



# CSIR

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## Application Manual

2024 African Laser Centre Research Collaboration program (ALC)

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## **PART 1: Introduction**

### **1.1 Purpose**

This manual provides information on opportunities for funding within the CSIR's African Laser Centre (ALC) program for Research Collaboration support.

The manual is intended to be an easy reference guide to the CSIR ALC Research Collaboration Grant Scheme and to assist potential participants in accessing the available funding. It does not, however, constitute a complete set of policy, procedure or systems supporting the programme.

### **1.2 Background**

The African Laser Centre (ALC) is an open non-exclusive partnership to stimulate innovation, research and technology development in lasers and the application thereof, across the African continent. To enable this objective the ALC has an active Research Collaboration support program, a conference, workshops and topical schools program, a ALC Scholarship program for African students to enrol and do post graduate degrees at South African Tertiary Institutions in a laser- and laser applications related research field, and an ALC Knowledge Exchange Program which support projects to transfer knowledge and capabilities between different institutions on the African continent.

The CSIR Photonics Centre is managing the funding allocation from the Department of Science and Innovation in support of the objectives of the Africa Laser Centre (ALC).

The Department of Science and Innovation has again made funding available which will be used to support collaborative research projects between South African and African researchers active in laser- and laser applications related research in 2024/25.

### **1.3 African Laser Centre program - Strategic intent**

The purpose of the programme is to support laser- and laser application-based research in Africa, specifically between South African researchers and African researchers. The program is designed to develop, encourage and support a unique programme of building and growing a sustainable corps of expert laser and laser application researchers across Africa. The objectives of the program are:

- To promote research and training in lasers, optics and photonics.
- To promote and foster technological innovation in the use of lasers, optics and photonics.
- To promote collaboration among laser and laser application researchers:
  - Between African research institutions and their international counterparts;
  - To enhance the efforts of any other laser-driven initiatives in Africa.
- To reverse the brain drain of researchers from the African continent.
- To improve the quality of life of all African peoples.

## 1.4 The ALC Research Collaboration Program

The ALC Research Collaboration Program seeks to:

- Increase continental research collaborations,
- Increase the number of postgraduate research students (doctoral students are expressly targeted),
- Increase research fellowships and research visits.

# PART 2: Call, Eligibility, Funding and Timelines

## 2.1 Call for Applications

The Call for the CSIR African Laser Centre Research Collaboration funding is facilitated through the ALC program office which is hosted by the National Programs group at the CSIR Photonics Centre. A template for new applications is distributed by this office to the ALC database of contacts, as well as to the research offices of all South African universities and university of technologies.

Proposals must be forwarded to the CSIR Photonics Centre's National Programs project office, at the e-mail address [tiduplooy@csir.co.za](mailto:tiduplooy@csir.co.za) and [nlcrentalpool@csir.co.za](mailto:nlcrentalpool@csir.co.za).

The scientific and technical contents of the project will be refereed through a peer review mechanism to assess quality of the research plan proposed, human capital development potential and impact of the proposed research. Applications must be substantial and comprehensive to allow proper assessment of the research proposed.

Applicants are encouraged to approach the CSIR Photonics Centre for assistance with completion of the application.

Projects can be funded for up to three calendar years. Contracting with successful applicants happens on a yearly basis, and continuation funding for a second or a third year of approved projects can only be considered based on the submission of a comprehensive annual progress report at the end of each year of the project. Continuation beyond the first three years can be considered if a new funding application is submitted to support a new research collaboration or a new research question on existing programs.

Based on experience gained during the COVID-19 pandemic situation which impacted and limited the ability to travel internationally, applicants are encouraged to continue to consider how research collaborations can make use of virtual collaboration platforms to save costs, improve efficiency and enable the acceleration of collaborative research efforts.

## 2.2 Funding

The program supports research collaboration between South African and African researchers, with a special emphasis on researcher mobility. The ALC Research Collaboration program funding covers the following aspects of the research collaboration:

- Costs related to the exchange of personnel between collaborating institutes in South Africa and Africa, up to a maximum of 2 visits in total per year.
- A daily allowance of R300 per day per person is allowed for senior team members and R250 for junior team members. Senior team members are defined as full time employees of research institutes. At the current funding level, research visits are limited to 10 days and 60 days per project for senior staff and junior staff respectively.
- Budgeting for daily accommodation costs per person are according the following guidelines:
  - R 1 000 per day for senior staff, stay duration of 10 days or less
  - R 7 000 maximum per month for junior staff on extended visits (maximum stay duration of 60 days)
- Flights – realistic costs to be included in the proposal. Applicants are encouraged to get quotations for flights during the preparation of the proposal budget.
- Consumables to be used in the project (lifetime < 1 year), up to a maximum of R50 000. For the proposal budget it is recommended that the Principal Investigator obtain quotes and provide a good estimate.

