



Collaborative Research with Los Alamos National Laboratory

The Texas A&M University System National Laboratories Office

The Texas A&M University System (TAMUS) National Laboratories Office (NLO) has developed a multi-element program to help TAMUS researchers:

- develop collaborative ties with researchers at Los Alamos National Laboratory (LANL);
- execute TAMUS-LANL collaborative research projects; and
- formalize long-term relationships where appropriate, for example via joint appointments.

The goal is to increase the number and depth of research¹ collaborations that benefit TAMUS, LANL, and the individuals involved. A key strategy toward that goal is to encourage TAMUS researchers to spend time at LANL and learn about LANL missions that are supported by research in their areas of interest. Spending time at LANL, establishing relationships with its staff, and learning about its missions and key unsolved problems greatly increase the likelihood of long-term funded collaborations that benefit all parties. Elements of the program are summarized below. Details and applications for each program element are provided in separate documents.

Exploration mini-grants are designed for TAMUS researchers who have the skills, knowledge, and interest to develop long-term collaborative ties with LANL researchers but do not already have such ties. A typical exploration mini-grant would pay travel costs for a TAMUS researcher to visit one or more LANL researchers to see if there is mutual interest in pursuing a long-term collaboration.

Development fellowships are designed for TAMUS researchers who have the skills, knowledge, and interest to develop long-term collaborative ties with LANL researchers and have already identified one or more LANL collaborators who are willing and able to engage in collaborative research. A typical development fellowship would fund up to 1.5 months of salary for the TAMUS researcher to work with the LANL collaborator(s) to write a joint proposal or joint research publication.

Research projects are designed for TAMUS researchers who have mature collaborative ties with LANL collaborator(s) and have identified research topics suitable for joint effort and joint funding from TAMUS and LANL. A typical research project would fund one month/year of TAMUS researcher salary plus the stipend, tuition, and fees for one graduate student, for four years. A LANL collaborator would typically serve on the graduate student's committee.

Long-term relationships can be formalized for TAMUS researchers with whom long-term engagement is of strategic interest to LANL. This could take the form of a joint appointment of indefinite duration, under which LANL funds a portion of the TAMUS researcher's time each year and the TAMUS researcher spends significant time working on problems of interest to LANL.

¹ In this document the term "research" includes a broad range of research and development activities.



Development Fellowships

An Element of the Research Collaboration Program with Los Alamos National Laboratory

The Texas A&M University System National Laboratories Office

Overview

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The goal is to increase the number and depth of research¹ collaborations that benefit TAMUS, LANL, and the individuals involved. A key strategy toward that goal is to encourage TAMUS researchers to spend time at LANL and learn about LANL missions that are supported by research in their areas of interest. Spending time at LANL, establishing relationships with its staff, and learning about its missions and key unsolved problems greatly increase the likelihood of long-term funded collaborations that benefit all parties. This document describes the “Development Fellowship” element and explains how to apply.

Development Fellowships

The “Development Fellowship” program element helps TAMUS researchers develop and deepen collaborative research partnerships with LANL Technical Staff Members (TSMs) in areas of interest to LANL. TAMUS researchers with the skills, knowledge, and interest to develop long-term collaborative ties with LANL TSMs—and with one or more LANL TSMs identified who are willing and able to partner on collaborative research—are encouraged to apply. TAMUS researchers who already have mature collaborative partnerships with LANL TSMs are encouraged to explore the “Research Projects” element of the TAMUS-LANL Research Collaboration Program.

Faculty who spend time at LANL learning LANL’s missions and problem sets are more likely to develop long-term partnerships with LANL TSMs. Development Fellowships aim to help researchers achieve such partnerships. PI-eligible research faculty and staff in every TAMUS component are eligible to apply, but tenure-line faculty at TAMUS universities may have priority. A typical development fellowship would fund up to 1.5 months of salary for the TAMUS researcher and reimburse travel costs (up to \$5000) to visit one or more LANL TSMs for several weeks, to enable the TAMUS-LANL partners to take tangible steps toward long-term funded collaborative research. A typical deliverable would be a joint publication or joint proposal. Applicants should

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propose alternate uses of approximately this level of funding, and/or alternate deliverables, if this would better support the goal of establishing a partnership that is able to secure future funding for longer-term projects.

