iversion and Alexandre Pierrepont. November 4, 2022, in the Performance Penthouse at the Logan Center for the Arts.

The Bridge: PANG!!, a performance by Sam Pluta (electronics), Sophie Agnel (piano), Pascal Niggenkemper (double bass), and Ben Lamar Gay (cornet, voice, electronics, flutes, percs). April 20, 2023, in the Performance Penthouse at the Logan Center for the Arts.

Doc Films Collaborations

Delphine Seyrig, More Than a Muse
Programmed by: Hannah Yang

This series highlight various aspects of Delphine Seyrig whose career spans the height of French cinema and who contributed to some of its most important works by directors like Resnais, Truffaut, and Buñuel.

Her unique voice, striking features, and ability to reveal the deepest of emotions with a single glance undoubtedly shaped her early-career roles—often the elusive, intellectual woman of desire as in *Marienbad* or *Stolen Kisses*. But, sensing that "theater and films are very far from women's consciousness about themselves," she refused to simply be a muse.

In 1975, Seryig stepped behind the camera and created the pioneering French feminist video collective *Les Insoumuses* with Carole Roussopolous, stating, "video is my independence from men." Her work was explicitly feminist (even labeled as militant) and she fiercely advocated for issues like abortion rights. Through the end of her career, Seyrig continued to make work with women and about women, leaving the roles of her early days behind. She collaborated frequently with Marguerite Duras and Ulrike Ottinger, and held a close relationship with Chantal Akerman, who noted that the French film establishment could not tolerate "the incongruity between their fantasy of her and what she was—a total feminist activist to the end of her life." This, combined with her unwillingness to compromise and become the perfect cinema muse, lessened what should be a significant legacy. Her contributions, both on and off screen, are invaluable. This series attempts to celebrate and bring to light her monumental life's work as an actor, filmmaker, and woman.

Last Year at Marienbad (1961), Alain Resnais, 94 minutes, DCP (March 22)

Jeanne Dielman, 23, quai du Commerce, 1080 Bruxelles (1975), Chantal Akerman, 201 minutes, DCP (March 29 & April 2)

Muriel, or the Time of Return (1963), Alain Resnais, 116 minutes, DCP (April 5)

Stolen Kisses (1968), François Truffaut, 90 minutes, DCP (April 12)

Baxter, Vera Baxter (1977), Marguerite Duras, 91 minutes, DCP (April 19)

Sois belle et tais-toi! (1981), Delphine Seyrig, 110 minutes, DCP (April 26)

Maso and Miso Go Boating (1976), *Calamity Jane & Delphine Seyrig, A Story* (2020), Carole Roussopoulos, Ioana Wieder, Delphine Seyrig, and Nadia Ringart, Babette Mangolte, 55 minutes and 87 minutes, DCP (May 3)

Letters Home (1986), Chantal Akerman, 104 minutes, DCP (May 10)

Johanna d'Arc of Mongolia (1989), Ulrike Ottinger, 165 minutes, 35mm (May 17)

Jacques Rivette, New Wave Master
Programmed by: Kathleen Geier

Jacques Rivette was one of the greatest directors of his time, an acknowledged inspiration for such contemporary cinematic visionaries as David Lynch and Claire Denis. If his work remains less well known than that of his peers, that is largely because he was, as Martin Scorsese noted, "the most experimental of the French New Wave directors." His films are distinguished by their tendency to explode cinematic conventions and upend traditional narratives. He strongly emphasized the collective nature of film making and his own methods were heavily collaborative. Many of his films were improvised or co-scripted by the actors.

Frequently, his most important collaborators were women. That's not surprising, because of all the French New Wave directors, it is Rivette who, along with Agnès Varda, is the most deeply interested in women. His films are notable for their strong female characters and their exploration of feminist themes. During our own era of ferocious antifeminist backlash, a film like his scathing masterpiece *The Nun* seems timelier than ever.

There are other reasons why Rivette seems necessary right now. In an era when political paranoia is at a fever pitch, his haunting films, with their conspiracy-obsessed protagonists, feel especially resonant. At a time when Hollywood products are more formulaic than ever, his radical experimentation is all the more thrilling. Finally, his films are greatly benefitted by being seen on the big screen, in the immersive environment of a theater. His films are demanding but also richly rewarding. Rivette is the rare filmmaker who can make you see not just cinema, but the world, in an entirely new way.

The Nun (1966), Jacques Rivette, 140 minutes, DCP (Oct 2)

Céline and Julie Go Boating (1974), Jacques Rivette, 193 minutes, Digital (Oct 9)

Duelle (1976), Jacques Rivette, 121 minutes, DCP (Oct 16)

Out 1: Spectre (1972), Jacques Rivette, 264 minutes, Digital (Oct 30)

The Gang of Four (1989), Jacques Rivette, 160 minutes, DCP (Nov 6)

La Belle Noiseuse (1991), Jacques Rivette, 238 minutes, DCP (Nov 13)

Joan the Maid: The Battles (1994), Jacques Rivette, 160 minutes, DCP (Nov 20)

Joan the Maid: The Prisons (1994), Jacques Rivette, 177 minutes, DCP (Dec 4)

Above: *Scene from Jacques Rivette's* The Nun.

Opposite page: *Dephine Seyrig in* Last Year in Marienbad *(upper) and photographed with with Ulrike Ottinger (lower).*

PANG!
THE BRIDGE #2.5

Sam Pluta
electronics

Ben Lamar Gay
cornet, voice, electronics, flutes, percs

Sophie Agnel
piano

Pascal Niggenkemper
double bass

Pang!, The Bridge #2.5 has been made possible through Jazz & New Music, a program of Villa Albertine and FACE Foundation, in partnership with the French Embassy in the United States with support from the French Ministry of Culture, Institut français, SACEM (Société des auteurs, compositeurs et éditeurs de musique) and the CNM (Centre National de la Musique).

