

AIMS-Carnegie Small Research Grants in Data Science and its Applications

Terms of Reference for Chairs

Purpose

This document describes the terms of reference for AIMS-Carnegie Small Research Grantees in Data Science and its Applications. This Small Research Grants Program was made possible by a grant from the Carnegie Corporation of New York and the government of Rwanda, and it is administered by Quantum Leap Africa (QLA) at AIMS Rwanda. QLA is a pioneering AIMS initiative that seeks to position Africa at the forefront of information science, particularly of the quantum variety.

The objectives of the program are to provide funding:

- ❖ To support PhD students who are at an advanced stage of their PhD study and have innovative aspects of their research work which they seek to advance either in their current institution or in another institution.
- ❖ To support the development of early career African academics who already hold a PhD degree and are seeking to establish an independent research/professional career in the field of data science and related disciplines that contribute to data science. By taking up a (co-)supervisory role through this grant, it could increase the likelihood of their long-term integration within an academic/research institution.
- ❖ For new and innovative, cutting-edge projects including industry-led, community-, or policy-driven projects in the field of data sciences and its related disciplines that make substantive use of mathematical concepts;
- ❖ To support proof-of-concept or pilot projects that are geared towards addressing a well-defined challenge in the above disciplines with relevance in Africa;
- ❖ For projects that will promote uptake of research-based outputs/results in the field of data science for the benefit of countries in Africa and the world at large; and
- ❖ To increase intra- and inter-continental interactions between AIMS Centers of Excellence and other institutions.



The above objectives respond to an urgent need for African scientists and other stakeholders to contribute to the provision of usable research-based recommendations/solutions that are needed to unlock valuable information embedded in the field of data science for the benefit of African communities, the economy, and the world at large.

Eligibility

- ❖ Applicants should be of African descent but could be residing anywhere in the world.
- ❖ Applicants could be PhD students who have made significant progress in their research, or must hold a PhD degree in data science or related disciplines that contribute to the field of data science e.g. quantum; data engineering; mathematics; statistics; computing; big data; artificial intelligence; among others.
- ❖ Applicants should demonstrate evidence of research in data science and its related disciplines with applications of mathematical concepts, or in mathematical sciences with practical applications to data science and its related disciplines.
- ❖ Proposed projects could be of a fundamental, applied or applicable type. Applicants should demonstrate an ability to translate their concepts into applicable solutions or recommendations, particularly for proof-of-concept, pilot, industry-led, policy-, and community-driven projects.
- ❖ Applicants with at least a postdoctoral standing could apply for funds to support the establishment of a research group. In this regard, they should demonstrate expertise or ability to (co-)supervise Master's and/or PhD students. Such a research group/team could be established in collaboration with a senior project advisor. The Grantee must have a recognized (co-)supervisory role in the project.
- ❖ Applicants can hold the grant in any institution around the world, including industry.
- ❖ Applicants must be willing to hold an affiliation at an AIMS Centre of their choice and spend a portion of their grant time in Quantum Leap Africa (Rwanda), or any of the AIMS Research Centres as a visiting researcher fellow, should the need arise.
- ❖ Applicants must be willing to contribute to a non-technical publication/bulletin which will highlight their work.



- ❖ Applicants should be able to take up the grant within two months of receiving the grant award letter.

Henceforth,

- ❖ the word “Grantee” shall be used to refer to the grant recipient;
- ❖ the word “institution(s)” shall be used to refer to either private, public or semi-private and semi-public institutions;
- ❖ the word “AIMS” will refer to the Global Network of AIMS.

Terms and Conditions

Expectations

- ❖ The Grantee is expected to develop a cutting-edge project in the field of data science or its related disciplines including, but not limited to, industry-led; proof-of-concept; pilot; policy-; and community-driven projects.
- ❖ The Grantee may elect to work under the supervision of a more senior researcher or to be self-directed. In either case, collaboration with stakeholders who can add value to the project is strongly encouraged.
- ❖ Projects can be executed at any institution, including the Grantee’s current home institution.
- ❖ The project should make substantive use of mathematical science concepts.
- ❖ Projects involving human and/or animal subjects shall adhere to the highest applicable ethical standards. The Grantee shall request and receive permission from their home or host institutions and share the approvals with AIMS for final validation before embarking on such projects.
- ❖ The Grantee is expected to promptly disseminate the outputs of his/her project results through international, peer-reviewed journals; conference presentations; and other appropriate mechanisms.
- ❖ AIMS, QLA and Carnegie Cooperation of New York should be duly acknowledged in all communications (publications, presentations, etc.) concerning work done by the Grantee. Publications should carry the following acknowledgement: “This work was carried out with the aid of a grant from Carnegie Cooperation of New York under the framework of the “African Diaspora Research Chair Program in Data Science” administered by QLA/AIMS.