Expenses incurred prior to application approval will not be reimbursed. The application **must identify at least one LANL collaborator** who has agreed to partner with the TAMUS researcher to execute the proposed effort. Reviewers chosen by NLO and LANL will select applications for funding in accordance with joint TAMUS-LANL priorities, subject to availability of funds. Applicants **must specify what will be delivered** (publication, proposal, etc.) upon completion of the proposed effort.

Application for Development Fellowships

Applications can be submitted via email by to lanl-engage@nlo.tamus.edu by October 15th, 2019. Notification of awards will be made by December 2nd, 2019. PDF documents are preferred for the application and the applicant's Curriculum Vitae. The application should be organized as follows:

1. **Applicant Info.** Provide information about the TAMUS researcher requesting funds, including at least:
 - a. Name
 - b. Title (e.g., Asst. Prof.)
 - c. TAMUS System Entity and Department (e.g., PVAMU Math)
 - d. Citizenship (e.g., US Permanent Resident)
 - e. Email address and phone number
 - f. Curriculum Vitae (PDF format)
2. **Collaborator Info.** Provide information about the identified LANL collaborator(s), including at least:
 - a. Name
 - b. Title (e.g., technical staff member)
 - c. Division and Group (e.g., CCS-2)
 - d. Evidence that the named LANL collaborator(s) have agreed to partner with the TAMUS applicant to execute the proposed effort (e.g., email from collaborator(s))
 - e. LANL collaborator(s) curriculum vitae or resume (PDF format)
3. **Proposed Effort.** Describe the proposed effort and tangible outcome (“deliverable”). Describe the research area that you and your collaborator(s) are interested in exploring over the long term. It is best if you can show a connection to long-term LANL missions, “capability pillars,” or initiatives. The narrative should be less than three pages.
4. **Cost and Timeline.** Provide a cost estimate and approximate timeline, including the date by which the deliverable will be given to the NLO. This can be a paragraph or two, and/or bulleted lists. A formal budget generated by research services is not required.

Questions should be directed to lanl-engage@nlo.tamus.edu.



Exploration Mini-Grants

An Element of the Research Collaboration Program with Los Alamos National Laboratory

The Texas A&M University System National Laboratories Office

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The goal is to increase the number and depth of research¹ collaborations that benefit TAMUS, LANL, and the individuals involved. A key strategy toward that goal is to encourage TAMUS researchers to spend time at LANL and learn about LANL missions that are supported by research in their areas of interest. Spending time at LANL, establishing relationships with its staff, and learning about its missions and key unsolved problems greatly increase the likelihood of long-term funded collaborations that benefit all parties. This document describes the “Exploration Mini-grant” program element and explains how to apply.

Exploration Mini-grants

The “Exploration Mini-grant” program element helps TAMUS researchers initiate collaborations with LANL Technical Staff Members (TSMs) in topical areas of interest to LANL. TAMUS researchers who have the skills, knowledge, and interest to develop long-term collaborative ties with LANL researchers—but do not already have such ties—are encouraged to apply. TAMUS researchers who already have such ties are encouraged to explore the “Development Fellowships” or “Research Projects” elements of the TAMUS-LANL Research Collaboration Program.

Faculty who spend time at LANL learning LANL’s missions and problem sets are more likely to develop long-term partnerships with LANL TSMs. Exploration Mini-grants help researchers move toward such partnerships. PI-eligible research faculty and staff in every TAMUS component are eligible to apply, but priority may be given to tenure-line faculty at TAMUS universities.

A typical exploration mini-grant would pay travel costs for a TAMUS researcher to visit one or more LANL researchers to explore whether there is mutual interest in pursuing a long-term collaboration. The mini-grant can fund short visits (typically one week) to LANL by TAMUS researchers to initiate collaborations with LANL TSMs.