## 2.3 Timeline

The timelines for the CSIR's ALC Research collaboration program are shown in **Table 1**.

<u>Event</u>	<u>Date</u>
Call for new applications	22 September 2023
Closing date for new applications	3 November 2023
Call for annual progress reports	20 October 2023
Closing date for annual progress reports	24 November 2023
Expected announcement of results	28 February 2024

Table 1: Call & outcomes announcement

\*See call document for actual due date.

## 2.4 Eligibility criteria

- All researchers in Africa engaged in laser- and laser applications-based research, in any study field in the natural sciences, health sciences or engineering may apply.
- Full time employees of research institutes may apply for grant funding. It is preferred that the Principal Investigator (PI) or main applicant be based at a South African research institution.
- Funding presently available to support ALC projects dictates that research collaborations needs to involve at least one South African entity. Applications for research collaboration support between only South African entities **will not be considered**.
- The grant may not be used for training alone, but should be based on a project with a strong research component.
- Applicants should hold at least a Masters degree and have a reasonable research track record.
- Students may not apply directly for a grant, but student involvement in projects are strongly encouraged.

## 2.5 Duration of the Grant

- Projects can be funded for up to three calendar years. Support after the first year, and in the subsequent years is not automatic. A **comprehensive annual progress report** must be submitted in response to an official call for progress reports. Continuation will be dependent on the quality of the Annual progress report as well as satisfactory progress during the previous year of the project.
- A Call for Proposals will be sent out each year, with a submission deadline specified. Application forms will be available from the CSIR Photonics Centre's National Program office at [tiduplooy@csir.co.za](mailto:tiduplooy@csir.co.za) and [nlcrentalpool@csir.co.za](mailto:nlcrentalpool@csir.co.za)

## 2.6 Assessment process

All applications and progress reports received by the CSIR Photonics Centre will be submitted to an independent review panel appointed by the CSIR Photonics Centre. The purpose of the review panel is to provide an independent assessment of the quality of the proposals and the progress reports received, and to make a recommendation to the CSIR Photonics Centre on whether the project should be funded. The panel will consist of experts from industry, universities and international members. The assessment will primarily focus on the research project plan, scientific merit, capacity building, output, and equity and redress. Continuation funding will also be assessed based on the progress report.

**Applicants are encouraged to ensure all the necessary information is captured in the proposal that is required for the review panel to do a fair assessment of the proposed work.**

The following aspects are important to consider when submitting an ALC application.

### 2.6.1 Quality of the Application

The following points are important and repeated to ensure that the review of proposals are accurate, and complies to the high ethical standards expected from applicants to and beneficiaries from the ALC Program.

- Applicants are strongly discouraged, and warned, not to commit plagiarism in the preparation of ALC Research Collaboration project proposals, or in the reporting of work completed. The review process has in the recent past picked up an increase in this very serious transgression. The Merriam-Webster dictionary defines **Plagiarize** as “*to steal and pass off (the ideas or words of another) as one's own : use (another's production) without crediting the source*”<sup>1</sup>. Applications which are found to contain plagiarized passages will immediately be disqualified.
- Applicants are **STRONGLY** discouraged from copying and pasting large sections of text from previous applications or progress reports. The peer review panel notices this and feel that this is an indication that applicants are not respecting the peer review process. Applicants and document authors are encouraged to rather keep the inputs and discussion concise and short and relevant to the section that they are completing, without the necessity to generate large amounts of text.
- Applicants are also encouraged to follow the instructions as provided in the proposal or the annual progress report templates meticulously, to ensure that the review panel has the correct information available when assessing the information provided.

### 2.6.2 Management plan

The research project plan or management plan submitted as part of the application must be a clear execution-able plan for the project. The plan must include defined major project tasks, broken down to activities that will be executed as part of the project plan. For each activity, a start and end date must be provided, and resources (such as for instance students) needs to be assigned to each of the activities defined. Each of the activities should also **have a clearly defined deliverable**. The detailed management plan can be in the form of a Gantt chart and must be available with the project proposal. Applications with no management plan or a management plan that does not meet the basic criteria listed above will be disqualified.

