# AGeS-DiG (Diversity in Geochronology) information session

August 29, 2023

**AGeS-DiG Deadline:**

**Oct 1, 2023**

# Agenda

- Overview (Becky Flowers)
- Financials (Ramon Arrowsmith)
- DiG experiences (Bella Bennett, Jacky Baughman)
- Questions?

# AGeS-DiG Overview

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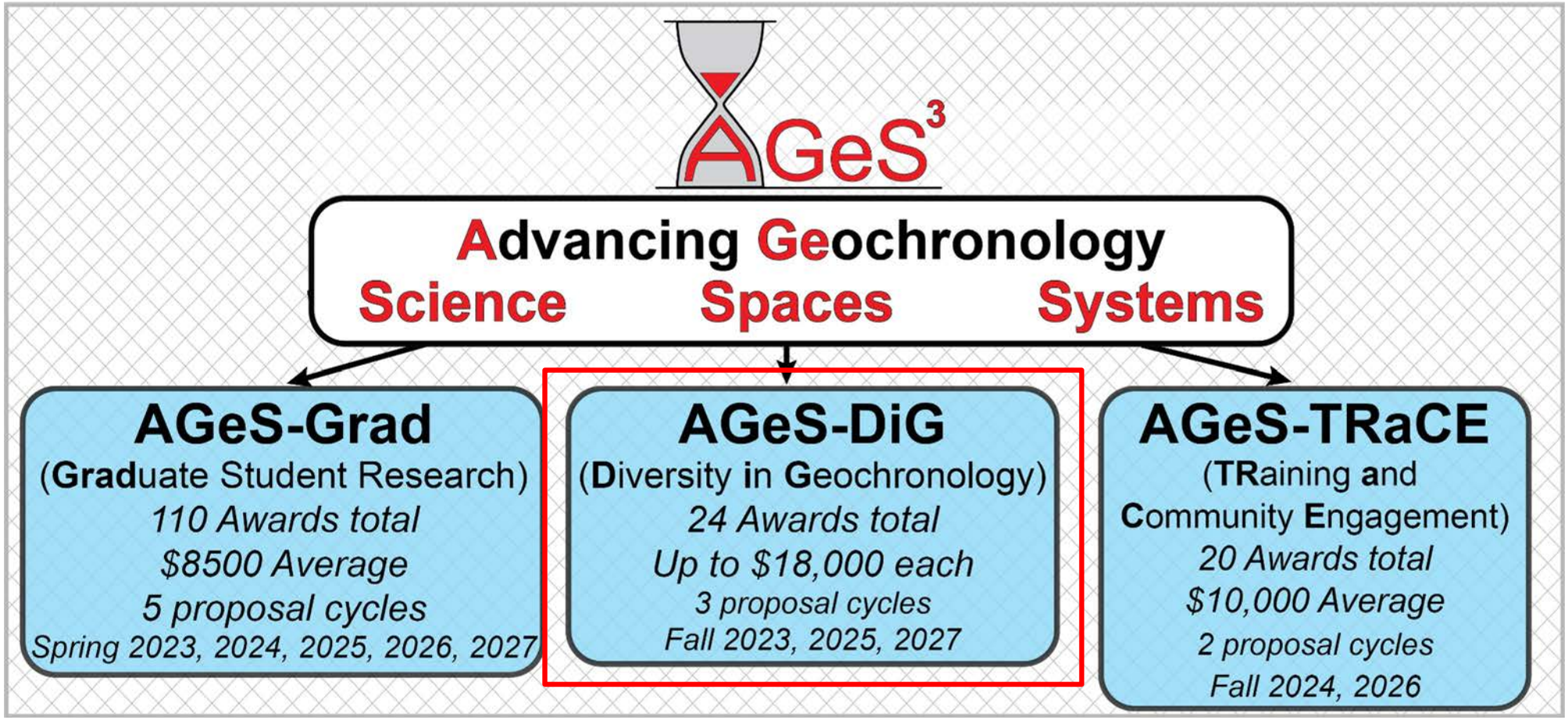

# AGeS-DiG: Goals

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**What are the AGeS-DiG Program Goals?**

- Engage, train, and educate students at any level (including undergraduate and community college) who have not historically had equal access to geochronology data and training.

