

Jefferson Science Associates, LLC
Managing and Operating the Thomas Jefferson National Accelerator Facility
for the U.S. Department of Energy

FY2018 JSA Initiatives Fund Proposal Summary Sheet

Proposal title

Project Start Date (month/year)

Project End Date (month/year)

New
proposal

Renewal

**Total funds
requested**

Total leveraged support / matching
funds. Details of funds must be
included in budget proposal.

To be completed by JSA: Total funds awarded

Principal Investigator (PI)

Institutional affiliation
Mailing address
Email / phone #

Co-PI (if more than 1, add
pages with information)

Institutional affiliation
Mailing address
Email / phone #

Check one category: If PI is a Lab employee, your identification of the appropriate Associate Director below represents the acknowledgement of that AD with your submittal of proposal. No signature required.

Lab employee: Identify Associate Director (email /
phone)

Lab user: Identify University affiliation (email / phone)
Joint appointee: identify University and Lab division
association (email / phone)

Other: Identify Institutional affiliation (email /
phone)

Proposal: Attach file with

- (1) **Executive summary and technical proposal**
- (2) **Synopsis of scientific, educational, technical, and/or business merits, and alignment with and significance to Lab's current program**
- (3) **Proposed evaluation plan to measure success.** If this is a request for renewal of funds, assessment of prior year performance,

Your proposal may include letters of endorsement and other supporting information (maximum of 12 pages including this summary sheet and budget sheet)

Budget Proposal

Proposal Title

Principal Investigator (PI)

Total funds requested

To be completed by JSA: Total funds awarded

	Item Description		Amount
<p>Equipment. Lab users submitting proposals that include equipment to be used at the Lab must review with the appropriate Lab Associate Director. The provision of the name of the AD below represents the AD's acknowledgement. No signature required.</p>			
	Associate Director: _____		
	_____	_____	
	_____	_____	
		Subtotal Equipment	
<p>Travel Support. Provide break-out of estimates for registration fees, lodging and transportation, catering, and facility charges (room rentals, AV equipment; etc.)</p>			
	_____	_____	
	_____	_____	
	_____	_____	
		Subtotal Travel	
<p>Supplies</p>			
	_____	_____	
	_____	_____	
		Subtotal Supplies	
<p>Consultants/Subcontracts</p>			
	_____	_____	
	_____	_____	
		Subtotal Consultants/Subcontracts	
<p>Other Expenses. Examples include stipends and honoraria, prizes, awards.</p>			
	_____	_____	
	_____	_____	
		Subtotal Other Expenses	
		Total Budget Proposal	

Budget Justification: Include narrative to explain need for each line item in the budget, showing breakdown of calculations used to arrive at the amount in each line of the budget. Note that the JSA Initiatives Fund Program does not support salaries and salary-related expenses, or indirect expenses.

Leveraged Support/Matching Funds information. Identify the source, type and amount of dollar funds from each institution. Include **separately** estimated value of in-kind support. Your identification of the authorized representative who has committed institutional support for your proposal represents the acknowledgement of that individual. If support or funds are provided by the Lab, identify the associate director (or equivalent) as the authorized representative. Information may be included on separate page.

Executive summary and technical proposal

This request is to continue support for Jefferson Lab's monthly lunchtime pizza seminars that are geared towards graduate students and postdocs.

A requested amount of \$8575 would fund 12 seminars, a summer picnic, collaboration meetings, student tour guides, and a software and scientific computing workshop in 2017. An amount of \$200 is requested to support travel for a few speakers to offset costs for transportation from nearby universities.

Additionally, an amount of \$500 is requested to support the annual student get together during the summer, where undergraduate students, graduate students, and postdocs can socialize under an informal setting and discuss research and careers in physics.

An additional request of \$1000 is asked for funding lunch meetings for students and postdocs for lunch at Hall collaboration meetings that are held at Jefferson Lab.