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<sup>1</sup> <https://www.merriam-webster.com/dictionary/plagiarizing>

The Management plan should also specifically address Laser Safety or any other Safety, Health and Environmental plans necessary to conduct the project safely. For laser safety, it is expected that a Laser Safety Officer is identified and named in the proposal. The Laser Safety Officer should be a staff member in the primary research team, and not a student appointment. Applicants can also refer to the CSIR for information regarding laser safety training available for staff and students involved in the operation of laser equipment to be used in the project.

### 2.6.3 Scientific Merit

Preference will be given to proposals that have the potential for high quality scientific outputs.

The section on the research question should be concise, and at a high level articulate the primary question that the research project is designed to investigate and intends to provide a result for.

This section should clearly articulate the scientific background and demonstrate through the proposed research a high level of scientific and technical excellence. Scientific outputs and impact need to be quantified.

In progress reports grant holders and applicants are encouraged to also list publications which have been submitted, but not yet accepted for publication to provide the review panel with an accurate view of progress on the project.

### 2.6.4 Collaborations

The proposal format request information on collaborations. For the purposes of this program the following definitions are included in this manual.

- Applicant: This is the researcher at a South African research institution that will be the main applicant, and whose institution will be the contracting party with the CSIR if the application is successful.
- Co-applicant(s): These are researchers at other research institutions, notable from outside South Africa that are the main collaborators on the project.
- Collaborators: These are researchers that are contributors to the research program, and who bring specific research field expertise or domain expertise to a multi-disciplinary research project.
- Technical support staff and technicians working in support of a project is not considered as collaborators.

A list of collaborators should be included, which clearly articulates the contribution of each of the collaborators to the program. The information provided must be presented in such a way that will allow reviewers to assess the expertise and experience of the listed



collaborators. One of the main objectives of the ALC Research Collaboration program is to support and foster strong multi-national collaborations, and projects which do not provide detailed information on the collaboration network will be disqualified.

It is important to also list all the members of the research team who constitute this collaboration. Be sure to highlight the PI track record, staff involvement, student involvement, post-docs, technical support, and external collaborations (institutional, regionally, nationally and internationally).

Continuation projects will specifically be evaluated based on evidence of a functioning collaboration. Applicants should demonstrate that there is joint work, as reflected in joint publications, joint supervision of students, or other events jointly arranged.

### **2.6.5 HC Development**

Preference will be given to proposals that include a strong human capacity development (HCD) program. In the section on HC development the applicant needs to list all students that will work on the project. It is important to identify the main supervisor and co-supervisor if applicable, as well as provide the thesis or research project title on which the student is working. Generic thesis titles or research project titles are not acceptable. A clear indication should also be provided of present staff members who are busy with further studies.

The proposal must include information on how Knowledge Transfer will happen between research groups active in the collaboration. Evidence should be provided on activities planned or executed to support knowledge or skill transfer between the collaboration partners. This can be training schools, joint workshops, and supervision of students, reports or any other evidence of transfer.

### **2.6.6 Relevance & Impact**

The proposal should clearly articulate the scientific, social, economic and environmental relevance and impact of the proposed work.

It is becoming increasingly important for research projects to also have clear commercialisation plans for the technologies that are being research and development. There is therefore the requirement for the proposal to also address how the future commercialisation of the technology is envisaged.

## **2.7 Laser safety**

Laser safety is of the utmost importance. The proposal should clearly nominate a Laser Safety Officer and plans around laser safety should be included in the management plan section of the proposal. For successful applicants, it will be expected that:

- The nominated laser safety officer needs to be trained,

- That all users of the equipment used for experimental work to support the ALC Research Collaboration are provided with laser safety training.
- It should be noted that it is preferred if permanent members of the research team were assigned the role of Laser Safety Officer.

## 2.8 Proposal and report assessment criteria

Assessment criteria will be used to maintain consistency during assessment of research proposals and reports, each criterion is assigned a weight (see [Table 2](#) and [Table 3](#)).

