



CIFAR Global Call for Ideas
The Future of Being Human

PROGRAM GUIDE 2021-2023

ABOUT CIFAR

CIFAR is a Canadian-based global research organization that convenes extraordinary minds to address the most important questions facing science and humanity.

By supporting long-term interdisciplinary collaboration, CIFAR provides researchers with an unparalleled environment of trust, transparency and knowledge sharing. Our time-tested model inspires new directions of inquiry, accelerates discovery and yields breakthroughs across borders and academic disciplines. Through knowledge mobilization, we are catalysts for change in industry, government and society. CIFAR's community of fellows includes 20 Nobel laureates and more than 400 researchers from 20 countries. In 2017, the Government of Canada appointed CIFAR to develop and lead the Pan-Canadian Artificial Intelligence Strategy, the world's first national AI strategy.

CIFAR is supported by the governments of Canada, Alberta, Ontario, and Quebec as well as international partner organizations, individuals, foundations and corporations.

CIFAR GLOBAL CALL FOR IDEAS

CIFAR invites the global research community to submit proposals for new programs that address complex, fundamental questions of importance to the world. Ideas must be novel, bold, and potentially transformative to warrant the creation of a sustained, interdisciplinary, and collaborative research program.

Deadline for Registrations: August 17, 2021 11:59PM (PST)

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INTRODUCTION

Building on our experience as a convener of global research networks, CIFAR challenges the international research community to identify questions of importance under the theme of **The Future of Being Human**. We invite proposals that ask new questions about our complex emerging world, where the issues under study are entangled and dynamic. The proposals should confront challenging problems that necessitate a diverse team incorporating multiple disciplines (potentially spanning the humanities, social sciences, arts, physical sciences, and life sciences) to engage in a sustained dialogue to develop new insights, and change the conversation on **The Future of Being Human**.

CIFAR is a Canadian-based global research organization that convenes extraordinary minds to address the most important questions facing science and humanity. For almost 40 years, CIFAR has focused on bringing the best minds together to address complex challenges of importance to the world. Since its inception in 1982, CIFAR has had a significant impact on the way the world understands critical issues such as the Earth's evolution, social identity and well-being, early child and brain development, artificial intelligence, building stronger societies, genetic networks, and many others. CIFAR takes a long-term view and supports leading-edge research with the potential for global impact.

CIFAR's collaborative approach and support of research is unique, focusing on challenges that transcend disciplinary boundaries and geographic borders. CIFAR supports sustained collaborations between Canadian and international researchers to address global problems, open new fields of inquiry, and accelerate the creation and mobilization of knowledge that address these challenges.

Through building long-term, interdisciplinary, global communities, we provide the world's top researchers with an unparalleled environment of trust, transparency and knowledge sharing for interdisciplinary collaboration. Our time-tested model inspires new directions of inquiry, creating a culture of risk-taking, accelerating discovery, and yielding breakthroughs across borders and academic disciplines. Through knowledge mobilization, we are catalysts for change in industry, government and society.

Currently, our community includes more than 400 researchers from 161 institutions in 18 countries. Our fellows, chairs, scholars, and advisors are among

the most highly cited researchers in the world. Twenty Nobel Prizes have been awarded to CIFAR-affiliated researchers.

CIFAR is not a traditional funder of research; we are a convener of researchers. We support synergy and collaborative investigation into complex challenges through sustained interactions between researchers. Through 5-year, renewable program terms, CIFAR provides flexible research support for fellows and supports face-to-face interaction between program fellows, guests, and early-career researchers and trainees.

CIFAR recognizes that bringing together individuals from multiple backgrounds, perspectives and experiences is integral to advancing excellence and increasing the impact of our organization. We strive to create an environment that will give our diverse global community of researchers the support to successfully address the most important questions facing science and humanity. Ensuring that every person feels valued and welcome, regardless of age, education, sexual orientation, gender expression and identity, parental status/responsibility, immigration status, Indigenous status, religion, disability, language, race, place of origin, ethnicity, culture, socio-economic status, and other attributes is vital to achieving our mission. We strongly encourage applications from members of society who face systemic barriers and biases, including, but not limited to, women, Indigenous persons, members of visible minority/racialized communities, 2SLGBTQ+ persons, members of marginalized gender identity communities, and persons with disabilities.

CURRENT OPPORTUNITY

The Future of Being Human

How our increasingly interconnected lives shape how we live, the choices we make, and the unanticipated consequences of each.

The pandemic has revealed cracks in a world that was already experiencing multiple crises. It has highlighted deep societal fault lines, and exacerbated inequalities within and between countries, while leading to the retrenchment of multilateralism, the thickening of borders, and revealing the precariousness of a tightly coupled and interconnected global system.

At the same time, it has galvanized international scientific cooperation and spurred scientific and technological progress. It has also made us rethink our ethical responsibilities for future generations, norms, and terms of accountability. Humans are at an inflection point. Radical new ways of thinking, coupled with an openness to action, are giving rise to a sense of both optimism and urgency, with a clear emphasis on the role of science for a better future.