- ❖ All books and journal articles resulting from the Grantee's work should be made freely available to the public, in post-print form, within 12 months of the initial publication date. All other project outputs should be sent to AIMS for submission to an appropriate open access repository.
- ❖ The Grantee shall respect existing intellectual property rights. In addition, the Grantee shall immediately report to AIMS any patentable output resulting or anticipated from his/her work. S/he shall not license, or otherwise assign the rights to, such outputs without written permission from AIMS.
- ❖ If the Grantee is unable to take up the position by the agreed start date, then s/he shall inform the program coordinator through opportunities@quantumleapafrika.org as soon as possible but before the expected start date.
- ❖ The Grantee is expected to submit timely quarterly progress reports to the program coordinator using the above email address. A reporting template will be provided for this purpose.
- ❖ In the event of a change in the Grantee's circumstances that makes him/her unable to continue to adhere to these Terms of Reference, s/he should immediately notify the program coordinator by email. Failure to do so will be considered a breach of these Terms and render the Grant void and subject to a termination. At the sole discretion of QLA, the Grantee may be requested to repay funds already received.
- ❖ All flight tickets approved within the Grantee's budget will be purchased by QLA. The Grantee is expected to provide timely information about such travels at least 4 weeks prior to the planned trip.
- ❖ Grantees may include the costs of participating in scientific events in their project budget, and will subsequently be asked to submit a separate letter explaining why such costs should be funded. This letter will be reviewed for relevance and alignment with the Grantee's project by members of the Oversight Committee. Preference will be given to Grantees who have already made significant progress in their proposed project and who will be delivering an oral presentation about their project results during such events.
- ❖ The Grantee may be expected to 'match' any approved funds earmarked for scientific event attendance from external sources.



- ❖ The Grantee releases AIMS-NEI, QLA and her supporters from all liability for any injury or other type of harm that the Grantee or her/his dependents may suffer while holding the Grant.

Maternity/Paternity consideration

- ❖ Maternity and paternity leave time will be considered when evaluating the applicant's career stage in comparison to their peers. For example, evidence of pregnancy or child birth during or after the PhD period will be taken into consideration.

Duration

- ❖ This is a non-recurring grant tenable for a period of 6 – 12 months at a maximum cost to AIMS-NEI and QLA of USD 12 000 per Grantee. The exact grant amount approved for the Grantee's project will be specified in the grant agreement letter.
- ❖ In exceptional cases, the project timeline can be extended by an additional three months at no additional cost to AIMS-NEI. Grantees are to submit a formal request for extension at most one month before their agreed project end date.
- ❖ QLA may decide to terminate a specific grant if the Oversight Committee deems the Grantee's progress to be unsatisfactory.

Financial support

- ❖ Allowable costs under this Grant include:
 - travel to a host institution in Africa where the project will be executed;
 - bursaries for Master's and/or PhD students (applicable for Grantees who are setting-up a research team);
 - participation in one international scientific event (workshop, conferences or summer school);
 - cost for field trip or data collection;
 - cost for basic project equipment;
 - basic project running cost;
 - travel and stay at an AIMS Centre.
- ❖ The actual amount provided to each Grantee will depend on the budgets submitted when applying.



- ❖ An initial lump sum, determined by the approved budget, will be paid to each Grantee within a month of the project start date. The balance will be paid in two installments following a schedule defined by QLA and contingent on the receipt of satisfactory progress reports from the Grantee.
- ❖ Grantees are responsible for complying with applicable tax laws.
- ❖ At the discretion of the Selection and Oversight Committees, Grantees maybe expected to provide 'match funding' to cover some of their proposed project activities.
- ❖ Non-allowable costs include:
 - overheads to the Grantee, home or host institution;
 - salary or salary supplement for the Grantee, project advisor or other project members;
 - bench fees;
 - office space;
 - vehicle hire – the most economical means of travel should be used at all times.
- ❖ All budget categories should be clearly defined and justified in the budget section. A descriptive basis for each budget category and the basis used for the calculations should be provided in order to help the various Committees understand the Grantee's financial requirements.

Application and Evaluation Procedures

Application procedure

Applicants must use the [online application](#) portal to apply. The following documents must also be submitted through this online portal before the deadline indicated in the call for applications:

- ❖ a completed personal details form,
- ❖ a completed project proposal form,
- ❖ a curriculum vitae,
- ❖ a letter of motivation,
- ❖ most recent academic qualification (for PhD students, proof of enrollment should be submitted), and
- ❖ an electronic copy of three significant publications.

These supporting documents should be submitted in a pdf format and named using the following format: "AIMS-Carnegie-Smallgrants–first and last name of applicant-type of document-monthyear of submission" e.g. "AIMS-Carnegie-Smallgrants–JohnJake-CV-Jan2019"



Before starting the application process, applicants should provide complete and accurate contact information (email address, title, names) of three referees who will provide confidential letters of support on their behalf. We will request these letters of support directly from the referees. It is the applicant's responsibility to provide their referees with a copy of the 'Terms of Reference' and the 'Instructions for Referees'. The applicant is also responsible for ensuring that their referees have received the request for a letter of support from us and have submitted the requested letters to us on time.

Applications shall be considered complete if all the documents listed above, including support letters, are received by AIMS before the application deadline. For more details on the application procedure, please visit www.quantumleapafrika.org/careers.

Evaluation procedure

Applications will initially be screened for relevance and then evaluated by an international Review and Selection Committee based on the following criteria:

- ❖ Quality of applicant: academic qualifications; quality of publications; experience in climate change-related research or research uptake; real-world impact and recognition of prior work (e.g. through awards).
- ❖ Quality of proposed project: relevance to climate change modelling, practice and policy; strength of connection to the mathematical sciences; experience of applicant in research or project topic; quality of project design; feasibility; suitability of proposed project environment(s); and quality and realism of budget projections.
- ❖ Potential impact.

Review

This document shall be reviewed, as needed, by an Oversight Committee and the AIMS Secretariat.