Thursday, April 20, 2023
7:30 pm
Performance Penthouse, #901
Logan Center for the Arts
915 E. 60th St.

Free and open to the public. A reception will follow.
Seating is limited and available on a first-come basis. Doors open at 7:15 pm.
Persons with disabilities who need assistance may contact Dan Bertsche in advance at 773-702-3662.

This Performance is presented by (and with the support of) The Bridge, The France Chicago Center, The Julie and Parker Hall Endowment for Jazz and American Music, The Department of Music, The Reva and David Logan Center for the Arts, Ministère de la Culture, Sacem, Centre National de la Musique, Spedidam, Adami, Institut Français, and Experimental Sound Studio.

Champs-Elysees Film Festival

With leadership from Sylvie Goutas and Alice McLean, and working in partnership with the French Language Section, the Humanities Collegiate Division, The French Club, and the Cultural Services of the French Consulate in Chicago, the France Chicago Center partnered in the planning, organization and financing of the 4th annual UChicago Champs-Elysées Film Festival, which took place from October 17 to November 7, 2022. This year's festival featured:

- a public screening of eight short films listed below (Oct. 17)
- a public conversation about French culture and cinema, moderated by Justine Lévêque (Oct. 19)
- the Unites States premiers of *Churchill, Polar Bear Town* by Annabelle Amoros, and *Planète Triste* by Sébastien Betbeder, at the Alliance Française de Chicago (Oct. 20)
- a public screening of Chicago-prize winning short film, *Lucienne dans un monde sans solitude* by Geordy Couturiau (Oct. 20)
- a screening of Ewan Barcelo and Tom Devianne's *Histoires rouges, actes janues,* followed by Q&A (Nov. 7)

Au revoir, Jérôme! - Chloé Farr, Gabrielle Selnet & Adam Sillard (8 minutes)

La Flûte Enchantée - Geordy Gouturiau (25 minutes)

Discussion animée entre entendeurs de voix, Tristan Thil (12 minutes)

Léo la nuit - Nans Laborde-Jourdàa (23 minutes)

Le feu au lac - Pierre Menahem (15 minutes)

Saint Jean Baptiste - Jean-Baptiste Alazard (20 minutes)

Séparation - Aurélien Achache (15 minutes)

Trois mots de rien - Paola Valentin (10 minutes)

Above: *Scene from Trap Door Theatre's* Joan and the Fire.
Below: *Champs-Elysée Film Festival poster.*

Trap Door Theatre Outing

In partnership with Daisy Delogu (RLL)—who taught a spring-quarter course entitled *Jean d'Arc: histoire et légende*—FCC purchased all tickets for the Trap Door Theatre's April 13, 2023, performance of Matei Visniec's *Jeanne et le Feu* in English translation and offered them free of Chicago to UChicago students who were enrolled in this course, who are affiliated with TAPS, and who were enrolled in a French language course. FCC also provided complimentary round-trip bus service between Hyde Park and Wicker Park for the 32 students attending this event.

THE HARD SCIENCES

FACCTS

FACCTS (France and Chicago Collaborating in the Sciences), France Chicago Center's flagship program in the sciences, offers seed-grant funding ranging from $7,500 to $40,000 in support of teams of scientists in Chicago and in France. In this way, the program encourages their collaborative research efforts by providing resources that allow them to engage in early-stage efforts. Since the program's inceptions in 2008, FACCTS has attracted 333 applications and disbursed 202 awards totaling $3,341,367. Because of the role that graduate students play in research, FACCTS has also served as a driver of transatlantic mobility, facilitating research stays conducted by more than 150 Ph.D. students working in partner host labs. FACCTS-sponsored research deepens networks between the University of Chicago and a host of institutions in France (88 and counting), has generated more than 400 joint publications, and has resulted in more than $50,000,000 in subsequent federal funding secured. Our 2023 call for proposals generated 22 applications and the program disbursed a total of $396,000 in support of the following 16 research collaborations.

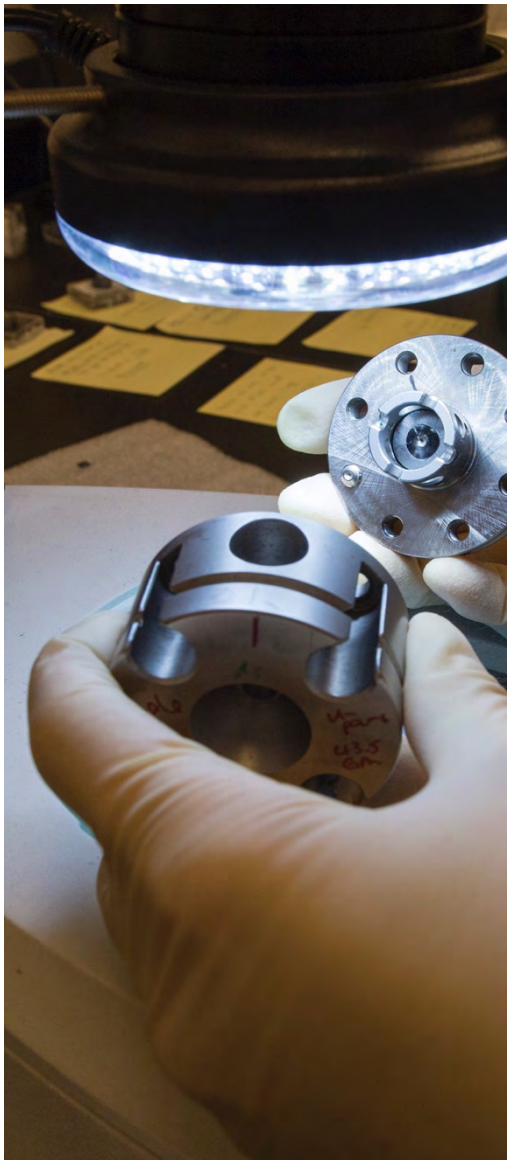
Stefano Allesina (UChicago, Ecology & Evolution) and **Francois Massol** (Université de Lille) received a $15,500 grant in support of their collaboration entitled "Models with Higher-Order Interactions in Ecology, Evolution and Epidemiology."