This increasingly complex and dynamic environment raises fundamental questions about the opportunities and limits of being human. Profound and rapid advances in technologies that enhance our human capacities, such as gene editing, algorithms for improving decision making, and surveillance, have far outpaced our understanding of how to develop, use, and govern them responsibly. New methods and tools augmented by exponentially-growing computational power are opening new areas of enquiry not previously possible. The scale and scope of available data is staggering and still growing; while at the same time, public trust in the traditional institutions gathering and analyzing these data is eroding. Looking into the future, this situation forces us to think differently about how we govern, communicate and interact, and to re-evaluate what the essential qualities are that make us human.

For CIFAR's next Global Call for Ideas, we are soliciting proposals related to **The Future of Being Human**, exploring in the long term the intersection of humans, science and technology, social and cultural systems, and our environment. Our understanding of the natural world around us, and new insights into individual and societal behaviour, have the potential to provide enormous benefits to humanity and the planet. We invite bold proposals that ask new questions about our complex emerging world, where the issues under study are entangled and dynamic. We are confronting challenging problems that necessitate a diverse team incorporating multiple disciplines (potentially spanning the humanities, social sciences, arts, physical sciences, and life sciences) to engage in a sustained dialogue to develop new insights, and change the conversation on important questions facing science and humanity.

CIFAR is committed to supporting research programs that break new intellectual ground and address high risk questions of global importance. Our current portfolio of 12 global research programs asks fundamental questions that require interdisciplinary dialogue to solve, ranging from Humans & the Microbiome (how do the microbes that live in and on us affect our health, development, evolution, and behaviour?) to Quantum Materials (how could quantum materials transform our society?). CIFAR's Global Call for Ideas invites diverse teams of researchers to re-envision the profoundly complex society in which we live.

Unbounded by the borders of nationality, discipline or question, CIFAR has been supporting high-risk interdisciplinary research on the world's most intractable problems since 1982. Our understanding of the importance of the early years in a child's successful trajectory throughout life, the development of deep learning artificial intelligence, the importance of social cohesion and social interactions in societal and individual well being, and some of the earliest work on quantum computing and quantum information, all emerged from CIFAR programs. **The Future of Being Human** is our next challenge.

OVERVIEW OF THE PROCESS

The CIFAR Global Call for Ideas is open to researchers from around the world. A three-stage process will be used to identify the most promising proposals.

STAGE I: REGISTRATION

CIFAR is looking for novel ideas to form the basis of new CIFAR programs that address complex, fundamental research challenges of importance to the world. These ideas must require sustained, deep collaboration within an international, truly interdisciplinary research network. The ideas should be ambitious enough to sustain the active engagement of outstanding investigators for at least five years and should also have a longer-term vision.

The Registration stage is the first opportunity for applicants to describe their ideas related to the theme, **The Future of Being Human**. Teams should use the registration to indicate their familiarity with the CIFAR model and what additional disciplinary perspectives are necessary to tackle the proposed complex research question. After an internal review of registrations by CIFAR, all eligible registrations will be invited to submit a Letter of Intent (LOI). A registration is required in order to move to the LOI stage.

Registrations that propose a research project, rather than a sustained program of research, will not move forward to the LOI stage.

For applicants new to CIFAR or without a proven track record of collaboration, CIFAR will offer pre-LOI Strategy Sessions to a select number of teams. Through these virtual workshops, CIFAR will work closely with teams to introduce the CIFAR model and support the extension of their interdisciplinary networks. Strategy sessions will take place in Fall 2021, before the LOI deadline.

Instructions for completing the Registration are available [here](#). Please follow these instructions to ensure that the necessary information is provided. Registrations must be submitted electronically through our online portal which can be accessed by visiting cifar.ca/global-call.

TIMELINE

Registration deadline
August 17, 2021

LOI deadline
January 26, 2022

Announcement of shortlisted proposals
Spring 2022

Final proposal deadline
Fall 2022

Announcement of competition results
Spring 2023

STAGE II: LETTER OF INTENT

The LOI submission will outline the core elements of the research idea and the range of possible research questions for consideration. Teams will be invited to submit their LOIs through our online portal.

CIFAR will shortlist LOIs based on the recommendations of the International Review Body and CIFAR's President's Research Council. Shortlisted LOIs will proceed to Stage III, based on the criteria described in more detail below.

The deadline for LOI submission is January 26, 2022 at 11:59PM (PST). No late submissions will be accepted.

STAGE III: PROPOSAL DEVELOPMENT

Each LOI team that passes Stage II will work with CIFAR to convene up to two small workshops over a five-month period to prepare a full proposal. The proponents of shortlisted LOIs recommended for full proposal development will first discuss with CIFAR staff how best to use the workshop process to create the strongest possible proposal. CIFAR will provide the resources (travel, accommodation, meals) and logistical support for these workshops as needed.

The purpose of these workshops is to bring the researchers involved in developing the full proposal face-to-face with other international researchers in order to refine the research question or challenge. Some of these researchers may be involved in the proposed research program.

Each workshop will bring together 8 to 15 researchers from Canada and abroad to further articulate the nature of the research question, how it could be tackled, and what intellectual resources are needed to make progress.