For NEW applications

Criterion	Details	Weight
<b>Management Plan [10%]</b>	Feasibility & Efficiency of management Plan	10%
<b>Scientific Merit [30%]</b>	Scientific/technical excellence	15%
	Scientific impact/outputs	15%
<b>Collaboration [20%]</b>	The impact and evidence of collaboration needs to be provided. This includes joint publications, joint supervision, and contribution of ideas.	20%
<b>HR Development [25%]</b>	Knowledge transfer	5%
	Research students (Masters)	10%
	Research students (Doctorate)	10%
<b>Relevance &amp; Impact [15%]</b>	Social, Economic and Environmental. Potential for commercialisation.	15%

**Table 2: Assessment criteria – New Projects**

For Continuation projects – Annual Progress Report evaluation criteria

Criterion	Details	Weight
<b>Project progress [10%]</b>	Progress on execution of the work as judged by progress against objectives, milestones and outputs	10%
<b>Scientific Merit [30%]</b>	Scientific/technical excellence	15%
	Scientific impact/outputs	15%
<b>Collaboration [20%]</b>	The impact and evidence of collaboration needs to be provided. This includes joint publications, joint supervision, and contribution of ideas.	20%
<b>HR Development [25%]</b>	Knowledge transfer	5%
	Research students (Masters)	10%
	Research students (Doctorate)	10%
<b>Relevance &amp; Impact [15%]</b>	Social, Economic and Environmental. Potential for commercialisation.	15%

**Table 3: Assessment criteria - Continuation projects**

## 2.9 General comments

It is important that proposals submitted are concise, and only provide information relevant to what is requested in the proposal template. The information provided needs however to be comprehensive, to allow the reviewers an opportunity to accurately assess the potential of the proposal. The review team will only assess proposals based on what is written in the proposal document.

Applicants and grant holders should also respect the review process, and the CSIR appointed review panel. Applicants and grant holders are encouraged to not copy and paste sections from one part of the proposal or annual progress report to another.

**For the annual progress report, the grant holder is requested to ONLY report on work conducted in the past year of funding.**

Based on the recommendations from the review panel, the CSIR will do budget allocations, rank the proposals received and make a decision on the projects which will be funded in the next funding cycle.

## PART 3: MANAGEMENT OF GRANT

### 3.1 Contracting

A CSIR ALC contract will be established that contains the clauses and requirements for the management of the grant. The contract addresses responsibilities, intellectual property issues, as well as the financial arrangements associated with the project. The contract is between the CSIR Photonics Centre and the host institution of the applicant.

At least one of the applicants on the proposal must be a South African citizen and must be based in South Africa. From a contracting perspective the requirement is that the South African researcher submits the application as the principal investigator (PI) to ease the contracting process.

The contract will be an annual contract and will be renewed on an annual basis **subject to the submission of an annual progress report, as well as a favorable review of the progress report.**

### 3.2 Reporting requirements

On accepting the award (signing the contract), the grant-holder will be required to deliver on the annual research plan that formed part of the accepted application.

At the end of the calendar year the grant-holder will be required to prepare and submit an annual progress report to the CSIR Photonics Centre. The annual progress report must address project progress, delivery on milestones, project outputs and outcomes as

presented in the research plan. In instances where the original project application was a multi-year proposal, the annual progress report will be used in an evaluation process to determine whether the project will continue in the next financial year.

For annual progress reports the following important points need to be considered and followed:

- Projects that do not report progress will not be funded in the following year.
- All publications titles should be included in the reporting. Only publications directly related to the work funded should be reported. Submitted publications including titles should also be reported, to demonstrate progress.
- In the annual progress report, an accurate assessment needs to be provided of work completed during the reporting period. Grant holders are encouraged to not just copy and paste information from the proposal, or to retain reporting from previous years in the report. Only up to date and relevant project-related information should be included in the report to enable a smooth and productive review of the progress on the project.
- A Power Point Presentation is required as part of the reporting process. This has to be submitted with the Annual Progress Report. The length of the presentation should be for a 10 min slot in the feedback program.
- The due date for reports is stated in section 2.3 of this manual.

### 3.3 Payment of Grants

Claims for payments of travel costs and consumables approved as part of the project should be submitted to the CSIR Photonics Centre for payment. Claims should be submitted for attention of Mr. Thomas du Plooy ([tiduplooy@csir.co.za](mailto:tiduplooy@csir.co.za)).

Invoices for payments should be addressed to:

The CSIR Photonics Centre  
PO Box 395  
Pretoria  
0001.

All invoices should reflect the CSIR's VAT no. 4470114283

All invoices should also reflect the unique reference number assigned to the project, and available on the ALC Grant contract, or from the CSIR Photonics Centre.

No payments will be processed unless proof of expenses accompanies the invoice submitted to the CSIR.

### 3.4 Assistance

Should you require clarification on any of the processes, criteria or plans presented in this manual please do not hesitate to contact Thomas du Plooy at 012 841 3511 or 082 443 1128, e-mail [tiduplooy@csir.co.za](mailto:tiduplooy@csir.co.za) or [nlcrentalpool@csir.co.za](mailto:nlcrentalpool@csir.co.za)