Edwin Munro (UChicago, Molecular Genetics & Cell Biology) and **Thomas Lecuit** (Collège de France) received a $22,500 grant in support of their collaboration entitled "Dynamic Coupling of Adhesion and Contractility during Morphogeneis."

Stephanie Palmer (UChicago, Organismal Biology & Anatomy; Physics) and **Aleksandra Walczak** (Laboratoire de Physique Théorique, PSL-École Normale Supérieure) received a $30,000 grant in support of their collaboration entitled "Discovering Common Principles for Prediction Across Scales and Systems in Biology."

Rama Ranganathan (UChicago, Biochemistry & Molecular Biology and PME) and **Olivier Rivoire** (PSL-ESPCI) received a $20,000 grant in support of their collaboration entitled "The Evolutionary Design of Proteins."

Esra Tasali (UChicago, Medicine) and **Francis Lévi** (Paul Brousse Hospital, Paris) received a $30,000 grant in support of their collaboration entitled "International Multidisciplinary Network on Personalized Cancer Chronotherapy: Fostering Collaborative Projects Through Chicago-Paris Partnership."



Zewdi Tsegai (UChicago, Organismal Biology & Anatomy) and **Sélim Natahi** (Collège de France) received a $25,000 grant in support of their collaboration entitled "Evolution of the Human Skull: Exploring Gracilization and Robusticity of the Lower Jaw in Humans and Chimpanzees."

Wei Wei (UChicago, Neurobiology) and **Olivier Marre** (Institut de la Vision, INSERM DR2) received a $18,000 grant in support of their collaboration entitled "Neural Basis of Robust Motion Detection by the Mammalian Retina."

Aashish Clerk (UChicago, PME) and **Marco Schiro** (Ecole Polytechnique; Collège de France) received a $30,000 grant in support of their collaboration entitled "Open Quantum Systems Dynamics in Noisy-Intermediate-Scale Quantum Systems."

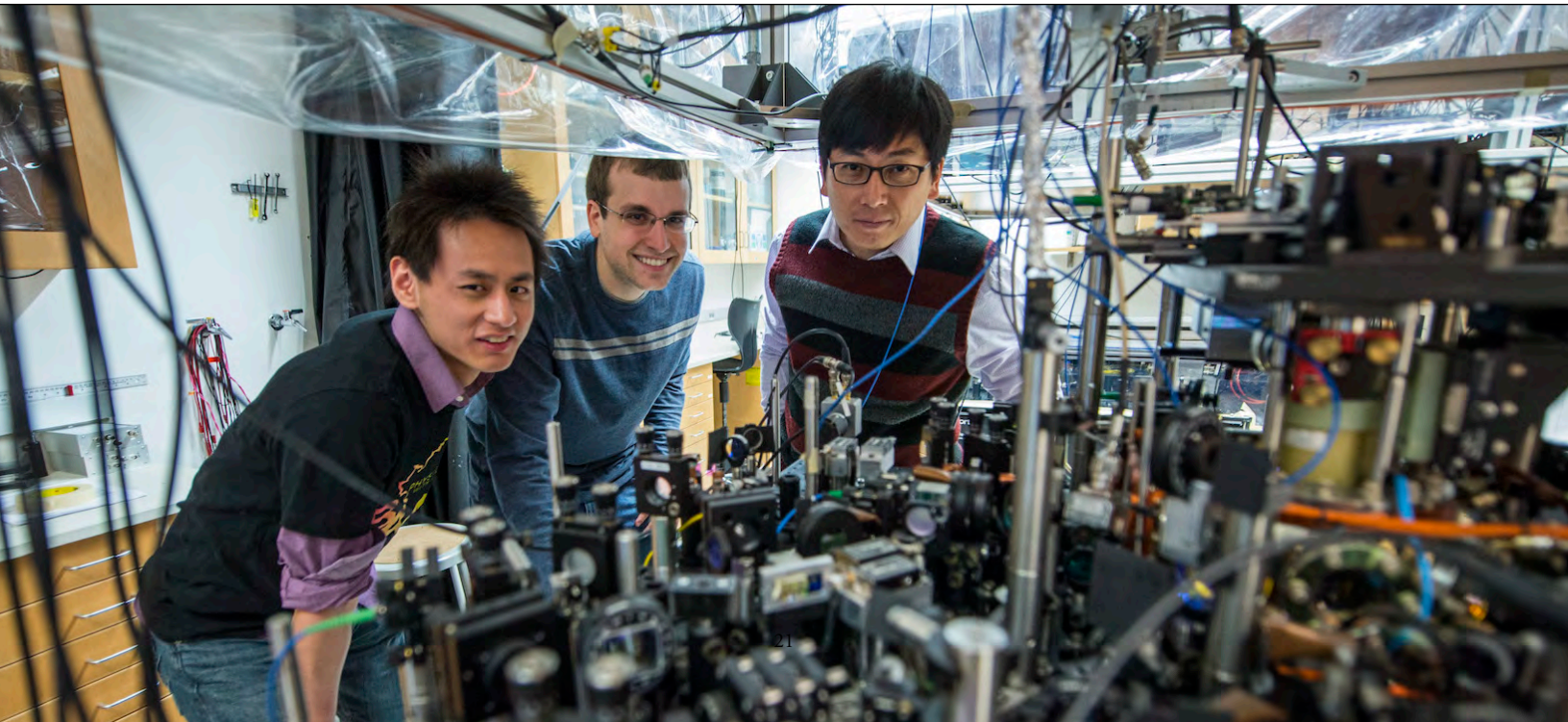
Vincenzo Vitelli (UChicago, Physics) and **Michel Fruchart** (PSL-ESPCI Paris) received a $30,000 grant in support of their collaboration entitled "Dualities for the Design and Control of Metamaterials."