The computing workshop (requesting \$850 for instructor travel expenses and additional funds for food) will utilize three instructors from Software Carpentry/Open Science Grid in order to provide a three-day comprehensive workshop on computing in UNIX, Python, and parallel computing. This workshop is also supported by Amber Boehnlein of JLab Computing. Food for the workshop is matched at 50% from JLab as per Bob Mckeown.

The first Computing Workshop took place from May 17th – May 19th, 2017. There were 41 students officially registered (48 seats in total available), and we allowed students who were not registered but wanted to attend to sit in on the workshop provided they did not take the seat of someone who did register. The time of year that the workshop was held was beneficial to the many new students just arriving to begin their summer research. The Unix section was most useful to new students. The GitHub section was received well by all. The majority of students were signing up specifically for the Python modules. This was taught well for beginners and a more advanced version is desirable for users who are already familiar with programming in C++ and Java. In the post workshop surveys, students are already expressing a desire for more lectures at a higher level.

Survey results from the computing workshop are available here:

RESULTS PRE-WORKSHOP: <https://www.surveymonkey.com/results/SM-RTK6G3VH/>

RESULTS POST-WORKSHOP: <https://www.surveymonkey.com/results/SM-FDWJB3VH/>

The computing program guide can be found here: <https://swc-osg-workshop.github.io/2017-05-17-JLAB/>

An additional request of \$2500 would modestly help support the Student Tour Guide Program at Jefferson Lab. Jefferson Lab provides tours to political leaders, visiting scientists and other dignitaries, and the general public in support of the Department of Energy's outreach agenda. Tour group sizes can

range from a single individual to groups in the hundreds. Students conducting research at Jefferson Lab fill a critical need by serving as escorts and guides during tours. Without student participation, the tour program would be severely limited. This should not be confused with community service because there will be hours spent doing the extra training. The participation of student guides reflects positively on the community as a face for the future of the lab.

Students who have passed the required training to enter the facilities at Jefferson Lab are selected and trained further using a hands on approach, as most student guides work throughout different facilities at Jefferson Lab.

Visiting person or persons requesting a tour inside the accelerator site or special radiation controlled areas require escorts. The Jefferson Lab policy is one escort per 5 visitors. Guides are selected based upon scientific knowledge of the area to be toured. Hence it be that a single tour my have multiple guides due to expertise. It is always preferable to have less guides, but this invites incompleteness or brevity in such tours. Compensation at a rate of \$30 per escort per tour and \$50 per guide per tour is motivational for the student to participate in the tour program.

In their capacity as tour guides and escorts, the student learns more about the lab and has the opportunity to engage important visitors. They also get to share their knowledge with visitors. The opportunity to meet and engage the next generation of scientists is welcomed by those who visit the lab, particularly political leaders.

The benefit to the Communications Department (formally Public Affairs) is that it eases the workload of the rest of the department so they are not relied on so heavily to help on tours. With increased projects such as the web redesign, new collateral brochures, and a large increase in social media, the Communications staff is already stretched thin. Bringing back the student tour program is very beneficial to not only the communications department, but to the student so they learn not just their portion of the lab, but gets a feel for the entire lab. Further, since the safety training is given in groups, adding a few students to the group is no additional cost.

The Communications Department has communicated their endorsement of this program and have offered to guide the students on receiving training as well.

Synopsis

The Pizza Seminar Series contributes directly to the scientific and intellectual atmosphere of the laboratory and showcases current research that is taking place at the laboratory. These well attended lunchtime talks are a venue for graduate students and postdocs to learn about research outside of their field and inform colleagues of their own research. These seminars provide a venue for a graduate student to prepare for theses defense and for both post-docs and graduate students to practice talks at conferences as well as prepare for interviews. In the summer months, some seminars are also attended by undergraduate students. A list of past year speakers from 2015 and 2016 is attached.

The annual summer picnic is geared toward the summer students at the lab, presenting an opportunity for them to engage in discussions with graduate students and postdocs along with their mentors. This presents an informal atmosphere for students to learn from graduate students and postdocs, and hopefully attracts students to further their careers in research and increase interest in Jefferson Lab physics.

