



Data Science Rotations for Advancing Discovery (RoAD Trip)

Description

The purpose of the RoAD Trip program is to provide fellowship support to junior biomedical scientists wishing to integrate their prior training and experience together with expertise and Big Data/resources being housed at leading institutions around the United States. Specifically, this unique program seeks to promote new collaborations between junior biomedical scientists and more senior-level data scientists to analyze pre-existing data. Through a process of “match-making,” junior biomedical scientists will be paired with data scientists possessing access to large-scale computational infrastructure and expertise to conduct a focused “two-week”* joint project. Only new projects, in contrast to already established collaborations, will be considered under this program.

Once selected to participate in the RoAD Trip program, the data science mentor and the biomedical fellow will complete the two-week* scientific rotation at the mentor’s institution. Once the minimum 2-week RoAD Trip has been completed, all fellows must notify Crystal Stewart (crystal.stewart@loni.usc.edu) and submit original receipts for travel expenses along with a completed RoAD Trip travel form. In addition, teams must submit a Project Progress Report describing their progress and their overall RoAD Trip experience. After receipts, travel form and Project Progress Reports have been submitted, a \$4000 stipend will be awarded to fellows and a \$1000 stipend will be awarded to mentors.** Visa holders along with USC and federal employees are welcome to participate in the Data Science RoAD Trip but due to restrictions imposed on such individuals, they will not be eligible to receive a stipend.

Post-Rotation Required Documents

- 1). Original travel receipts (via postal mail)
- 2). A Completed RoAD Trip Travel Form
- 3). Project Progress Report

For the minimum two-week* timeframe of the award, individuals are expected to pursue their joint-research training on a full-time basis, normally defined as 40 hours per week. The month prior to the RoAD Trip, we encourage applicants to begin preparing to benefit optimally from the RoAD Trip itself; guidance on how best to structure this should be provided by the mentor and documented in the Joint Data Science Research Plan and RoAD Trip Timeline (see “Application Process” below for more details about the two-phase application process).

Individuals are strongly encouraged to spend one month before and one month after the scientific rotation at the identified host institution to complete the project. This other time is not supported by the award.

*The duration for data science rotations is expected to be a minimum of 2 weeks. However, proposals for extended visits under the same funding amount are welcomed.

** RoAD Trip fellows and mentors are eligible for a stipend if they are not affiliated with USC or the federal government, and are not working under a visa. Eligible applicants must hold primary appointment at a domestic research university or educational institution.

bigdata@ini.usc.edu / bigdata.ini.usc.edu / www.facebook.com/BD2KTCC / www.twitter.com/BD2KTCC

Eligibility

The data science rotation should occur in a strong research environment that has appropriate human and technical resources and is committed to research training.

Individuals from underrepresented racial and ethnic groups, as well as women, and individuals with disabilities are strongly encouraged to apply. Only individuals with a primary appointment at a domestic research university or educational institution are eligible to apply. Federal employees, USC employees and visa holders are welcome to participate in the RoAD Trip program, but due to limitations imposed on visa holders and government and USC-affiliated individuals, such individuals will not be able to accept a fellow or mentor stipend award.

Mentor applicants must have their PhD and must hold an appointment such as an associate professor, professor or higher. RoAD Trip fellow applicants with a PhD are desired, however pre-doctoral fellows may also apply.

Application Process

The RoAD Trip application process consists of two phases.

Phase I

During the first phase, junior biomedical scientists and senior data scientists will submit separate applicant profiles, along with an NIH Biographical Sketch, and a Letter of Reference, or Statement of Institutional Support (See the “Apply Now” options on the main program page to begin your applicant profile).

After a period during which such profiles will be gathered, potential fellows and mentors will be “matched.” The review team will forward a list of compatible matches to prospective fellows and mentors, and they may decide to “like” each other. Once feedback is received from both parties, the review team will finalize the “matching” process.

Phase I Required Application Documents:

Fellow/Biomedical scientists:

- RoAD Trip Fellow Applicant Profile
- Standard NIH Biographical Sketch
- Letter of Reference

Mentor/Data Scientist:

- RoAD Trip Mentor Applicant Profile
- Standard NIH Biographical Sketch
- Statement of Institutional Support

*The duration for data science rotations is expected to be a minimum of 2 weeks. However, proposals for extended visits under the same funding amount are welcomed.