- Generate and test innovative ideas to expand geochronology access for those minoritized in the Earth sciences.

# AGeS-DiG: Deadline and Related Info

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**When is the Deadline? Oct 1, 2023**

**What is the typical award amount? Up to $18,000 (no overhead)**

**How many awards will be made in 2023? 7-10**

**What is the start date and duration of funded DiG projects?**

- Projects funded in 2023 will have a project duration of **Jan 1, 2024** to **June 30, 2025**, during which all awarded funds should be expended.

# AGeS-DiG: Eligibility Details

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**Who can apply?**

- Scientists anywhere in the U.S. (e.g., universities, government agencies, national labs)
- Faculty, senior scientists, postdocs, graduate students
- In addition to the lead-PI, a co-PI may be included in the proposal
- AGeS labs are eligible to apply directly for this funding and may otherwise be engaged in DiG proposals, but it is not a requirement that a lab be involved in DiG projects.

# AGeS-DiG: Types of Projects

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- Emphasize authentic research experiences
- Mentor two or more students
- Foster a cohort experience for participants
- Articulate an effective recruitment and mentoring/retention plan
- Include a stipend for the student participants
- Examples of possible projects
  - opportunities for underserved groups to visit labs in person to acquire data for project(s)
  - training of an underrepresented cohort in geochronology methods and remote data acquisition for a project

# AGeS-DiG: Previously Funded projects

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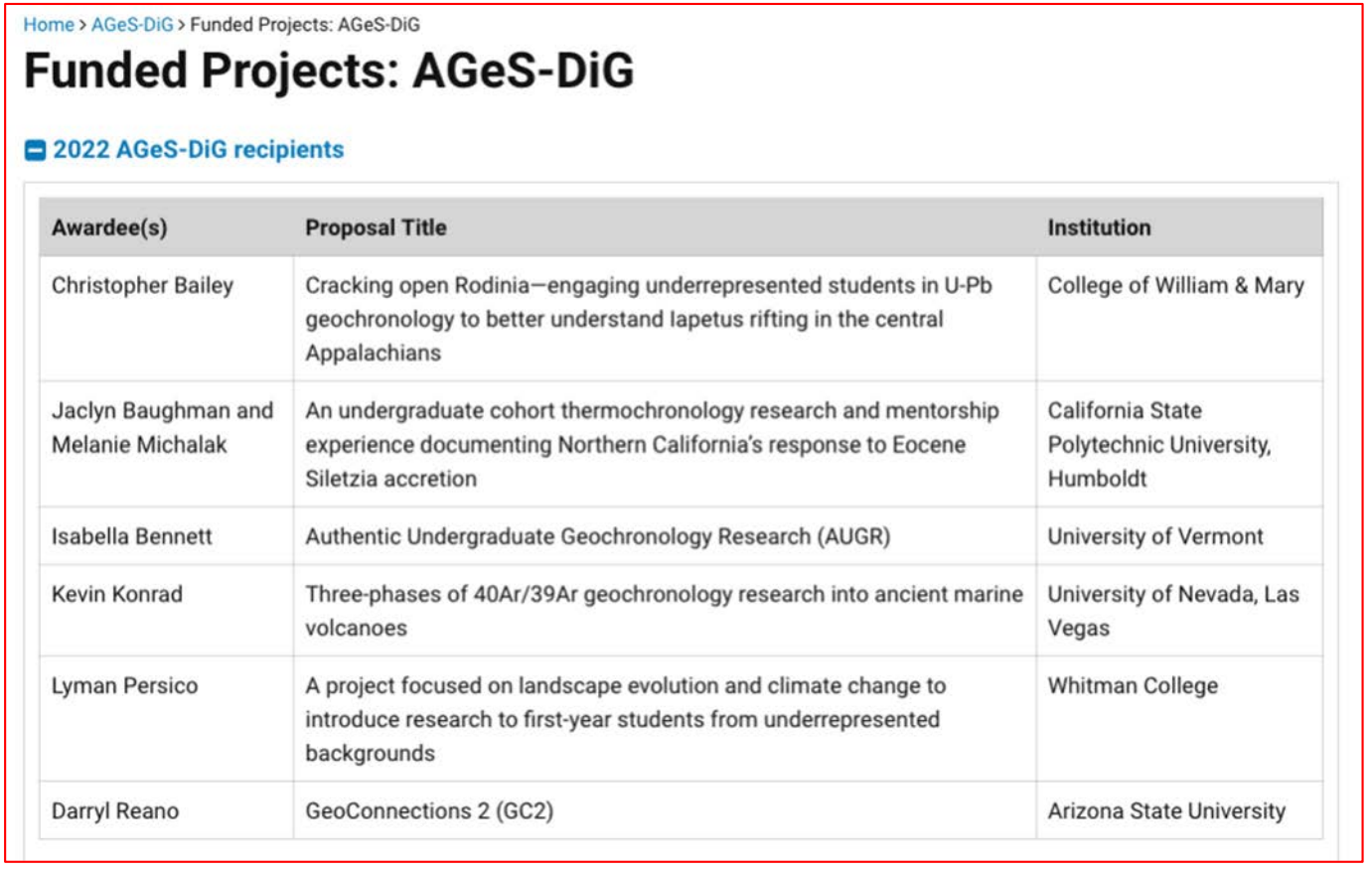
- 1 pilot proposal cycle (in 2022)
- 16 submitted proposals
- 6 awards
- $14,350 avg. award amount



