Evaluation Report

A1 - Scientific merit of the project (20%)

Score: 5.80

The framework of the present project is the development of new methodologies for the next generation of logical representations. In particular, the goal is to expand Probabilistic Logic Programming (PLP) with Stochastic Answer Set Programs (SASP) and, for this, to apply algebraic methods to express uncertainty and to integrate evolutionary algorithms. The motivation behind this research program is to develop logic programs capable of accommodating probability distributions, a relevant ingredient for applications of logical representations in real world scenarios.

This could have a potential impact if successful. But details are given in the topic "Research Methodology" in only 8 lines. In the description of the "Tasks", a few more lines are given. A detailed description of the intended work, the expected difficulties and the planned methods are missing.

A2 – Innovative nature of the proposal (20%)

Score: 6.40

The general vision of this proposal appears to go beyond the state of the art, indicated in the proposal.The research program is the continuation of previous works of the involved team, here the innovation relies on the adopted methodology: the application of algebraic methods to express uncertainty and the integration of evolutionary algorithms. The research proposal is well focused.

The idea to apply Stochastic Answer Set Programming in Probabilitic Logic Programming is interesting. A basis for this is developed in the recent, yet unpublished, paper [8] by three members of the intended team. Unfortunately, the Panel could not find a preprint. This makes it difficult to judge on the scientific basis of the intended project. Further details are described in the project proposal only very shortly.

B1 – Scientific merit of the Principal Investigator and the research team (21%)

Score: 6.50

The PI (PhD in 2006) has a strong background in logic programming. He has achieved 5 conference papers until 2015, 6 journal papers until 2017 and 1 further journal paper in 2021. The PI has been involved in several project grants. He has considerable experience in teaching, higher education and scientific organizational matters.

The PI is supported by a team with very appropriate expertise. In particular the research will be carried out within the High Performance Computing Chair, an R & D infrastructure focused on high performance computing and artificial intelligence, based at the University of Evora. The other researchers involved in the activities are described in detail. The scientific output of the intended team members is excellent respectively outstanding (M. Avillez).

The Panel would appreciate further scientific output from the PI, exceeding one paper in the last 6 years. All members of the team are from University of Evora; no consultants are listed. A broader team with external expertise could be beneficial for the project.

B2 – Impact of project execution for PI’s career progression and/or research (14%)

Score: 7.00

The impact of this project on the PI's career progression and/or research is properly identified. The project, if successful, would enable the PI to achieve scientific publications, both in conferences and journals, and thereby to considerably improve his current publication record. Also, he could gain further scientific contacts. This would enhance his scientific standing and further research development in the field of probabilistic logic programming. This project execution would also strengthen the capabilities for obtaining funding at the international level.

C1 – Feasibility of the work plan and proposed indicators (12.5%)

Score: 5.00

The work plan is described only very shortly, within 8 lines in "Research Methodology" and some lines in the description of 3 main Tasks of the project work-plan. The tasks address the project challenges and the planned activities with a growing level of TRL-Technology Readiness Level (from the underlying structure to the applications in real-world problems).

A project timeline is described in detail.
The proposal does not contain an adequate description of risk with proposed risk-mitigation measures.

The shortage of the description of the project contents makes it difficult for the Panel to judge convincingly positive on the feasibility.
The intended indicators (publications in international meetings or journals) are fine, but their feasibility has few support by the PI's current publication activity.

C2 – Budget adequacy (12.5%)

Score: 6.10

The budget is consistent with the goals and properly justified for each task. The budget is splitted in the three tasks of the project. A detailed description is reported for the different activities to be carried out. The main part of the budget (roughly 56% + overhead) will be dedicated to human resources, in particular support of a full-time postdoc researcher for one year.
A significant part of the budget is dedicated to the promotion and dissemination activities.
In view of the PI's publication record and the only very shortly described scientific objectives and contents of the research itself, the Panel has doubts whether the considerable total amount is adequate.