Ying Shirley Meng (UChicago, PME) and **Alejandro Franco** (Université de Picardie, Jules Verne) received a $15,000 grant in support of their collaboration entitled "Optimization of the Pressure during Cycling for Positive Electrode with Solid Electrolyte."

Andrew Campbell (UChicago, Geophysical Sciences) and **Razvan Caracas** (Institut de Physique du Globe de Paris) received a $17,650 grant in support of their collaboration entitled "Collaborative Studies of Iron-Hydrogen Alloy as a Model of Earth's Core."

Claire Donnat (UChicago, Statistics) and **Olga Klopp** (ESSEC Business School) received a $19,500 grant in support of their collaboration entitled "Statistical Properties of Graph Neural Network Embeddings."

Nick Feamster (UChicago, Computer Science) and **Francesco Bronzino** (ENS Lyon) received a $22,500 grant in support of their collaboration entitled "Cost-Aware Feature Engineering and Model Selection for Network Traffic."



Opposite Page: *Cheng Chen, a 2022 FACCTS recipient, with two members of his research team.*

Above: *Stephanie Palmer, a 2023 FACCTS recipient, with a discoid cockroach used for neuroscience experiments with CPS 7th grade students.*

Right: *Andrew Campbell (left), a 2023 FACCTS recipient, with a student.*

Xu Han (Argonne National Laboratory) and **Patrice Bertet** (CEA at U Paris-Saclay, CNRS, UMR 3680) received a $40,000 grant in support of their collaboration entitled "Microwave Single Photon Detection for Spin and Microwave-Optical Entanglement."

David Kaphan (Argonne National Laboratory) and **Clément Camp** (Laboratory of Catalysis, Polymerization, Processes and Material) received a $40,000 grant in support of their collaboration entitled "Cooperative Nitrogen Reduction by Heterobimetallic Active Sites on Electron Reservoir Supports."

Alex Drlica-Wagner (Fermilab National Accelerator Laboratory)and **Johann Cohen-Tanugi** (Université de Montpellier) received a $19,500 grant in support of their collaboration entitled "Understanding Dark Matter from Observations of Stellar Streams with Rubin Observatory."

See appendix for more detail on each project.

CNRS Research Partnership

As part of its ongoing commitment to deepening relations between the University of Chicago and the CNRS, The France Chicago Center provides a mobility stipend to one UChicago PhD student participating in the activities of a host lab in France undertaken under the auspices of the UChicago-CNRS Research Partnership.

In the context of this commitment, this year FCC supported the partnership between **Junhong Chen** (PME) and **Arlette Vega Gonzales** (LSPM, CNRS) that focuses on water decontamination techniques by providing transatlantic travel funding to UChicago Ph.D. student, **Yuqin Wang**, for her various research stays at the Laboratoire des Sciences des Procédés et des Matériaux in Villetaneuse in France. FCC will continue to provide similar support over the next two years.

As part of the agreement, CNRS is financing French Ph.D. student, **Rendy Prastiko**, during his various research stays in the Chen lab on the UChicago campus.

FINANCIAL SUMMARY

REVENUE

Source	Amount	Note
UNIVERSITY PARTNERSHIPS		
Support from Divisions & Schools[1]	$52,000	*in support of administrative expenses*
Social Sciences Division Dean of Students	$13,500	*EHESS Exchange Fellowship*
Other University Partnerships	$14,700	
Office of the Provost	$30,000	*in support of FACCTS*
Office of the Vice Provost of Research	$15,000	*in support of FACCTS*
Physical Sciences	$25,000	*in support of FACCTS*
Biological Sciences	$25,000	*in support of FACCTS*
Pritzker School of Molecular Engineering	$20,000	*in support of FACCTS*
Subtotal	**$195,200**	
ENDOWMENT REVENUE[2]	**$155,225**	*Unrestricted*
SUPPORT BEYOND THE UNIVERSITY		
Ministry of Foreign Affairs[3]	$23,000	*see footnote 3*
National Laboratories[4]	$99,460	*in support of FACCTS*
Institut des Amériques	$1,049	*Scholarly Programming*
French University Partners[5]	$12,500	*see footnote 5*
Support Council in the Sciences *(Confrères)*	$104,000	*in support of FACCTS*
French Ministry of Higher Education & Research[6]	$38,457	*FACCTS & Student Mobility*
Subtotal	**$278,466**	
TOTAL REVENUE	**$628,891**	

[1] *Contributions from the Divisions of the Humanities and Social Sciences, the Harris School, the Crown Family School, and the Divinity School*

[2] *FCC's endowment value as of December 31, 2022 was $3,427,878*

[3] *Includes funding for FACCTS ($20,000) and various cultural programming initiatives ($3000)*

[4] *Support from Argonne National Laboratory and Fermilab Accelerator National Laboratory*

[5] *Includes support from PSL University (FACCTS), Sciences Po (Student Mobility) and EHESS (Student Mobility)*