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## Funded Projects: AGeS-DiG

**2022 AGeS-DiG recipients**

| Awardee(s) | Proposal Title | Institution |
|---|---|---|
| Christopher Bailey | Cracking open Rodinia—engaging underrepresented students in U-Pb geochronology to better understand Iapetus rifting in the central Appalachians | College of William & Mary |
| Jaclyn Baughman and Melanie Michalak | An undergraduate cohort thermochronology research and mentorship experience documenting Northern California's response to Eocene Siletzia accretion | California State Polytechnic University, Humboldt |
| Isabella Bennett | Authentic Undergraduate Geochronology Research (AUGR) | University of Vermont |
| Kevin Konrad | Three-phases of 40Ar/39Ar geochronology research into ancient marine volcanoes | University of Nevada, Las Vegas |
| Lyman Persico | A project focused on landscape evolution and climate change to introduce research to first-year students from underrepresented backgrounds | Whitman College |
| Darryl Reano | GeoConnections 2 (GC2) | Arizona State University |

# AGeS-DiG: Previously Funded projects

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*Photo of AUGR students at Purdue University PRIME lab as part of Bella Bennett's (UVM) DiG project (project summary on AGeS website)*

Let's Date Rocks! A Geochronological Journey from the Outcrop to a Numeric Age

by Structural Geology & Tectonics Research Group

February 13, 2023

4 Comments

By Nailah Johnson '24

Last summer I worked with a team of **William & Mary undergraduate students** to study the geology of central Virginia. In particular, my research focused on a suite of enigmatic metamorphosed rocks in the Smith River Allochthon, which is a controversial piece of geologic real estate in the southwestern Virginia Piedmont. Previous regional maps denoted a belt of fine-grained, light-colored schists in the northern Smith River Allochthon and interpreted these rocks to be metamorphosed volcanic rocks. In 2016, these rocks were first named the Oakville Volcanic Suite, but no detailed work has ever been completed in the region.



Me, at the sign in 'downtown' Oakville, Virginia.

