

Call For Proposals

African Laser Centre 2025 Research Collaboration Programme

The African Laser Centre is a NEPAD flagship initiative and is funded by the Department of Science and Innovation. The CSIR Photonics Centre, a key node of the African Laser Centre (ALC), and the Department of Science and Innovation (DSI) would like to take this opportunity to introduce the ALC Research Collaboration programme and to invite proposals from South African researchers planning to collaborate with partners on the African continent to apply for support from the ALC Research Collaboration programme.

The grant scheme focuses on the promotion of laser and laser applications-related research on the African continent, with the purpose of stimulating and growing laser research programmes within the African continent. The main aim of this programme is to establish research capabilities on the African continent and to support human capacity building in laser and laser-based application sciences. The fund will allow research collaborations and student/researcher exchanges for participating institutes. The fund also provides limited support for consumables required for research projects. The collaborations supported under this grant scheme should be between a South African research team and an African research team outside the borders of South Africa.

The programme has master's, doctoral and post-doctoral studies as key drivers and focuses on laser and laser-based application research. Applications will be evaluated in line with the approved ALC research guidelines.

An ALC Research Collaboration Programme Manual is available from nlcrentalpool@csir.co.za, which provides eligibility criteria as well as information on what can qualify for funding support.

Please extend this invitation to all researchers active in laser- and laser-based application research in the natural sciences, health, and engineering fields within your institution.

Important dates are:

Opening of the call: **Monday, 16 September 2024**

Closing of the call: **Friday, 25 October 2024**

The following documents are available for prospective applicants:

- ALC Research Collaboration Manual for 2025;
- For NEW projects: ALC R and D Collaboration application form for 2025; and
- Call for African Laser Centre Research Collaboration grant applications for 2025

Applicants must submit their proposals in MS Word format as well as a signed PDF to the CSIR Photonics Centre by e-mail at nlcrentalpool@csir.co.za or tiduplooy@csir.co.za

The application must be accompanied by the required documents as stipulated in the ALC proposal template and the ALC Research Collaboration Programme Manual.

Please direct all queries to:

Thomas du Plooy

CSIR Photonics Centre

Tel: [012 841 3511](tel:0128413511)

Cell: [082 443 1128](tel:0824431128)

Email: nlcrentalpool@csir.co.za or tiduplooy@csir.co.za



Call for Applications Manual

2025 African Laser Centre Research Collaboration Programme (ALC)

September 2024

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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) programme 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, include a complete set of policies, procedures or systems supporting the programme.

1.2 Background

The 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 programme, a conference, workshops and topical schools programme, an ALC scholarship programme for African students to enrol and do postgraduate degrees at South African tertiary Institutions in a laser- and laser-applications-related research field, and an ALC Knowledge Exchange Programme which supports 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 ALC.

The Department of Science and Innovation has again made funding available to support collaborative research projects between South African and African researchers active in laser- and laser-applications-related research in 2025/26.

1.3 African Laser Centre programme – 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 programme is designed to develop, encourage and support a unique programme to build and grow a sustainable corps of expert laser and laser application researchers across Africa. The objectives of the programme are to:

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

- Improve the quality of life of all African peoples.

1.4 The ALC Research Collaboration Programme

The ALC Research Collaboration Programme seeks to:

- Increase continental research collaborations;
- Increase the number of postgraduate research students (doctoral students are expressly targeted); and
- 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 programme office hosted by the National Programmes 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 universities of technology.

Proposals must be forwarded to the CSIR Photonics Centre's National Programmes project office at tiduplooy@csir.co.za and nlcrentalpool@csir.co.za.

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

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

Projects can be funded for up to three calendar years. Contracting with successful applicants happens annually. Continuation funding for a second or 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 programmes.

Based on experience gained during the COVID-19 pandemic 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 programme supports research collaboration between South African and African researchers, with a special emphasis on researcher mobility. The ALC Research Collaboration Programme 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 two visits 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 is according to the following guidelines:
 - R1 000 per day for senior staff, stay duration of 10 days or less; and
 - R7 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 in preparing 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 Programme are shown in **Table 1**.

Table 1: Call and outcomes' announcement

<u>Event</u>	<u>Date</u>
Call for new applications	16 September 2024
Closing date for new applications	25 October 2024
Call for annual progress reports	21 October 2024
Closing date for annual progress reports	22 November 2024
Expected announcement of results	28 February 2025

*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 or main applicant be based at a South African research institution.
- Funding presently available to support ALC projects dictates that research collaborations must 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 master's degree and have a reasonable research track record.
- Students may not apply directly for a grant, but student involvement in projects is strongly encouraged.

2.5 Duration of the grant

- Projects can be funded for up to three calendar years. Support after the first year, or 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 Programme office at tiduplooy@csir.co.za and 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 recommend to the CSIR Photonics Centre 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 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 is accurate, and complies with the high ethical standards expected from applicants to and beneficiaries from the ALC Programme.