[6] *Dollar equivalent of the 39500 euro grant received in September 2022*

EXPENDITURES

Program / Initiative	Amount
STUDENT MOBILITY	
François Furet Travel Grant Program	$27,500
Graduate Exchange Fellowships (Sciences Po and EHESS)	$28,000
Institut des Amériques Collaboration	$4,500
Internship Travel Grant Support	$28,000
Subtotal	**$88,000**
COLLABORATIONS IN THE SCIENCES	
FACCTS Program Awards	$396,010
CNRS Research Partnership	$5,000
Subtotal	**$396,010**
COLLABORATIONS IN THE ARTS	
The Bridge	$8,300
UChicago Presents	$7,000
Doc Films	$5,000
Champs-Elysées Film Festival	$3,200
Trap Door Outing	$1,030
Subtotal	**$24,530**
INITIATIVES IN THE HUMAN & SOCIAL SCIENCES	
Faculty Grants	$34,000
French Contemporary Writers Initiative	$3,400
Workshop on Modern France and the Francophone World	$6,000
Institut des Amériques-driven scholarly activities	$5,600
French Activities Fund (with Romance Languages & Literatures)	$2,500
France Chicago Collection	$2,500
Subtotal	**$54,000**
OUTREACH	
Outreach Initiatives	$2,500
Partnerships with the French Consulate	$2,600
Subtotal	**$5,100**
SALARIES & ADMINISTRATIVE EXPENSES	**$62,900**
Grand Total	**$630,540**

APPENDIX:
DETAILS OF THE 2023 FACCTS COMPETITION

This appendix contains information about the 2023 FACCTS application pool, the stakeholders whose invaluable support make this program possible, the six-person review committee that evaluated all applications and selected the 2023 FACCTS laureates, and the 16 research collaborations being funding through FACCTS this year.

FACCTS & FIGURES

Total FACCTS Applications Received 22
- Applications from Faculty Members in the Physical Sciences (PSD)* 4.5
- Applications from Faculty Members in the Biological Sciences (BSD)* 9
- Application from Faculty Member at the Pritzker School (PME)* 2.5
- Applications from Researchers at Argonne National Laboratory (ANL) 5
- Application from Researchers at Fermilab National Accelerator Laboratory (FNAL) 1

Total Funding Requested $600,957
- Total Requested by PSD Faculty* $107,150
- Total Requested by BSD Faculty* $219,717
- Total Requested by PME Faculty* $54,590
- Total Requested by Researchers at ANL $200,000
- Total Requested by Researchers at FNAL $19,500

Total Number of FACCTS Grants Awarded 16
- Recipients in PSD 4.5
- Recipients in BSD 6
- Recipient at PME 2.5
- Recipients at ANL 2
- Recipient at Fermilab 1

Total Funding Allocated to FACCTS Projects in 2023 ..... $395,150
- Allocated to Projects in PSD $104,650
- Allocated to Projects in BSD $136,000
- Allocated to Projects at PME $55,000
- Allocated to the ANL-Based Projects $80,000
- Allocated to the Fermilab-Based Project $19,500

Average Amount of Each Request $27,316
Average Amount of Each Award $24,697

PARTNERS/STAKEHOLDERS

Members of the France Chicago Center Support Council in the Sciences (*Confrères*)	$92,500
Argonne National Laboratory	$80,000
France Chicago Center	$30,000
Office of the Provost of the University of Chicago	$25,000
Division of the Physical Sciences	$25,000
Division of the Biological Sciences	$25,000
PSL University	$25,000
Office of Science and Technology at the Embassy of France in Washington	$20,000
Pritzker School for Molecular Engineering	$20,000
Fermilab National Accelerator Laboratory	$19,600
French Ministry of Higher Education, Research, and Innovation	$19,010
Office of Science, Innovation, National Laboratories, and Global Initiative (SING)	$15,000
Total	$396,010

REVIEW COMMITTEE

The France Chicago Center gratefully acknowledges the work of the 2023 FACCTS committee, whose members include: **Aniruddha Hazra** in the Department of Medicine (representing BSD), **Paolo Privitera** in the Department of Astronomy & Astrophysics (representing PSD), **Keith Moffat** in the Department of Biochemistry & Molecular Biology (representing FCC), **Robert Morrissey** in the Department of Romance Languages & Literatures (representing FCC), who chaired the committee, **Mireille Guyader** (Scientific Counselor at the French Embassy in Washington), **Jean-Paul Lallès** (Scientific Attaché at the Consulate of France in Chicago), and **Christophe Delacourt** (French Ministry for Higher Education, Research, and Innovation). **Daniel Bertsche** (Associate Director, France Chicago Center) convened the committee and facilitated its discussions and deliberations.

FCC SUPPORT COUNCIL IN THE SCIENCES (CONFRÈRES)

FCC's Support Council in the Sciences, the members of which are designated as *Confrères*, has once again generously underwritten the costs of four research collaborations—Stephanie Palmer & Aleksander Walszak, Zewdi Tsegai & Sélim Natahi, Esra Tasali & Francis Lévi, and Rama Ranganathan & Olivier Rivoire. FCC offers heartfelt thanks to the *Confrères* who who enliven and enhance the review and selection process, and who help to underwrite collaborations whose areas of focus resonate with their interests. *Confrères* who attended the meeting in Paris this year and/or who supported at least one collaboration include: **Tem Horwitz** (co-chair), **Daniel Weissbluth** (co-chair), **Stan V. Smith, Marc Weissbluth,** and **Jaime Thomas** (through a partnership with Francis W. Parker School). We warmly welcome our newest *Confrère*, Stan Smith, to the group!

