



Selection process - AAPG 2023 Step 2

SKATE

Project Coordinator

Name : KUMAR First  
name : Suraj Email :  
suraj.kumar@inria.fr

FINAL REPORT

This evaluation summary report must outline the panel's final decision. So this report must be: drawn up carefully, argued to justify the final decision, relative only to the evaluation criteria and relative only to the information included in the scientific document and its annex (ie CV), not include recommendations as recommendations are not a Guarantee of success in case of resubmission.

Quality and Scientific Aim

a - Clarity of research objectives and hypotheses b - Scientific ambition of the project and position in relation to the state-of-the-art c - Adequacy and relevance of the methods implemented

comment

The objective of the project is to develop new parallel algorithms to accelerate two types of calculations frequently used in tensor methods: matrix-tensor products and Khatri-Rao type products. The objective is also to prove the lower bounds in terms of communication for these algorithms. The objectives are very clear, however the committee judged the project's contribution in terms of technological innovation insufficient or poorly described, the coordinator envisages pairing the methods already existing in the literature without specifying which are the many technological innovations to overcome this coupling. More details on the parallelization techniques considered would also have been appreciated.

ORGANIZATION AND IMPLEMENTATION OF THE PROJECT

a - Skills, expertise and involvement of the scientific coordinator b - Contribution to the coordinators level of responsibility and team development c - Adequacy of implemented and requested means to the projects objectives

Warning:The French National Research Agency (ANR) has signed the San Francisco Declaration on Research Assessment (DORA). Consequently, all the results of research work must be considered (scientific publications, data sets, software, etc.). The use of bibliometric indicators such as the impact factor and the h-index must be banned in favor of qualitative indicators on the works, such as their influence on policies and practices.

comment

The coordinator seems to have all the skills to manage this project well, which will allow him to develop his autonomy within his team.

IMPACT AND BENEFITS OF THE PROJECT

a - Scientific impact and potential economic, social or cultural impact b - Strategy for the dissemination and exploitation of the results; promotion of scientific, technical and industrial culture

comment

The project could potentially have a strong impact, given that the products concerned by the project are very frequently used in numerical methods based on tensors. The dissemination strategy is simple and classic, but effective for this type of project: communications in scientific journals and conferences, code in open source and accessible without license, and the creation of a web site for the project. An interesting part of the proposal consists of making accessible in free data the data set constructed and used during the project, with the aim of creating a reference so that other researchers can benchmark their solutions.

GENERAL OPINION including the strengths and weaknesses of the project

comment

The committee judged that the project had no weak points regarding the skills of the coordinator, the clarity of the objectives and the potential impacts of the project. The committee, however, felt that the project appeared to be primarily centered around the coupling of certain pre-existing methods without mentioning the difficulties that would be inherent in this coupling, and did not adequately value the technological innovations required to put them into action. .