Notwithstanding travel restrictions due to the ongoing COVID-19 pandemic, workshops will be held from May 2022 through August 2022 at CIFAR's office in Toronto, Canada.

The full proposal will describe the research challenge and how it addresses one or more global, complex questions facing our world. The full proposal will also provide evidence for the excellence of the potential team's leadership and team members.

The proposals will be reviewed by an Expert Review Panel of outstanding researchers using the selection criteria outlined below.

After the submission of the full proposal, proponents may be interviewed by the President's Research Council in advance of their ranking and recommendations. The Research Council will make recommendations to CIFAR's President about funding decisions. CIFAR's Board of Directors will make the final decision based on the President's recommendation.

CRITERIA FOR SELECTION

The International Review Body and CIFAR's President's Research Council will use the following criteria to assess the submissions.

Research Significance

CIFAR supports research that accelerates cutting-edge knowledge creation and has the potential to make important contributions to the world's understanding of complex issues. Proponents must clearly articulate the proposed research questions to be addressed through sustained, deep collaboration within an international, truly interdisciplinary research network. Applicants must describe the current state of knowledge of the proposed topic areas that they wish to advance, including any necessary conceptual frameworks and/or methodologies. There should be a clear articulation of how this proposed research program will add value to current research being undertaken globally, and more generally to our understanding of the world. Proposals should address how such an effort is distinct from existing international research networks that are exploring similar questions, and why this is the right time to pursue this research challenge. Proponents are required to explain how the research effort is interdisciplinary and how a commitment to global, interdisciplinary collaboration will produce unique and important progress.

Knowledge Mobilization:

A key component of a CIFAR research program is a program-driven Knowledge Mobilization plan that creates pathways to societal impact. Knowledge Mobilization at CIFAR is not a one-way dissemination or translation of research output. It is a two-way exchange of ideas and co-creation of impact resulting from a research program. Applications should identify potential areas or issues their proposed program may

impact that can inform the development of the proposed program's Knowledge Mobilization plan, which will engage nonacademic stakeholders from industry, the public sector, or civil society.

Excellence of Research Team:

CIFAR's model for supporting interdisciplinary research involves engaging outstanding groups of scholars committed to deep collaboration over a sustained period. CIFAR is not primarily a funder of research; rather we create global communities of exceptional scientists and scholars dedicated to open, long-term discussions. Potential program members should be researchers who are recognized to be among the best in their fields globally. Anticipated members of the program should be identified in the proposal: up to eight members in the LOI and up to 15 members in the full proposal, inclusive of the potential Program Co-Directors. Applicants should demonstrate the scholarly excellence of proposed program members and make clear how the proposed program members reflect the necessary interdisciplinarity required to address the research questions or challenges. Proposals should include a plan to promote diversity of membership within the proposed program. A successful proposal must have at least one core team member based at a Canadian institution.

Potential Leadership:

CIFAR's experience is that leadership plays a crucial role in the success of a given program. In addition to the research team members, in the LOI applicants are expected to describe the potential leadership of the proposed program. The two potential leaders should be selected not only for their research excellence, but also for their openness to disruptive thinking and deep collaboration across disciplines and national borders, and their commitment to impact. Proponents that develop a full proposal will finalize the proposed co-leadership of the program in consultation with CIFAR.

Equity, Diversity & Inclusion:

Efforts to improve equity, diversity and inclusion (EDI) help research communities attract and retain the best possible pool of researchers, enable scholars to reach their full potential, and support research outcomes that are strong and more globally relevant. Applicants should indicate how EDI principles are and will be further considered in their team composition and research design.

Alignment with CIFAR's mission and vision:

Applicants should make the case why a CIFAR effort, based around a global, deep collaboration, would produce unique and important progress towards advancing the current state of research related to the proposed research challenge. Proponents should clearly articulate how CIFAR support will add value to the pursuit of the identified research challenge or questions, including how CIFAR's model of supporting international engagement and knowledge mobilization over a sustained period will contribute toward transformative knowledge creation and impact.

ASSESSMENT PROCESS

CIFAR anticipates LOIs on a broad range of topics, consistent with our mandate to advance knowledge across the full spectrum of research.

CIFAR's International Review Body will consist of the highest caliber researchers from every discipline around the world. This body will provide feedback on each LOI and identify the most promising submissions. CIFAR's President's Research Council will make recommendations on which LOIs should proceed to the workshop stage to be developed into full proposals.

Full proposals will be reviewed by expert panels of international researchers as well as CIFAR's Research Council. The Research Council will make recommendations to the President about funding decisions. CIFAR's Board of Directors will make the final decision based on the recommendation of the President.

FURTHER INFORMATION

Individuals interested in submitting a Registration are strongly encouraged to visit CIFAR's website to look at the nature, breadth, and scope of our existing research programs.

A [Frequently Asked Questions page](#) has been developed to address questions that we anticipate. We encourage potential applicants to review these first, and to contact globalcall@cifar.ca with any questions not addressed in the FAQ.

Instructions for submitting a Registration are available [here](#).

Information about the Global Call for Ideas is available [online](#).

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