COLLABORATIONS IN THE PHYSICAL SCIENCES

Collaborative Studies of Iron-Hydrogen Alloy as a Model of Earth's Core

Chicago PI: ..... Andrew Campbell (Geophysical Sciences)
PI in France: ..... Razvan Caracas (Institut Physique du Globe)
FACCTS Award (2 Year): $17,650

Abstract: Chicago PI Campbell and France collaborator Caracas both lead research programs investigating the properties and behavior of Earth's deep interior. The Chicago lab uses experimental methods; the Paris group uses computational methods, and the combination of these two methods can be more powerful than either alone. Here we propose for a Chicago graduate student to visit Paris and learn to use density functional theory to augment the experimental results on her Ph.D. project. The French collaborator will commit very substantial CPU time to the project. The results will improve our understanding of the iron alloys in Earth's metallic core, and how it got to be that way.

Statistical Properties of Graph Neural Network Embeddings

Chicago PI: ..... Claire Donnat (Statistics)
PI in France: ..... Olga Klopp (ESSEC Business School)
FACCTS Award (2 years): $19,500

Abstract: This collaboration proposes to establish statistical guarantees for Graph Neural Network embeddings. The latter are a recent extension of the neural network machinery to the graph setting that allows to encode node- (e.g. drugs and their properties in a biological network) and edge- (e.g. drug-drug interactions) information in a vector representation that is amenable to inference (e.g. side effect prediction). But what you see is what you get: biased or incomplete node representations would be detrimental to any downstream statistical analysis. Yet, very little work has yet attempted to understand the statistical properties of these node representations: what graphs are GNNs able to correctly estimate? How does the GNN architecture impact these estimates? Our two-year collaboration proposes to work on alleviating this fundamental gap.

Cost-Aware Feature Engineering and Model Selection for Network Traffic

Chicago PI: ..... Nick Feamster (Computer Sciences)
PI in France: ..... Francesco Bronzino (ENS Lyon)
FACCTS Award (2 years): $22,500

Abstract: This proposal aims to make it easier for operators and researchers to apply machine learning models in practice to solve real-world network management challenges. Unfortunately, today, most models do not perform outside of the isolated laboratory environment in which they were trained and even when robust, they require access to data that cannot be collected and analyzed in real-time on high-speed networks. We aim to tackle the following challenges: (1) automatically selecting models that achieve high accuracy under real-world systems constraints (e.g., time and memory constraints); (2) integrating information about systems constraints into existing automated machine learning networking pipelines.

Dualities for the Design and Control of Metamaterials

Chicago PI: ..... Vincenzo Vitelli (Physics)
PI in France: ..... Michel Fruchart (PSL-ESPCI)
FACCTS Award (2 years): $30,000

Abstract: The goal of this proposal is to harness dualities and non-standard symmetries as a design principle for metamaterials with remarkable properties. Our starting point consists in taking seriously the question: what is a symmetry? A symmetry is a transformation that maps a system onto itself. A duality, on the other hand, relates distinct models or structures. This distinction is blurred in self-dual systems, mapped onto themselves by a duality. These exhibit remarkable properties due to emergent symmetries, as exemplified by the scale invariance of an Ising magnet at the critical point. Dualities provide tools to design metamaterials with properties otherwise possible but unattainable. For instance, the phonon band structure of Kagome lattices exhibits a global two-fold degeneracy forming the basis for mechanical pseudospins and computations.

This collaboration is supported in part by the PSL University through a broader agreement linking the University of Chicago with PSL.

Discovering Common Principles for Prediction Across Scales and Systems

Chicago PI: ..... Stephanie Palmer (Physics)
PI in France: ..... Aleksandra Walzcak (PSL-ENS)
FACCTS Award (2 years): $30,000

Abstract: Guiding behavior in a dynamic environment requires biological systems to make rapid predictions about the future state of the world because of the significant response delays present in all biological transducers. To interact fluidly with the external world, the brain must make predictions on both short (milliseconds) and long (hours) timescales. Similarly, the immune system must predict what pathogens will infect the system next to protect the host organism. This predictive behavior is learned over many iterations of biological sensing and honed over evolutionary time. While prediction operates with different microscopic machinery, at different time scales, and with different signaling mechanisms, we will use tools from physics and statistical inference to identify common strategies for solving this mission-critical behavior in biology.

This collaboration is supported in part by Jaime Thomas through the Horwitz-Barreto Charitable Fund as part of the Confrères *initiative. It is also supported in part by PSL University through a broader agreement linking the University of Chicago with PSL.*

COLLABORATIONS IN THE BIOLOGICAL SCIENCES

Models with Higher-Order Interactions in Ecology, Evolution, and Epidemiology

Chicago PI: ..... Stefano Allesina (Ecology & Evolution)
Key Individual in France: ..... François Massol (University of Lille)
FACCTS Award (2 years): $15,500

Abstract: The mathematization of ecological population dynamics can be traced back to the pioneering work of Lotka (1920) and Volterra (1926). The model bearing their names has been extended and generalized, yielding results in ecology, epidemiology, and evolutionary theory. These extensions still assume that interactions between agents happen in pairs: the predator interacts with the prey, the host with the pathogen, etc. However, "higher order interactions" (HOIs), i.e., interactions involving multiple agents, have been long recognized and documented in natural systems. Analyzing models containing HOIs has posed insurmountable obstacles, due to mathematical considerations. Here we propose a collaboration to circumvent the issues that have stymied progress in this area, thereby laying the foundations for new models that will find application in a variety of biological disciplines.

Dynamic Coupling of Adhesion and Contractility during Morphogeneis

Chicago PI: ..... Edwin Munro (Molecular Genetics & Cell Biology)
PI in France: ..... Thomas Lecuit (Collège de France)
FACCTS Award (2 years): $22,500

Abstract: The objective of our collaboration is to explore novel quantum phenomena based on laser cooled atoms with tunable two- and three-body interactions. We will study changes in the thermodynamical properties of atoms that condense at ultralow temperatures and their excitations (such as solitons) in the presence of programmable interactions, a novel feature of the cold atoms. One particular quantum object we will investigate collaboratively is the quantum droplets, i.e., self-confining gases "bubbles". Our two groups have great interest in sharing various experimental techniques and in discussions to detect such quantum objects. Annual mutual visits from the students and the PIs as well as regular online joint group meetings are planned.