The graduate student/postdoc lunch meetings have started off well, and provide a venue where graduate students and postdocs can discuss current issues within the collaboration that affect them in an informal setting. An open forum is provided with the freedom to discuss concerns without involving the entire collaboration. It allows new students to become more familiar with the collaboration and its business practices along with current students to discover issues they might not be currently aware of. A funding award would allow these successful meetings to continue and allow the others Halls a chance to start holding lunch meetings for graduate students/postdocs as well.

Students and post docs often spend a significant amount of time developing the tools and skills with various computational and coding procedures in order to analyze data and complex modeling physics problems at Jefferson Lab. Several users have expressed interest in having a formal introduction to data analysis tools and techniques that could improve the quality of their research as well as reduce some of the initial learning time to develop these skills. Software Carpentry has held numerous workshops at various universities throughout the country instructing scientists on ways to use UNIX, Python, and high throughput/parallel computing resources. In coordination with GSPDA and UGBOD, the JLab Computing Center held a Computing Workshop for grad students and postdocs for the first time last year. It was well-attended and covered command shell, GitHub, JLab computing, High throughput computing, computing on Open Science Grid, Python. While Software Carpentry supplies the software and three qualified instructors, modules of the workshop will be supplemented and contributed to by experienced JLab scientists. Local experienced users who verbally committed to last year's workshop include Robert Michaels, Balint Joo, David Lawrence, and Balsa Terzic. The workshop provides hands-on, example-driven training utilizing JLab computing resources. This workshop aims to reduce some of the overhead that is required when a user tries to learn all of these techniques and skills on their own.

The student tour program is a hands-on educational program. Through the program, students get the opportunity to refine their communication skills and learn about the lab as a whole. Students refine their communication skills by explaining complex physics topics in a way that is engaging and exciting to the general public. They also get the opportunity to engage lab leadership and important visitors.

Improving communication skills better prepares students for future careers and potential leadership roles. The lab benefits by having the manpower needed to deliver tours and more importantly the lab makes visible its commitment to education by having visitors engage the next generation of scientists.

Students will benefit with small stipends based on the number of tours given, restoring a program supported by the JSA Initiatives Fund in previous years.

Tour guides and escorts will be limited to a select group whose members will be trained by Public Affairs. Public Affairs will keep records of all hours work and report to JSA.

Evaluation Plan/Performance Measure

Evaluation is primarily done via attendance and verbal feedback from the students and postdocs. The pizza seminars regularly have attendance of 40-50 people. We plan for 50-60 students in the upcoming year in our budget estimate and hope to see this number of students next year. The GSPDA meetings have an open invitation policy, and graduate students and postdocs are encouraged to attend and contribute to discussions on the effectiveness of the seminars and the selection of speakers and topics.

Participation at the CLAS lunch meetings and Hall D Collaboration was ~20 students. Other halls have not yet had their summer meetings but we are expecting similar attendance.

All current and past talks can be found on the GSPDA wiki:

https://gspda.jlab.org/wiki/index.php/Main_Page

Software Workshop attendees will answer questions about their current skill level and objectives when registering for the workshop. During the workshop, attendees will work through guided, practical exercises so that they will have codes accessible for reference at the end of the workshop that they can use to build on in their own computing. After the workshop, attendees will be asked to fill out a survey to see if they met their expectations and objectives for the workshop and seeking suggestions for improving these software workshops. As we are planning for three workshops, the feedback we obtain from each will be important to the success and planning of future workshops. The evaluations will be maintained by the Graduate Students and Post Docs Association for evaluation and planning purposes. Additionally, Software Carpentry has experience in holding these types of computing workshops which will enhance the basic planning knowledge for making the workshop most effective.