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The application **must identify at least one LANL potential collaborator** who has agreed to spend time with the TAMUS researcher to explore whether there is mutual interest in pursuing a long-term collaboration. Aspiring applicants that do not know appropriate hosts can ask the NLO to work with LANL managers to try to identify potential LANL host TSMs. Grant recipients must submit a **brief report summarizing the outcome** of the exploratory engagement.

Expenses incurred prior to application approval will not be reimbursed. NLO will select applications for funding in accordance with priorities established collaboratively with LANL, subject to availability of funds. NLO will pay costs up to \$1500 per person (in accordance with TAMUS guidelines) for successful applicants to travel to LANL to engage with potential collaborators. If it is more useful for the LANL TSM to visit the TAMUS researcher, the NLO can help the identified TSM secure travel funding from within LANL.

Application for Exploration Mini-grants

Applications can be submitted via email at any time to lanl-engage@nlo.tamus.edu. PDF documents are preferred for the application and the applicant's Curriculum Vitae.

The application should be organized as follows:

1. **Applicant Info.** Provide information about yourself, including at least:
 - a. Name
 - b. Title (e.g., Asst. Prof.)
 - c. TAMUS System Entity and Department (e.g., PVAMU Math)
 - d. Citizenship (e.g., US Permanent Resident)
 - e. Email address and phone number
 - f. Curriculum Vitae
2. **Collaborator Info.** Provide information about the identified LANL collaborator(s), including at least:
 - a. Name
 - b. Title (e.g., technical staff member)
 - c. Division and Group (e.g., CCS-2)
 - d. Evidence that at least one identified LANL collaborator has agreed to spend time with the applicant to explore collaboration possibilities, and has agreed to meet with the applicant if travel to LANL is proposed (e.g., an email from the collaborator)
3. **Research Area.** Describe the research area that you and your collaborator(s) are interested in exploring. A single paragraph can suffice. If you know how the area is connected to LANL missions or its "capability pillars," please include this.
4. **Cost and Timeline.** Describe how and when you will spend the mini-grant funds if your application is selected for funding, and specify the date on which your summary report will be delivered to the NLO.

Questions should be directed to lanl-engage@nlo.tamus.edu.



Research Projects

An Element of the Research Collaboration Program with Los Alamos National Laboratory

The Texas A&M University System National Laboratories Office

Overview

The Texas A&M University System (TAMUS) National Laboratories Office (NLO) in collaboration with Los Alamos National Laboratory (LANL) developed a multi-element program to support TAMUS researchers:

- develop collaborative ties with researchers at LANL;
- execute TAMUS-LANL collaborative research projects; and
- formalize long-term relationships where appropriate, for example via joint appointments.

The goal is to increase the number and depth of research¹ collaborations that benefit TAMUS, LANL, and the individuals involved. A key strategy toward that goal is to encourage TAMUS researchers to spend time at LANL and learn about LANL missions that are supported by research in their areas of interest. Spending time at LANL, establishing relationships with its staff, and learning about its missions and key unsolved problems greatly increase the likelihood of long-term funded collaborations that benefit all parties. This document describes the “Research Projects” element and explains how to apply.

Research Projects

The “Research Projects” program element funds multi-year research and development projects collaboratively executed by TAMUS and LANL researchers. Funding levels are sufficient to support one graduate student and one month of TAMUS researcher time. Applications with the following characteristics have the best chance of receiving funding:

- Proposed TAMUS-LANL researchers have a history of partnership;²
- LANL leadership sees value in long-term relationship with proposed TAMUS researcher(s);
- Proposed R&D improves a key LANL capability and/or addresses a LANL mission need, and is in an area for which LANL has stable long-term funding;
- Project engages one or more graduate students with potential for LANL employment;

¹ In this document the term “research” includes a broad range of research and development activities.

² A separate element of the TAMUS-LANL Research Collaboration Program, the “Development Fellowship” element, provides a possible avenue for establishing such a history.



- Proposed TAMUS researcher, or researcher's group, appears likely to produce a steady stream of graduates with potential for LANL employment, for the foreseeable future.