*Blogpost by DiG undergrad participant in Chuck Bailey's (W&M) DiG project (link on AGeS website News page)*

# AGeS-DiG: Project Description

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- Clearly identify the minoritized group(s) to be targeted and explain why this group is appropriate to target *(1000 character limit)*
- Provide an overview of proposed project, including science questions *(3000 character limit)*
- Outline how the students will be recruited to and selected for the project *(1200 character limit)*
- Explain the mentoring/retention plan *(1200 character limit)*
- Timeline, references, available funds, budget and justification

# AGeS-DiG: Project Description

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**What is the proposal length?**

- **Concise!**
- 2-3 pages in length
- ~1500 words excluding references, strict character limits
- Get started early, but the proposal itself is not long

**If you applied previously and were not successful, apply again!**

# AGeS-DiG: AGeS Inclusive Community

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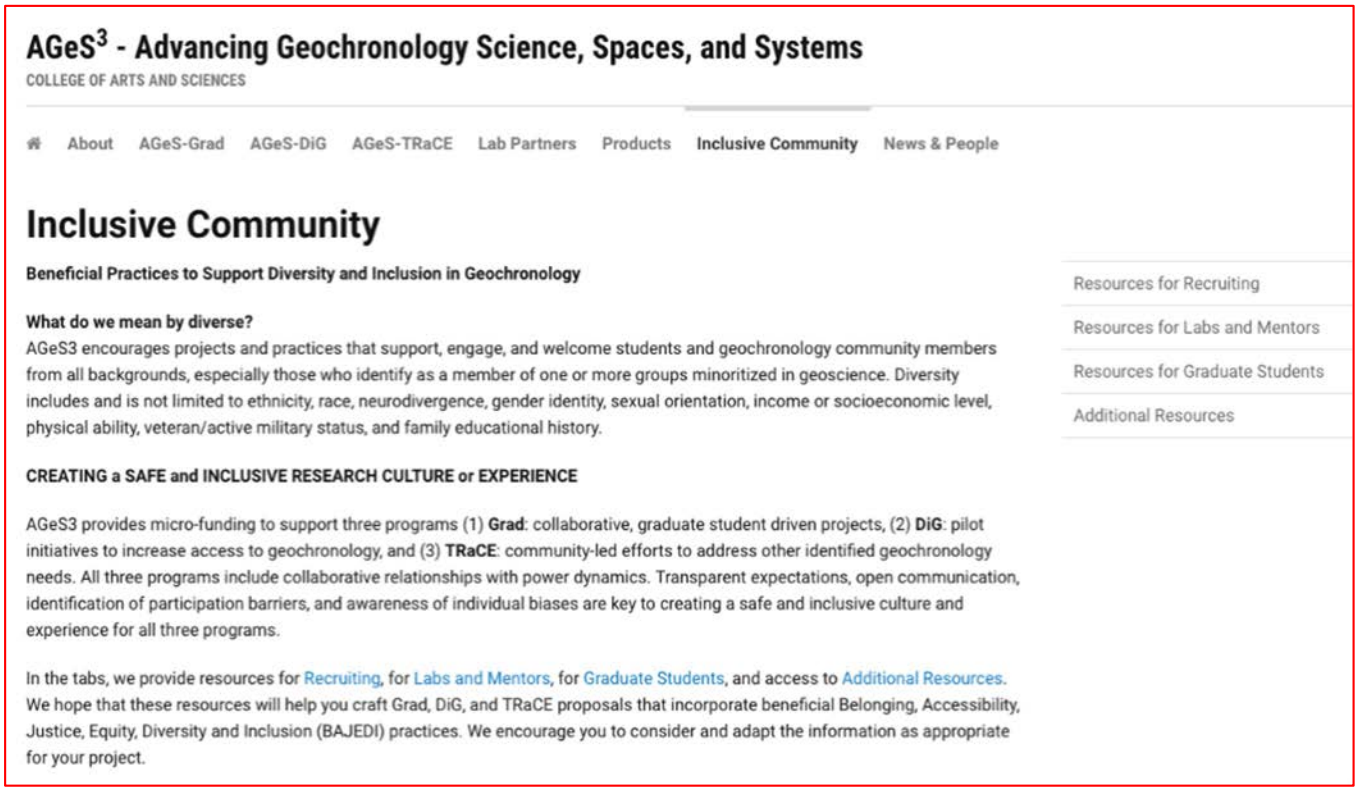