Currently, the measure of success of the tours is through word of mouth from the visitors. Jlab staff have only received positive feedback from visitors relating to the student tour program. The number of tours which student tour guides are used for is also a measure of the contribution the program makes to the Communications Department.



caryn palatchi <cap2wm@virginia.edu>

JSA matching funds - Computing workshop

Bob McKeown <bmck@jlab.org>
To: caryn palatchi <cap2wm@virginia.edu>
Cc: Pat Stroop <Stroop@jlab.org>

Dear Caryn,

Yes JLab will agree to matching funds of \$525 for this workshop.

Regards,

Bob

On 8/8/2017 10:42 AM, caryn palatchi wrote:
Informal Request Letter and Proposal

Bob McKeown
Deputy Director for Science at Jefferson Lab
Jefferson Lab 12000
Jefferson Ave STE 15 Newport News, VA 23606

Dear Bob,

Students and post docs often spend a significant amount of time developing the tools and skills with various computational and coding procedures in order to analyze data and complex modeling physics problems at Jefferson Lab. Several users have expressed interest in having a formal introduction to data analysis tools and techniques that could improve the quality of their research as well as reduce some of the initial learning time to develop these skills. In coordination with GSPDA and UGBOD, the JLab Computing Center held a Computing Workshop for grad students and postdocs for the first time last year. It was well-attended and covered command shell, GitHub, JLab computing, High throughput computing, computing on Open Science Grid, and Python. It was well attended. The workshop provides hands-on, example-driven training utilizing JLab computing resources. This workshop aims to reduce some of the overhead that is required when a user tries to learn all of these techniques and skills on their own.

The software workshop plans to provide air travel for 1 instructor as Software Carpentry will be able to provide air travel for two other instructors (traveling from Chicago and other western

states). Additionally, this budget will provide expenses for the workshop instructors to stay overnight at the Residence Facility on site while holding the workshop. For three days of the computing workshop, initial meal and coffee estimates are ~\$350 per day for 3 people and instructors (the three from off site, and numerous local users assisting the workshop). This cost amounts to \$1050.

We are currently in the process of applying for JSA Initiatives Funds. As encouraged by the JSA Initiatives Fund Program guidelines <http://www.jsallc.org/IF/CP17.html>, we want to ask you whether you and hence JLab has any opportunity and availability of matching funds for our Computing Workshop, which would allow us to support and travel for Software Carpentry instructors who otherwise would not be able to make it. GPSDA and UGBOD would be honored to have JLab and JSA as official sponsor of this event. We are requesting \$525 in matching funds from JLab and would greatly appreciate the lab's assistance.

If you have any further questions please let us know. We would highly appreciate it if you could help us in any way to optimize the success of the Computing Workshop for graduate student and postdocs at JLab.

Sincerely,
Torri Roark and Caryn Palatchi



caryn palatchi <cap2wm@virginia.edu>

Student Tours - proposal

Michael Robbins <mrobbins@jlab.org>

To: cap2wm <cap2wm@virginia.edu>

Hi,

The benefit to the Communications Department (formally Public Affairs) is that it eases the workload of the rest of my department so they are not relied on so heavily to help on tours. With increased projects such as the web redesign, new collateral brochures, and a large increase in social media, the Communications staff is already stretched thin. Bringing back the student tour program is very beneficial to not only us, but to the student so they learn not just their portion of the lab, but gets a feel for the entire lab.

The amount of training is not as vast as one would think. Typically, the grad students should already have Rad Worker I training and likely, the hall safety training to which they do their research. The addition of the other three experimental halls plus the accelerator tunnel and LERF is no more than five total hours. I can guide the students on who to contact for each training as well.

Thanks,

Michael D. Robbins

----- Original Message -----

From: "Michael Robbins" <mrobbins@jlab.org>

To: "cap2wm" <cap2wm@virginia.edu>

Cc: "Torri Roark" <roark@jlab.org>, "Hari Areti" <areti@jlab.org>,

"HOLLY SZUMILA-VANCE" <hvanc001@odu.edu>

[Quoted text hidden]