IT4Innovations 32nd Open Access Call

NOTICE! Delete all text in grey. Do not exceed a **maximum document size of 5 pages**.

To be submitted before: 2024-07-30 23:59:00

**Name of the project:**

**Multi-year:** YES/NO; see eligibility criteria <https://www.it4i.cz/en/for-users/multi-year-open-access>.

**Project duration:** Fill “12 months” or in the case of multi-year 24 or 36 months.

**Number of node hours requested for each platform:**

1. **Barbora CPU:**
2. **Barbora GPU:**
3. **Barbora FAT:**
4. **DGX-2:**
5. **Karolina CPU:**
6. **Karolina GPU:**
7. **Karolina FAT:**
8. **LUMI-C (CPU):**
9. **LUMI-G (GPU):**
10. **Complementary systems:** YES/NO
11. **Visualisation servers:** YES/NO

**Other HPC resources:**

Fill only in case of the non-standard resource request:

1. [**HOME and SCRATCH Barbora:**](https://docs.it4i.cz/barbora/storage/)[TB]
2. [**HOME and SCRATCH Karolina**](https://docs.it4i.cz/karolina/storage/)**:** [TB]
3. [**PROJECT:**](https://docs.it4i.cz/storage/project-storage/)[TB]
4. [**Cloud services requirements:**](https://docs.e-infra.cz/compute/openstack/technical-reference/ostrava-site/quota-limits/)Instances, VCPUs, RAM, volume storage and others.

**Name and surname of primary investigator:**

**Affiliation of primary investigator:**

**e-mail:** Use primary e-INFRA CZ/EduID e-mail if exists.

**Names and surnames of other investigators:** Comma-separated list.

**Affiliations of other investigators:** Comma-separated list.

**e-mails:** Comma-separated list. Use primary e-INFRA CZ/EduID e-mail if exists.

**Research area:** e.g. Artificial intelligence, Bioinformatics, Chemistry, Engineering, Physics.

**Popular abstract:**

Include a popular abstract in a form which is immediately available for publication on the website or in newspapers etc., outlining the proposed research, the methods to be used, and the expected impact, in language appropriate for the general public. Be concise; **do not exceed 1500 characters** in abstract**.** Do not exceed a **maximum document size of 5 pages**.

**Scientific readiness:**

Please ensure that the entire scientific readiness section is a **maximum of 2 pages**, including figures and tables. Provide appropriate details to gain a high score; see [*https://www.it4i.cz/en/for-users/open-access-evaluation*](https://www.it4i.cz/en/for-users/open-access-evaluation). Max 5 points in this section.

**Aims and objectives**

Describe the proposed research, and its aims and objectives. Be concise but with enough detail that the reviewers can understand your intent. If the application is directly related to solving an approved H2020, ERC, or EuroHPC research project, or other peer-reviewed national or international project, state it and provide project name and identifier **(compulsory for multi-year access)**.

**Methods and state-of-the-art**

Describe theoretical and computational methods you plan to employ to achieve your aims and objectives. Compare these to the established state-of-the-art within the field.

**Impact and outlooks**

Place the proposed research in the context of other work in your discipline. In addition, explain what innovation, advancement of scientific knowledge, or impact you expect to be enabled should your aims and objectives be achieved.

**Computational readiness:**

Please ensure that the entire Computational readiness section is a **maximum of 1 page**, including figures and tables. Provide appropriate details to gain a high score; see [*https://www.it4i.cz/en/for-users/open-access-evaluation*](https://www.it4i.cz/en/for-users/open-access-evaluation). Max 5 points in this section.

**Computational approach, parallelization, and scalability:**

Describe the computational techniques and platforms a.-g. that you will use. Consider including the names of codes, programming languages, libraries, and other software to be used.

Describe parallelization and scalability aspects. Include: parallel programming system used (e.g., MPI, OMP, CUDA, HIP, “embarrassingly parallel”). If possible, provide references and data for your application’s parallel performance, speedup, and scalability.

**Computational resources:**

Justify the requested computational resources. Note that all requested resources a.-g. should include an estimation of the required **node hours**. Provide the basis on which the requested resources were estimated. **In case of multi-year access, it is compulsory** to provide a plan of resource utilization spanning multiple 12-month periods.

**Socioeconomic readiness:**

Assess the socioeconomic merit of your proposal. Provide appropriate details to gain a high score; see [*https://www.it4i.cz/en/for-users/open-access-evaluation*](https://www.it4i.cz/en/for-users/open-access-evaluation).

**Socioeconomic impact:**

It is very important to demonstrate the general usefulness of the project. Assess the socioeconomic impact of the proposed project for general society, even if the impacts seem remote or indirect. Describe any expected synergic effects and their contribution to public revenues.

**References:**

Include all references here.