AGeS$^3$ - Advancing Geochronology Science, Spaces, and Systems

COLLEGE OF ARTS AND SCIENCES

About | AGeS-Grad | AGeS-DiG | AGeS-TRaCE | Lab Partners | Products | **Inclusive Community** | News & People

## Inclusive Community

**Beneficial Practices to Support Diversity and Inclusion in Geochronology**

**What do we mean by diverse?**

AGeS3 encourages projects and practices that support, engage, and welcome students and geochronology community members from all backgrounds, especially those who identify as a member of one or more groups minoritized in geoscience. Diversity includes and is not limited to ethnicity, race, neurodivergence, gender identity, sexual orientation, income or socioeconomic level, physical ability, veteran/active military status, and family educational history.

**CREATING a SAFE and INCLUSIVE RESEARCH CULTURE or EXPERIENCE**

AGeS3 provides micro-funding to support three programs (1) **Grad**: collaborative, graduate student driven projects, (2) **DiG**: pilot initiatives to increase access to geochronology, and (3) **TRaCE**: community-led efforts to address other identified geochronology needs. All three programs include collaborative relationships with power dynamics. Transparent expectations, open communication, identification of participation barriers, and awareness of individual biases are key to creating a safe and inclusive culture and experience for all three programs.

In the tabs, we provide resources for Recruiting, for Labs and Mentors, for Graduate Students, and access to Additional Resources. We hope that these resources will help you craft Grad, DiG, and TRaCE proposals that incorporate beneficial Belonging, Accessibility, Justice, Equity, Diversity and Inclusion (BAJEDI) practices. We encourage you to consider and adapt the information as appropriate for your project.

Resources for Recruiting

Resources for Labs and Mentors

Resources for Graduate Students

Additional Resources

See the AGeS Inclusive Community pages for what we mean by diverse and for associated resources on inclusive practices for recruitment, selection, mentoring, and retention of diverse students

# AGeS-DiG Overview: Proposal Process

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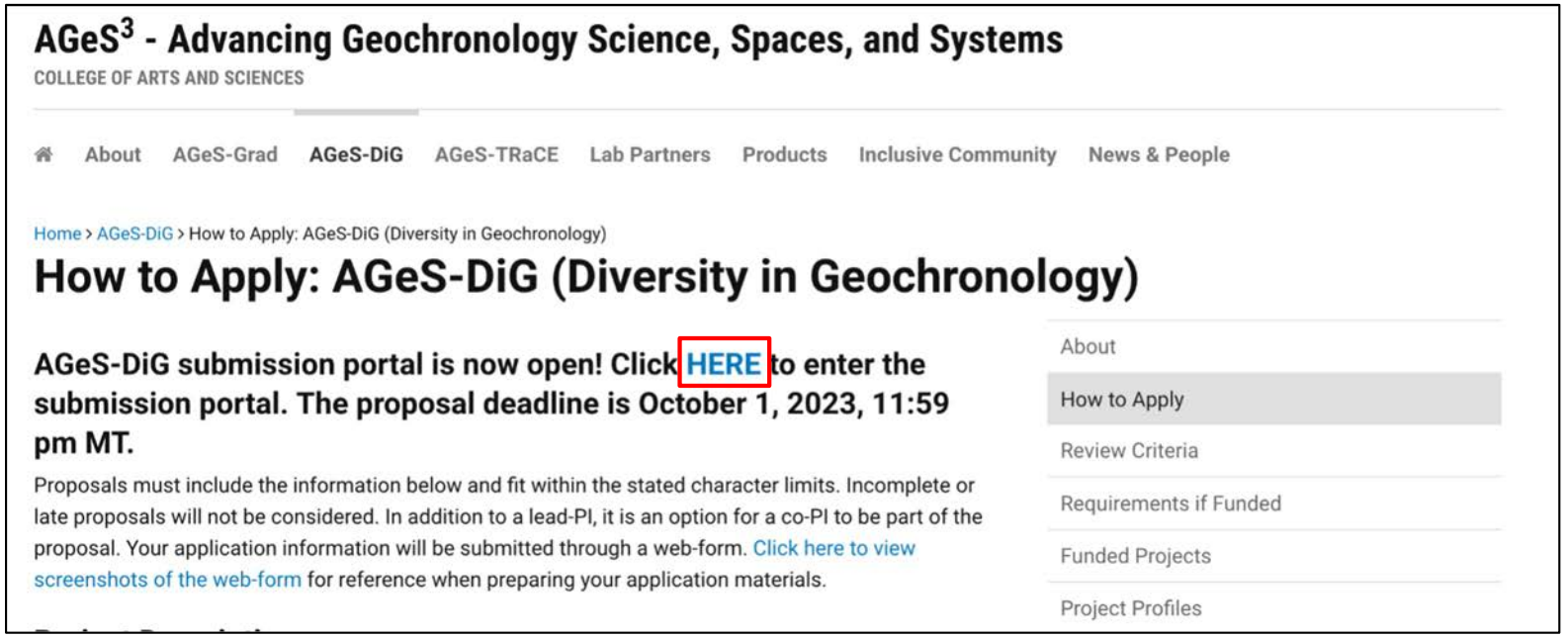
## How do I apply?