Discovering Common Principles for Prediction across Scales and Systems

Chicago PI: ..... Stephanie Palmer (Organismal Biology & Anatomy)
PI in France: ..... Aleksandra Walzcak (PSL-ENS)
FACCTS Award (2 years): $30,000

Abstract: Guiding behavior in a dynamic environment requires biological systems to make rapid predictions about the future state of the world because of the significant response delays present in all biological transducers. To interact fluidly with the external world, the brain must make predictions on both short (milliseconds) and long (hours) timescales. Similarly, the immune system must predict what pathogens will infect the system next to protect the host organism. This predictive behavior is learned over many iterations of biological sensing and honed over evolutionary time. While prediction operates with different microscopic machinery, at different time scales, and with different signaling mechanisms, we will use tools from physics and statistical inference to identify common strategies for solving this mission-critical behavior in biology.

This collaboration is supported in part by Jaime Thomas through the Horwitz-Barreto Charitable Fund as part of the Confrères *initiative. It is also supported in part by PSL University through a broader agreement linking the University of Chicago with PSL.*

The Evolutionary Design of Proteins

Chicago PI: ..... Rama Ranganathan (Biochemistry and Molecular Biology)
PI in France: ..... Olivier Rivoire (PSL-ESPCI)
FACCTS Award (2 years): $20,000

Abstract: Proteins play a critical role in cells, performing vital functions such as catalyzing chemical reactions and transmitting signals. The study of proteins currently faces two major challenges: gaining a deeper understanding of how protein functions emerge through evolution and designing novel proteins with unique and custom capabilities. This funding will support research aimed at addressing these challenges. Working with Ph.D. student Eric Rouvière, we are developing theoretical models of proteins to shed light on the long-sought understanding of the evolutionary origin of protein allostery, the regulation of protein activity in response to cellular conditions. In parallel, Ph.D. student Emily Hinds is using machine learning models trained on natural protein sequences to create new enzymes that perform as well or better than natural ones.

This collaboration is supported in full by Daniel Weissbluth, Tem Horwitz, and Sandra Barreto as part of the Confrères *initiative.*

International Multidisciplinary Network on Personalized Cancer Chronotherapy: Fostering Collaborative Projects Through Chicago-Paris Partnership

Chicago PI: ..... Esra Tasali (Medicine)
PI in France: ..... Francis Lévi (Paul Brousse Hospital, Paris)
FACCTS Award (2 years): $30,000

Abstract: Cancer chronotherapy i.e., the delivery of anticancer drugs according to circadian timing, can increase treatment efficacy and minimize toxicities, thus drastically improving patient outcomes. Circadian rhythms generated by internal genetic clocks can vary between individuals, thus calling for collaborative research for personalizing chronotherapy. In cancer patients, a highly novel and promising approach involves continuous telemonitoring of circadian biomarkers at people's homes and selection of anticancer drugs timing according to real-time data. With personalized cancer chronotherapy in focus, this proposal aims to foster multidisciplinary collaborations through partnerships between the University of Chicago and Paris-Saclay University, involving US and European teams. This proposal builds on decades of research and complementary strengths of Chicago- Paris partners and combines multidisciplinary skills in sleep/circadian rhythms, oncology, chronobiology, and advanced data science.

This collaboration is supported in full by Daniel Weissbluth as part of the Confrères *initiative.*

Evolution of the Human Skull: Exploring Gracilization and Robusticity of the Lower Jaw in Humans and Chimpanzees

Chicago PI: ..... Zewdi Tsegai (Organismal Biology & Anatomy)
PI in France: ..... Sélima Natahi (Collège de France)
FACCTS Award (2 years): $25,000

Abstract: The modern human face is characterized by a highly gracile facial morphology in comparison to the robust morphology of the first fossil members of our species and to our ape relatives. The mode and timing of this evolutionary change remains uncertain. This project applies a novel methodological approach to assess structural changes in bone growth in the lower jaw (mandible) of humans and chimpanzees, from high resolution micro computed tomographic (microCT) data, to determine how their adult morphology is achieved. This will allow us to assess the potential causes of this evolutionary transition. Future research will apply this approach to fossil mandibles, and to other regions of the skeleton, to better understand the evolution of modern human skeletal gracilization.

This collaboration is supported in full by Stan V. Smith as part of the Confrères *initiative.*

Neural Basis of Robust Motion Detection by the Mammalian Retina

Chicago PI: ..... Wei Wei (Neurobiology)
PI in France: ..... Olivier Marre (Institut de la Vision)
FACCTS Award (2 years): $18,000

Abstract: Visual perception and visually guided behavior rely on brain circuits that extract ethologically relevant visual information from photons reaching the retina. How does the animal's visual system perform robust motion detection even when the background of the moving object contains other visual features? This important task is carried out at multiple levels of the nervous system, starting from the very earliest stage of visual processing in the mammalian retina. Previous works have mostly studied motion processing in the retina using simple stimuli, leaving aside the issue of robustness of motion processing in the presence of confounding factors. The overall objective of this application is to understand the neural mechanisms that preserve the retina's sensitivity to motion stimuli in the natural environment.

