AVRE ENGAGE PROGRAM ——— December 2020

Call for Project Proposals

Overview

The AuScope AVRE team are entering the second year of the Engage Program and seeking collaboration opportunities with Australian universities, government institutions and the industry on real-world scientific problems that would benefit from application of new technology, computing and storage infrastructures, data managements, etc. We are committing a large portion of the funds to engaging on activities with other AuScope components.

The AuScope AVRE team will work with representatives from AuScope Programs and beyond to develop pilot projects or complete workflows to assist in data delivery, web presence or meeting Findable, Accessible, Interoperable and Reusable (FAIR) data requirements. These projects are intended to become precursors to larger project proposals and demonstrate the capacity of the proposition. The team are keen to embark on a series of three months engagements governed by a Steering Committee (SC).

How it works

The AuScope AVRE team is looking for three short-term projects of three months in length with a possibility for extension. Each successful project will receive support from software engineers for a specified term to work in close collaboration with the proponent.

While there is no direct cost involved to work with us through the Engage program, there is an expectation of the proponent's staff to be directly involved during the active phase of the project. The engineering effort will be fully covered by the AuScope AVRE but the proponent will need to designate a project manager and a small team of researchers available for the duration of the project with regular (at least weekly) meetings. Time allocation of proponent's staff is considered in-kind and will not be covered by the program. It is also expected that researchers/engineers will be acknowledged in any publications or other research outputs developed, and, when appropriate, to share authorship of research outputs.

While there are no fixed criteria on the size and scope of project proposals to which the AuScope AVRE Engage program can contribute, we expect that each project will last approximately 3 to 6 months. For further details, please refer to the "Call for Project Proposals" section below and examples of previous AuScope AVRE Engage Program projects in Appendix A on Page 5.

Once project proposals are collected, a steering committee will be formed that will assess the proposals. The successful proponents will be contacted to discuss the details of the project, its scope and time constraints. In most cases, we will be able to accommodate according to staff availability.

Webinar: 16 December 2020, 1 – 2:30 PM AEDT

The AuScope AVRE team will be organising an online webinar to introduce the Engage Program, its objectives and scope, and showcase examples of previously completed projects. Participants of the webinar will be encouraged to ask questions and seek clarification about the program. The webinar will also provide an opportunity for participants to bring up their project ideas for discussion and seek advice on how to write a successful project proposal. The webinar will be conducted online via Webex. It will consist of a half an hour presentation followed by a round-table discussion.

To attend the free webinar, register (and receive Webex details) via Eventbrite: https://bit.ly/33xAjhK

Engage Program governance

The Engage program will be governed and overseen by a Steering Committee (SC), whose role will be to collect and review project proposals, prioritise, set project schedule, review the project outcomes, and report upon program completion. SC will be meeting regularly to review the outcomes of a completed project and plan the commencement of the next project.

Each phase of the Engage program will progress according to the following process:

1. AVRE will seek project proposals from the national research geoscience community
2. SC will review and prioritise community submissions
3. SC will communicate the outcome of proposals with all submission teams and commence work on successful submissions with respective teams
4. Project Proponent will need to be available to collaborate and meet regularly (at least weekly) with the project team during the active phase of the project
5. Project team will present results at the next SC meeting; and then
6. AVRE will repeat the process.

Call for Project Proposals

We call for project proposals that would benefit from application of information technology in a wide range of fields: HPC/Cloud computing, code optimisation and parallelisation, scientific data visualisation, automation of data management and processing, data management, etc. The project proposals may vary in scope significantly, but all must address the following selection criteria:

1. **Impact** statement – what problem does it solve and what is the significance of the problem. What is the impact of not having the proposed system in place?
2. **Scope** – the project must be feasible and achievable within the term of three months by the team of 2-3 software engineers and/or data experts.
3. **Problem** – the proposed project must address a defined real-world problem and produce a robust, high-performance science software, e.g., code and process optimisation, scientific data processing and visualisation, parallelisation and upscaling of numerical simulations, creation or improvement of a data management workflow, etc.
4. **Pathway** into adoption – it is expected that by the end of the project, it is deployed and ready for wide adoption by users.

Preference will be given to research groups that have not previously engaged with us through the AuScope AVRE Engage program on a similar topic. Proponents are not limited to a single project proposal and are encouraged to make multiple submissions. However, each proponent can only be awarded one project under the Engage program.