- 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 recently noticed an increase in this grievous 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*”¹. Applications found to contain plagiarised 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 regards this as 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 relevant to the section that they are completing, without generating large amounts of text.
- Applicants are also encouraged to follow the instructions 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, executable plan for the project. The plan must include defined major project tasks, broken down into activities that will be executed as part of the project plan. For each activity, a start and end date must be provided, and resources (for instance students) must 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.

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

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

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 with 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 must be quantified.

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

Through the review of proposals and progress reports and investigating the type of journals and publications reported by applicants and grant holders to the programme, the CSIR has noted that some researchers elect to publish their work in predatory journals which have questionable peer-review processes in place. Although this may boost the number of published peer-review papers, the research efforts must be designed and constructed based on peer review in reputable scientific journals with ethically sound review processes in place.

2.6.4 Collaborations

The proposal format requests information on collaborations. For this programme, the following definitions are included in this manual:

- Applicant: This is the researcher at a South African research institution who 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 from outside South Africa who are the main collaborators on the project.
- Collaborators: These are researchers who are contributors to the research programme, 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 are not considered collaborators.

A list of collaborators should be included and must clearly articulate the contribution of each of the collaborators to the programme. 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 Programme is to support and foster strong multi-national collaborations, and projects that do not provide detailed information on the collaboration network will be disqualified.

It is important to list all the members of the research team who constitute this collaboration. Be sure to highlight the Principal Investigator's track record, staff involvement, student involvement, postdocs, 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 Human capital development

Preference will be given to proposals that include a strong human capacity development programme. In the section on human capital development, the applicant must list all students who 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 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 skills transfer between the collaboration partners. This can be training schools, joint workshops, supervision of students, reports or any other evidence of transfer.

2.6.6 Relevance and 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 have clear commercialisation plans for the technologies that are being researched and developed. There is therefore the requirement for the proposal to address how the future commercialisation of the technology is envisaged.

Even if there is no formal commercialisation strategy or commercialisation plan for the proposed work, applicants are encouraged to offer some evidence that the commercialisation of the technology is being considered. This evidence can be direct, indirect or anecdotal, indicating some consideration for the commercialisation of the technology.

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 must be trained,
- All users of the equipment used for experimental work to support the ALC Research Collaboration are provided with laser safety training.
- A permanent member of the research team is assigned the role of Laser Safety Officer.

2.8 Proposal and report assessment criteria

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

Table 2: Assessment criteria – New Projects

Criterion	Details	Weight
Management Plan [10%]	Feasibility & Efficiency of management plan	10%
Scientific Merit [30%]	Scientific/technical excellence	15%
	Scientific impact/outputs	15%
Collaboration [20%]	The impact and evidence of collaboration must be provided. This includes joint publications, joint supervision, and contribution of ideas.	20%
HR Development [25%]	Knowledge transfer	5%
	Research students (Master's)	10%
	Research students (Doctorate)	10%
Relevance & Impact [15%]	Social, economic and environmental potential for commercialisation	15%

Table 3: Assessment criteria – Continuation Projects

Criterion	Details	Weight
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Project progress [10%]	Progress on execution of the work as judged by progress against objectives, milestones and outputs	10%
Scientific Merit [30%]	Scientific/technical excellence	15%
	Scientific impact/outputs	15%
Collaboration [20%]	The impact and evidence of collaboration must be provided. This includes joint publications, joint supervision, and contribution of ideas.	20%
HR Development [25%]	Knowledge transfer	5%
	Research students (Master's)	10%
	Research students (Doctorate)	10%
Relevance & Impact [15%]	Social, economic and environmental potential for commercialisation	15%

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 must, however, be comprehensive, to allow the reviewers an opportunity to assess the potential of the proposal accurately. The review team will assess proposals based on what is written in the proposal document only.

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 report on work conducted in the past year of funding ONLY.

Based on the recommendations from the review panel, the CSIR will allocate the budget, rank the proposals received and decide which projects 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, and the financial arrangements associated with the project. The contract is between the CSIR Photonics Centre and the applicant's host institution.

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, to ease the contracting process, the South African researcher must submit the application as the Principal Investigator..

The contract will be annual. It will be renewed annually **subject to the submission of an annual progress report, as well as a favourable review of the progress report.**

3.2 Reporting requirements

On accepting the award (signing the contract), the grant holder must 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 report must address project progress, delivery of 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 must be considered and followed:

- Projects that do not report progress will not be funded in the following year.
- All publication 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 must 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 project's progress.
- A PowerPoint 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-minute slot in the feedback programme.
- 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 the attention of Mr Thomas du Plooy (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 number: 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 8413511 or 082 443 1128, e-mail tiduplooy@csir.co.za or nlcrentalpool@csir.co.za