COLLABORATIONS AT THE PRITZKER SCHOOL FOR MOLECULAR ENGINEERING

Open Quantum Systems Dynamics in Noisy-Intermediate-Scale Quantum Systems

Chicago PI: ..... Aashish Clerk (PME)
PI in France: ..... Marco Schiro (Ecole Polytechnique, Collège de France)
FACCTS Award (2 years): $30,000

Abstract: The advent of noisy intermediate-scale quantum (NISQ) devices – quantum systems consisting of many imperfect qubits – is already revolutionizing our understanding of quantum dynamics and quantum information science. While an ideal quantum computer/simulator would be free from dissipation and noise, any realistic device will be subject to both, leading to complex dynamics that is not information-preserving ("non-unitary"). Our project aims to increase fundamental understanding of how to control large-scale NISQ systems in the presence of noise and dissipation. Our approach will focus on connections to so-called "non- Hermitian dynamics", and the physics of monitored systems. We will establish general theoretical frameworks for this new field, which will help guide state-of-the-art experiments in a number of platforms (e.g. neutral atom quantum simulators, superconducting quantum circuits).

The Evolutionary Design of Proteins

Chicago PI: ..... Rama Ranganathan (PME)
PI in France: ..... Olivier Rivoire (PSL-ESPCI)
FACCTS Award (2 years): $20,000

Abstract: Proteins play a critical role in cells, performing vital functions such as catalyzing chemical reactions and transmitting signals. The study of proteins currently faces two major challenges: gaining a deeper understanding of how protein functions emerge through evolution and designing novel proteins with unique and custom capabilities. This funding will support research aimed at addressing these challenges. Working with Ph.D. student Eric Rouviere, we are developing theoretical models of proteins to shed light on the long-sought understanding of the evolutionary origin of protein allostery, the regulation of protein activity in response to cellular conditions. In parallel, Ph.D. student Emily Hinds is using machine learning models trained on natural protein sequences to create new enzymes that perform as well or better than natural ones.

Optimization of the Pressure during Cycling for Positive Electrode with Solid Electrolyte

Chicago PI: ..... Ying Shirley Meng (PME)
PI in France: ..... Alejandro Franco (University of Picardy, Jules Verne)
FACCTS Award (1 year): $15,000

Abstract: To meet the society's requirements, the safety and performance of classical lithium-ion batteries with a liquid electrolyte need to be improved. The use of solid electrolytes in batteries offer a promising alternative but one that introduces new challenges to solve such as designing the interfaces between materials. Here, we propose an innovative workflow combining computational modeling and experimental characterizations to assist the optimization of the cycling condition for a Li6PS5Cl/LiNi0.8Mn0.1Co0.1O2 positive electrode. The study will focus on the external pressure needed (either uniaxial or isostatic) to ensure proper contacts between the components of the battery with the highest content of active material possible. Indeed, the objective is to identify the lowest external pressure yielding satisfactory contacts during while having an electrode suitable for practical applications.

COLLABORATIONS AT ARGONNE NATIONAL LABORATORY

Cooperative Nitrogen Reduction by Heterobimetallic Active Sites on Electron Reservoir Supports

Chicago PI: ..... David Kaphan (Argonne National Laboratory)
PI in France: ..... Clément Camp (University of Lyon, CNRS)
FACCTS Award (2 years): $40,000

Project Summary: Industrial production of ammonia, termed the Haber-Bosch process, is critical for global food production, but must be run at extraordinarily high temperature and pressure and therefore consumes one percent of the total global energy output and produces one percent of all CO2 emissions. We hypothesize that the unique cooperative heterobimetallic systems developed by Dr. Camp (CNRS, Lyon), in combination with the Li-ion battery anode inspired catalyst support materials being studied by Dr. Kaphan (ANL) will have a unique capability to flatten the potential energy surface for nitrogen reduction. The FACCTS program will enable this collaboration with Dr. Camp's group at the CNRS, which will provide valuable insights to enable well-defined catalyst design, particularly for small molecule activation such as in nitrogen reduction to ammonia.

Microwave Single Photon Detection for Spin and Microwave-Optical Entanglement

Chicago PI: ..... Xu Han (Argonne National Laboratory)
PI in France: ..... Patrice Bertet (CEA-Saclay)
FACCTS Award (2 years): $40,000

Project Summary: Single photon detection plays a pivotal role in Quantum Information Science. We propose to take advantage of the state-of-the-art single microwave photon detectors that have been recently demonstrated at Paris-Saclay and explore two unique quantum systems that have been under development at Argonne: (a) ultralong coherence single-electron spin qubits on an ultraclean solid neon surface, and (b) superconducting piezo optomechanical system for entangled microwave-optical photon generation. We aim to achieve efficient detection of spin qubit transition and verification of microwave-optical photon entanglement in the two systems via novel single microwave photon detection schemes. The coherent combination of the experimental breakthroughs made by the participating PIs from UChicago/Argonne and Paris-Saclay in France could open new routes in quantum sensing and establish essential steps towards scalable quantum networks.

COLLABORATION AT FERMILAB NATIONAL ACCELERATOR LABORATORY

Understanding Dark Matter from Observations of Stellar Streams with Rubin Observatory

Chicago PI: ..... Alex Drlica-Wagner (Fermilab)
PI in France: ..... Johann Cohen-Tanugi (University of Montpellier, CNRS)
FACCTS Award (2 years): $19,500

Project Summary: We propose to develop a framework to constrain the fundamental properties of dark matter through observations of stellar streams with the Vera Rubin Observatory's Legacy Survey of Space and Time (LSST). Stellar streams are dynamically fragile collections of stars that are sensitive to the presence of small clumps ("halos") of dark matter that are predicted by the standard cosmological model. Rubin LSST will dramatically improve our measurements of stellar streams; however, a thorough understanding of observational systematics is required to rigorously extract signatures of dark matter physics. We will develop and test statistical procedures to detect and characterize stellar streams using simulated data. Our studies will inform Rubin LSST commissioning and enable unprecedented science from early Rubin LSST data.

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