- Through the submission portal on the AGeS website



# AGeS-DiG: Proposal Process

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**Additional documents depending on the proposal**

- **Partner lab letter,** if a lab is engaged in the project
- **Partner letter,** if additional partners are engaged in the project
- **Supervisor letter,** if the primary proposer is a graduate student
- **Matching fund support letter,** if matching funds are obtained
  - Although NOT a requirement, AGeS-DiG encourages proposers to seek opportunities to obtain some amount of matching funds if an AGeS-DiG grant is obtained.

# AGeS-DiG: Review Criteria

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## Criteria: 100 points total

1. **Potential to successfully recruit and select the target student group (35 pts)**

   Extent to which the project: i) clearly identifies and justifies the minoritized group(s) to be targeted; and ii) provides new opportunities for a cohort of these students to engage in geochronology. This includes an effective recruitment and selection plan for the student participants.

2. **Potential to successfully mentor and train the student cohort (35 pts)**

   General likelihood that the project will successfully mentor, retain, and train a cohort of students in geochronology methods and in the science behind the proposed project. This includes the strength of the project's proposed support plan for the students, including interaction with the mentor/PI, professional development, and demonstration of the safe and welcoming environment for the activities. Priority will be given to projects that emphasize authentic research experiences for the student cohort.

# AGeS-DiG: Review Criteria

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## Criteria: 100 points total

### 3. Science motivations (15 pts)

How compelling is the science motivation and how well is it aligned with NSF Earth Sciences priorities (https://www.nap.edu/catalog/25761/a-vision-for-nsf-earth-sciences-2020-2030-earth-in)? This may include geoscience education motivation questions. How appropriate is/are the geochronology method(s) for the research questions?

### 4. Coordination, timeline, and budget (15 pts)

Evaluation of the proposed timeline and budget, specifically considering the time required for project implementation and completion. This criterion relies partially on good coordination between the proponent and any partners, evaluated based on the proposal and any support letters.

# AGeS-DiG: Review Process

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**Who and how will my proposal be reviewed?**

- Review by 6-member committee
- Reviewers will use a point system that weights the relative importance of each category and allows for direct comparison of multiple proposals.
- Multiple reviewers provide feedback on each proposal
- Unanimous committee support of final rankings and awards
- The committee may partially fund proposals

# AGeS-DiG: Requirements if Funded

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## What are the project requirements if I'm funded?