A typical research project would support one graduate student (GAR stipend, tuition, and fees) and one month of time per year for a TAMUS researcher (typically the student's advisor) for up to four years. Applicants are free to propose different allocations of approximately this level of funding. Funding is provided jointly by the NLO and LANL, with NLO bearing most costs for the first year and LANL bearing most for subsequent years. Funded students are expected to spend one or more summers (or similar time periods) at LANL under the supervision of a LANL co-advisor, who is typically a co-author of the proposal and co-executer of the research. Continued funding throughout the proposed project period is contingent upon satisfactory progress and availability of funds.

Expenses incurred prior to application approval will not be reimbursed. The application **must name at least one LANL technical staff member** who has agreed to partner with the TAMUS researcher(s) on the proposed effort, agreed to supervise funded student(s) during their stays at LANL, and agreed to serve on the students' research advisory committees. Reviewers chosen by NLO and LANL will select applications for funding in accordance with joint TAMUS-LANL priorities, subject to availability of funds. Funded partners must submit **annual progress reports**, except for the final year, when a **final project report** is required.

Application for Research Projects

Applications can be submitted via email to lanl-engage@nlo.tamus.edu by October 15th, 2019. Review Committee will notify awardees by December 2nd, 2019. Application materials should be submitted as PDF documents.

The application should contain the following documents:

- Personnel description document
- Proposal narrative document
- Budget and timeline document
- Curriculum vita / resumes

with content as follows:

1. **Section 1 of Personnel Document: TAMUS applicant Info.** Provide information about the TAMUS PI (and Co-PIs if any), including at least:
 - a. Name
 - b. Title (e.g., Asst. Prof.)
 - c. TAMUS System Entity and Department (e.g., PVAMU Math)
 - d. Citizenship (e.g., US Permanent Resident)
 - e. Email address and phone number
 - f. Student information: explain how project leaders will ensure that students chosen for funding have the potential for LANL employment



- g. Pipeline information: Briefly discuss long-term prospects for TAMUS researcher's program to produce future graduates with potential for LANL employment
2. **Section 2 of Personnel Document: LANL collaborator Info.** Provide information about the identified LANL collaborator(s), including at least:
 - a. Name
 - b. Title (e.g., technical staff member)
 - c. Division and Group (e.g., CCS-2)
 - d. Evidence that the named LANL collaborator(s) have agreed to partner with the TAMUS applicant to execute the proposed effort, to supervise the funded student(s) when at LANL, and to serve on the students' research committees. This can take the form of an email from collaborator(s), for example.
 - e. Description of previous collaborative efforts between proposed TAMUS and LANL collaborators (e.g., joint publications, joint proposals, co-supervised students)
3. **Proposal Narrative Document.** Describe the proposed research project and explain how it supports long-term LANL missions, "capability pillars," or initiatives. Include the following sections but do not exceed 10 pages total (including references):
 - a. Summary, up to 1 page (explains what is proposed and what motivates it in a way that a technical person from a different discipline can understand; explains what difference will it make if it succeeds)
 - b. Motivation (current state of the topic area, with references to previous work, and why improvements are needed)
 - c. Proposed activities (what will be done, what new knowledge or technology will be gained, etc.)
 - d. Expected impact (how this will improve LANL capabilities and/or mission delivery)
 - e. Roles (who will do what)
 - f. LANL visits: list time periods planned for TAMUS personnel to be at LANL (with understanding that plans may evolve)
 - g. References
4. **Budget and Timeline Document.** Provide a budget estimate and approximate timeline. A formal budget generated by research services will be required if proposal is selected for funding. At application time, only an itemization of expenses is required. For example:
 - a. Dr. X salary support: 1 mo/yr (current salary \$12k/mo)
 - b. GAR support: \$2200/mo + tuition + fees; TAMU College of Science
 - c. Travel: student travel once/year to Los Alamos, student lodging near LANL 2 mo/yr, Dr. X travel to LANL once/year, Dr. X and student travel to conference once/year
 - d. Equipment: (list and estimate costs)
 - e. Materials and supplies: (list and estimate costs)
 - f. Other: (list and estimate costs)
5. **TAMUS researcher curriculum vitae** (PDF document)
6. **LANL researcher curriculum vitae or resume** (PDF document)

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