The proponent will be required to designate a project manager and a group of stakeholders that will be available and actively involved for the duration of the project. Close collaboration during the project's active development phase will be required with at least weekly project meetings. This will be essential for the success of a project and will be required during all phases of the project — requirements analysis, design, development, testing and delivery.

How to apply

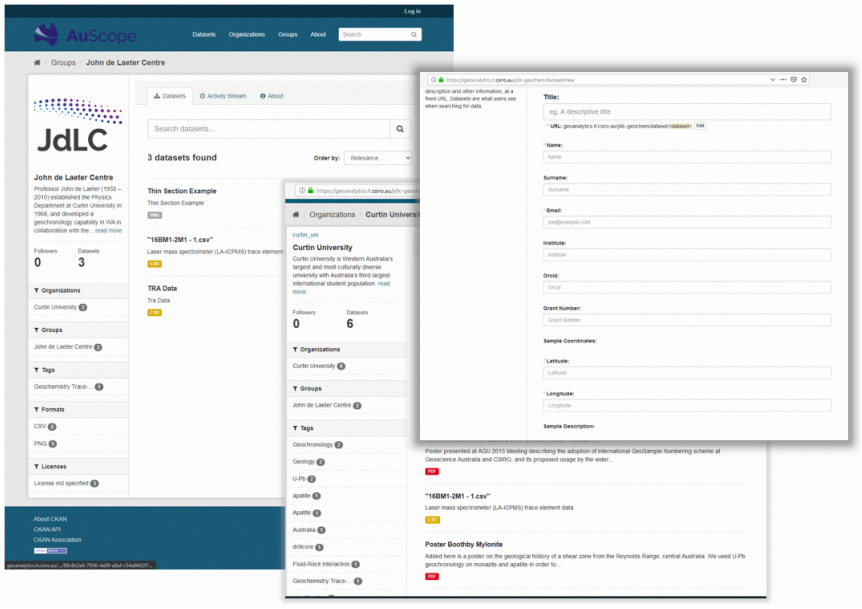
To submit your project proposal, provide a project brief and address the selection criteria described above, i.e., Impact / Scope / Problem / Pathway, with three-four sentences each. Then submit your proposal to Dr Pavel Golodoniuc by 15 January 2021. Please feel free to reach out with questions in the meantime:

Pavel.Golodoniuc@csiro.au ——— +61 8 6436 8776

Appendix A: Engage Program project examples

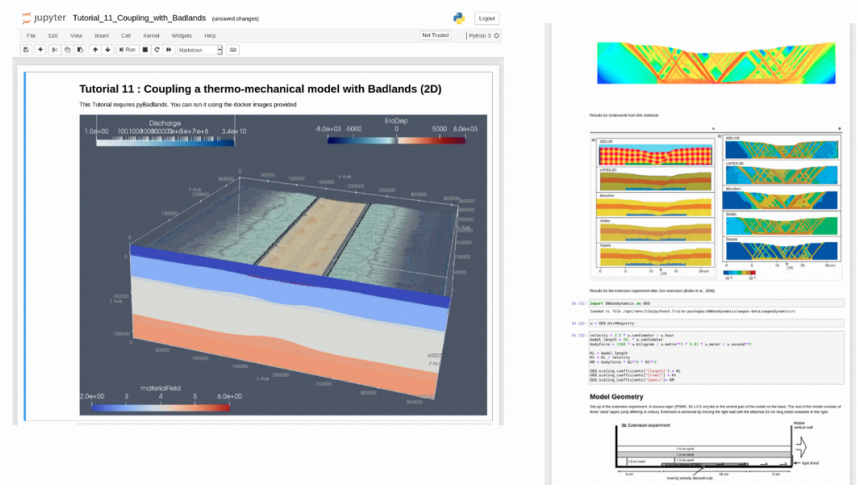
Data management

Harvestable data management catalogues and supporting infrastructure — information modelling, Cloud storage, data harvesting and data dissemination.



Cloud infrastructure and research environments

Scalable Jupyter Hub Cloud research environments for education, research and data exploration fields.



Data visualisation and exploratory tools

Interactive dashboard, visual analytics, and data exploration tools. Integration of numerical codes, scalable Cloud environments and data processing workflows.