- AGeS awardees are expected to model BAJEDI (Belonging, Accessibility, Justice, Equity, Diversity, Inclusion) principles.
- AGeS-DiG awardees and DiG project participants engage in AGeS evaluation activities.
- A list of participants in the AGeS-DiG project should be provided to the AGeS program.
- Funding from the AGeS program should be acknowledged in all products.
- AGeS should be informed of all products by sending an email to contact@agesgeochronology.org, even if the product is generated after the award duration.
- The AGeS-DiG lead PI will submit a final, short, informal project profile, including at least two images with captions, to contact@agesgeochronology.org for posting on the AGeS project website.

# AGeS-DiG: Budget guidance (I)

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- The funding is **not a grant to an institution** but is paid directly to individuals, labs, or other vendors from AGeS award funds managed by Arizona State University. As such, **institutional indirect costs** (e.g., overhead) should **not be included** in proposal budgets.
- The duration of DiG proposals funded in fall 2023 will be **January 1, 2024 to June 30, 2025**, during which all DiG funds should be expended.
- Requested funds from AGeS may **not exceed $18,000** per proposal (note that additional matching funds from other sources are encouraged, but not required).
- If funded, you will work closely with ASU AGeS staff to **coordinate the expenditures**.

# AGeS-DiG: Budget guidance (II)

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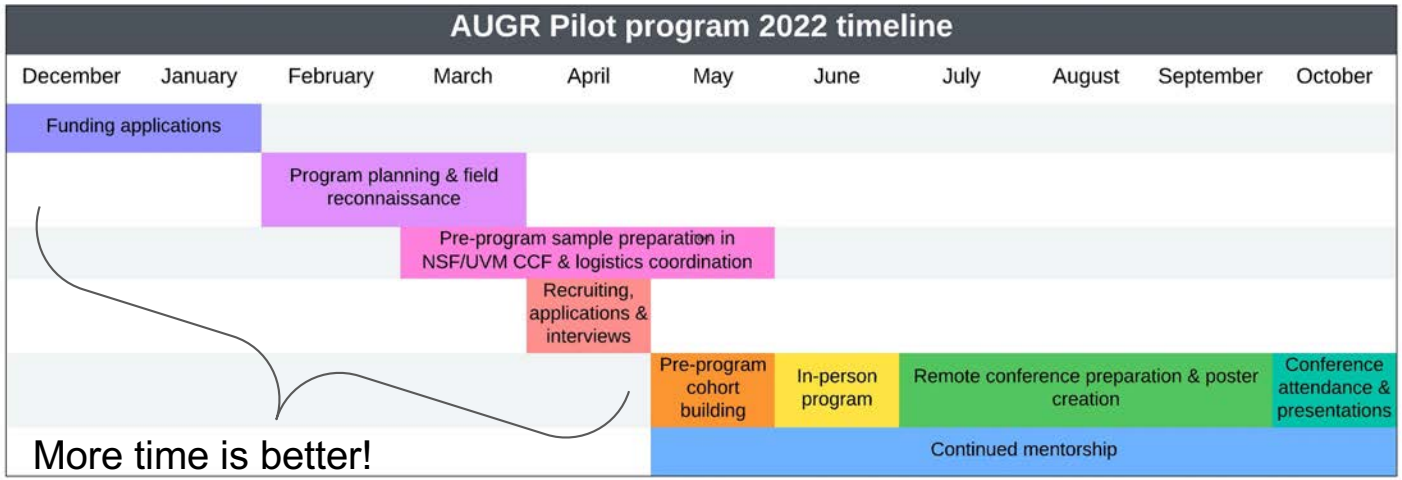
**Budgets should be categorized into:**