** RoAD Trip fellows and mentors are eligible for a stipend if they are not affiliated with USC or the federal government, and are not working under a visa. Eligible applicants must hold primary appointment at a domestic research university or educational institution.

[bigdatau@ini.usc.edu/](mailto:bigdatau@ini.usc.edu) bigdatau.ini.usc.edu/ www.facebook.com/BD2KTCC / www.twitter.com/BD2KTCC

Standard NIH Biographical Sketches

Both the fellow applicant and mentor applicant must contribute current NIH biographical sketches. For more information regarding format, visit the [NIH Biosketch Instructions](#) page.

Letters of Reference

Fellow applicants

One letter of reference is required from the fellow applicant's institution chair or program head.

Mentor applicant

One Statement of Institutional Support is required from the mentor/host institution outlining endorsement of the data science mentor's participation in the RoAD Trip program during the proposed time frame.

The information retrieved in phase I will allow the review team to effectively arrange compatible matches between prospective junior fellows and senior data science mentors.

Phase II

In phase II, when compatible matches between junior fellows and senior data scientists are already established, both parties will be asked to jointly submit a Data Science Research Plan and a timeline for the RoAD Trip and related activities. The research plan should describe a project where the junior biomedical scientist (fellow applicant) provides the data while the senior data scientist (mentor applicant) provides the computational and analytic resources. The specific contributions of the mentor applicant and the Big Data resources already in place at the host institution must be articulated along with a description of the research environment and the availability and quality of needed research facilities and research resources (e.g., equipment, laboratory space, computing resources, data). Importantly, this joint plan description must have an articulated goal of promoting the translation of "Big Data" into new knowledge within or across NIH Institutes and Centers.

Phase II: Required Application Documents:

Fellow and Mentor

- Joint Data Science Research Plan
- RoAD Trip Timeline

The RoAD Trip Joint Data Science Research Plan should be no longer than 5 pages and include the following sections:

1. Name of the junior biomedical scientist (fellow) institution.
2. Name of the senior data scientist (mentor), and the host institution (where the work will be performed).
3. Project title
4. Brief Project Progress Report

*The duration for data science rotations is expected to be a minimum of 2 weeks. However, proposals for extended visits under the same funding amount are welcomed.

** RoAD Trip fellows and mentors are eligible for a stipend if they are not affiliated with USC or the federal government, and are not working under a visa. Eligible applicants must hold primary appointment at a domestic research university or educational institution.

bigdata@ini.usc.edu / bigdata.ini.usc.edu / www.facebook.com/BD2KTCC / www.twitter.com/BD2KTCC

5. The biomedical subject matter of the project as a data science challenge
6. The background leading to the proposed research
7. The significance and the specific aims of the research
8. Proposed approach to analyzing the data (e.g. design and methods, resources)
9. The expected outcomes of the project
10. Project timeline
11. Plans for future collaboration beyond RoAD Trip
12. Relevance of the project to biomedical data science

Important Dates:

Applications Due..... November 26, 2018
 Matching Announced..... December 7, 2018
 Joint Research Plan Due..... January 2, 2019
 Original Travel Receipts & Form Due.....2 weeks after rotation (Before July 1, 2019)
 Project Progress Report Due..... No later than July 1, 2019

Selection Process

Submitted Joint Data Science Research Plans will be critically evaluated by a RoAD Trip Review Group chaired by the BD2K TCC Director, comprising members of the BD2K training community and representative(s) from the National Institutes of Health. Up to ten RoAD Trip projects will be selected annually.

Post-Science Rotation Evaluation

In carrying out its stewardship of this program, the BD2K TCC may request information essential to an assessment of the effectiveness of this program from databases and from participants themselves. Participants may be contacted after the completion of this award for periodic updates on various aspects of their employment history, publications, support from research grants or contracts, honors and awards, professional activities, and other information helpful in evaluating the impact of the program.

*The duration for data science rotations is expected to be a minimum of 2 weeks. However, proposals for extended visits under the same funding amount are welcomed.

** RoAD Trip fellows and mentors are eligible for a stipend if they are not affiliated with USC or the federal government, and are not working under a visa. Eligible applicants must hold primary appointment at a domestic research university or educational institution.