exploreCSR: Google Grant Pilot Program for Undergraduate Computer Science Research Focused Workshops for Women

# 2018 Request for Proposals

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## **Background**

Awareness around undergraduate research experiences in computer science (CS) can yield several benefits to students. These benefits include, but are not limited to, improved retention in both the major and discipline-related careers; ability to work independently and to communicate well with a team; increased confidence in academic knowledge and technical skill; broader awareness of the discipline; and awareness of research career pathways. These benefits can be particularly strong for women in computing who are severely underrepresented, and who are more likely to see research careers as "not for them" because of the lack of role models and lack of encouragement to pursue research careers and pathways<sup>1</sup>. One way to increase awareness and confidence in research pathways is through experiential research-focused workshops designed to provide undergraduate women with opportunities to work on exploratory problems in teams, network with peers and faculty, and learn first hand about graduate student life and pathways. Workshop models include (but are not limited to),

OurCS: Opportunities for Undergraduate Research in Computer Science hosted by <u>Carnegie Mellon University</u>, School of <u>Computer Science</u> and <u>Indiana University Bloomington</u>, <u>School of Informatics</u>, <u>Computing</u>, and <u>Engineering</u>.

#### **Award Information**

Google is requesting and encouraging proposals from faculty members from PhD granting institutions in the U.S. and Canada. We encourage proposals that include institutional partnerships (e.g., community colleges, HBCUs, MSIs, liberal arts, private non-profit), a clear focus on cultivating and retaining a "critical mass" of women in computing, and a commitment to exposing undergraduate women in computing to foundational research training. Proposals that include strategies for sustained and deep engagement are especially welcome.

<sup>&</sup>lt;sup>1</sup> L. Barker. 2009. Student and Faculty Perceptions of Undergraduate Research Experiences in Computing. Trans. Comput. Educ. 9, 1, Article 5 (March 2009), 28 pages. DOI=10.1145/1513593.1513598 http://doi.acm.org/10.1145/1513593.1513598

Google's goal for this pilot program is to support the design, development, and execution of regional research-focused workshops that enhance the undergraduate experience and increase womens' motivation to pursue graduate study and research careers in CS. As part of this pilot we also want to identify key components of the workshops that can be scaled via "toolkits" that can transfer to other schools in cost-effective ways.

Please feel free to share this opportunity with other institutions you believe would be exemplary candidates.

#### **Award Details:**

- Universities in the U.S. and Canada may receive support of up to \$35,000 (USD).
- We strongly encourage that funding requested targets to impact at least one student per \$500 requested (e.g., a request of \$35,000 should reach at least 70 students).
- We intend to distribute ~12 awards in 2018.
- These are one-year awards, intended for use during 2018-2019.
- The awards will be given as unrestricted gifts to the university. Please note that Google does not pay overhead on gifts.

#### We will prioritize workshops that:

- **Community**: Foster a sense of community and support from peer groups and both near-peer and faculty mentors.
- **Skills**: Provide practical skills and know-how to help women succeed both in their undergraduate program and beyond.
- **Confidence**: Instill confidence that comes from knowing women have the skills to contribute to problem solving beyond the classroom.
- **Motivation**: Motivate, inspire and challenge women through exposure to real-world research problems in computer science.

#### **Review Criteria**

The focus for all of the awards will be on research-focused workshops for undergraduate women pursuing or interested in pursuing CS (or related) graduate programs. The funding criteria are:

- **Student audience:** Efforts in place to recruit undergraduate women in CS or related fields from own institution and surrounding institutions in your state or region.
- **Partnerships:** Proposals should include 1-2 current or anticipated partner institutions/ organizations who will support the workshops.
- **Content:** Workshop content should include fostering a research culture (e.g., research training, projects and presentations, mentorship) and some combination of the following: holistic advising (e.g., graduate admission process, transition to graduate school life,

- academic and financial resources), and ongoing development. Research faculty at the university are expected to be involved in creating and conducting the research content.
- **Format and schedule:** Workshops delivered throughout 2018-2019 with a format and schedule that meets the needs of attendees.
- **Sustainment plans:** Evidence of plans to sustain involvement with students to ensure support beyond the workshop (e.g., delivering advanced workshops, reaching more students, helping students secure ongoing funding/resources, guiding students through to graduate programs).
- Measurability: Proposals include an evaluation plan describing potential research
  questions to be explored along with proposed methods that might be used to arrive at
  those answers.

## **Proposal Instructions**

As guidance, we prefer the body of the proposal to be four pages **maximum**, including budget. Be sure to include the following:

- Proposal title;
- Primary faculty contact full name, title, postal address, e-mail address, and phone number;
- Institutional affiliation:
- Collaborators and partners within and external to the primary institution;
- Proposal objectives and expected results;
- How proposed workshop will meet review criteria (see above);
- Links to primary faculty and any additional investigator CVs;
- Number of anticipated participants; and
- A budget summary that provides a breakdown of major line items. Please format budgets as a short bulleted list of overall costs with basic explanations where needed. We recommend the following format:
  - [Line item]: Description. [unit cost] x [number of units] = total cost for line item
    - E.g., Student meals. \$150 per person x 40 people = \$6,000

To submit your proposal, please fill out this <u>form</u> and then email your proposal materials as a single PDF file to **e-csr[at]google.com**. The title section of your PDF proposal should include the email address of the primary faculty contact. The deadline for submissions is **July 9, 2018**. If you have a process, technical, or scope question, please contact **shmoghadam[at]google.com**.

To delete your submission information at any time, please email: **e-csr[at]google.com**.

# **Program Timeline (subject to change)**

Milestones	Timeline
RFP Announcement	May 2018
Proposals received	July 2018
Proposals reviewed	July 2018
Funding decisions announced	July 2018
Funding awarded and awardee planning begins	Aug 2018
Workshops completed	2018-2019

# **Program Evaluation**

Please note that one objective of the exploreCSR program is to work toward a systematic means of evaluating funded workshops, so that the complete and comparable exploreCSR story can be told. As part of this program you may be asked to collect and aggregate results for indicators deemed appropriate for your workshop. Example indicators might include:

- Self-efficacy
- Intentions to attend graduate school
- Computer science attitudes
- Research skills
- Mentoring satisfaction
- Leadership
- Professional/scientist identity formation
- Satisfaction with workshop experience

## **Frequently Asked Questions**

#### Will feedback be provided on the abstract?

No. We will answer questions with regard to the granting process but will not provide comments on the abstract. Please proceed to completing a full proposal by the deadline, **July 9, 2018**.

#### Can we set up a time to discuss?

Please email any questions to **shmoghadam@google.com**. We will provide you with a timely answer or set up a time to talk if necessary.

#### My proposal has changed since I submitted an abstract - what do I do?

We will be making selections based on the full proposal so just include your final proposal at that time.

#### When does the grant period begin?

The preliminary start date for the grant period will be August, 2018. We understand that the schedule of your workshop activities may have a different schedule, as included in your proposal.

#### Are there font size or formatting requirements?

There is no font type/size/formatting requirements; however, the proposal should be easily legible and succinct.

#### Are references included in the 4 pages?

If you would like to include a list of citations/references, you may do so in a separate appendix that will not be included in the 4 page maximum.

#### Are letters of commitment from partners needed?

No, the RFP does not require letters of commitment.

#### Does the funding amount include indirect costs?

These awards are given as unrestricted gifts to the university. Please note that Google does not pay overhead on gifts.

#### When will I be notified of the proposal decisions?

Notification of proposal decisions will be made in late-July 2018.

### Can I have an extension on the proposal deadline?

No. All proposals must be received no later than July 9, 2018.