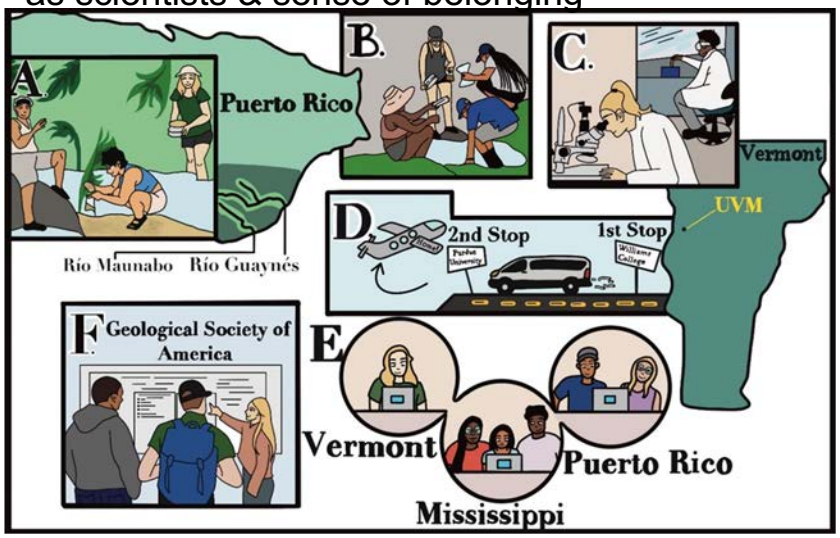
- Funds for **travel, food, lodging, and meetings**
- Analytical and training **fees**, costs of equipment or consumables required for the project, and sample preparation fees
- **Stipends** for student participants should be included in the budget. For reference, typical stipend amounts of NSF REU (Research Experiences for Undergraduates) programs are $600-$650/week, or $15-$16.25/hour.
- **Postdoc and graduate students** engaged in project mentorship may also request a stipend for their time.

# Authentic Undergraduate Geoscience Research (AUGR)

**Program Goals**

- Accessibility (financial & academic)
- Training in field & lab skills
- Mentoring & professional networks
- Model non-extractive field work practices
- Nurture students' confidence, identities as scientists & sense of belonging

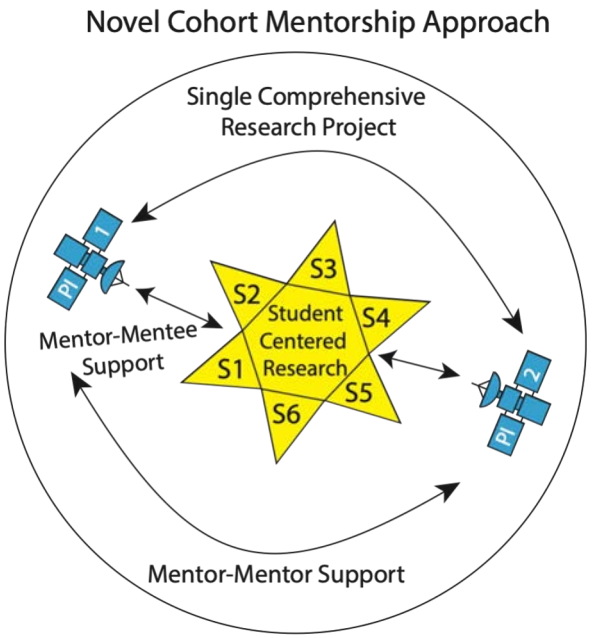



**Advice for getting started**

- Think about target group(s) of students & what approach may be most desirable to/useful for these students
- Develop mentoring strategy that caters to needs of target students
- Consider AGeS labs and/or collaborators
- Be realistic about budget & time
- Seek matching funds (if applicable)

# A place-based undergraduate cohort thermochronology research and mentorship experience




## Centering Student Research Contributions

**Fall 2022**

- ☑ Project Overview
- ☑ Fieldwork/Sample Collection
- ☑ Mineral Separation
- ☑ Prep Samples for U-Th)/He analysis

**Spring 2023**

- ☑ Data Interpretation
- ☑ Abstract and Figure Making
- ☑ Cohort Presents (and wins award!) at GSA Cordilleran Meeting

## Equitable Recruitment and Experience

- Clarify participant expectations
- Advertise widely
- Paid opportunity!
- Interest form > application
- Local, easy to access field and lab work

## Reflecting Thoughts

- It's AMAZING how much science you can do with 18k!
- AGeS finance team was excellent to work with
- Clear and approachable DiG proposal application
- Opportunity to try something new → led to NSF Tectonics Award!!

# Questions?