Proposal Evaluation Form

EUROPEAN COMMISSION

Horizon 2020 - Research and Innovation Framework Programme

Evaluation Summary Report

Call: H2020-MSCA-IF-2014_ST
Funding scheme: Standard EF
Proposal number: 656568
Proposal acronym: ROBOTS
Duration (months): 24
Proposal title: Reasoning about Robots
Activity: ENG

N.	Proposer name	Country	Total Cost	%	Grant Requested	%
1	UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II.	IT	180,277	100.00%	180,277	100.00%
	Total:		180,277		180,277	

Abstract:
The scientific objective of this proposal is to establish a framework which can be used to express and automatically solve algorithmic problems about robots operating in unknown environments. Achieving this scientific objective would give the first techniques to automatically verify or synthesise robot protocols in a parameterised setting. This would lay the foundation for tools which i) automatically verify existing theorems about robot protocols whose hand-written proofs are error prone and often ad hoc, ii) facilitate computer-aided experimentation in the area of robots operating in unknown environments. The main methodology to achieve the scientific objective is to apply and extend the theory of games, automata and logic, areas of theoretical computer science in which the applicant is an expert. The hosting group has complementary knowledge which the Applicant will draw on. Specifically, the Supervisor is a leading expert in strategic reasoning for reactive and multi-agent systems, and the department hosts a world-renowned robotics group with whom the Applicant will consult. The medium-term career objective of the Applicant is to achieve a permanent research position in an academic institution. Since 2012, the Applicant has successfully shifted his research focus to formal verification of distributed systems, a topic relevant to this project. However, the Applicant's record is missing an independently conceived and funded research agenda. The work programme involves consultation with the Supervisor, rapid dissemination of results, and a workshop between the labs in Vienna and Naples which will increase the Applicant's visibility in his new field. A successful fellowship will create lasting collaborations, both within the department, and between the department and labs in Austria, France, and Germany. A successful fellowship will place the Applicant within reach of an Habilitation Thesis and a permanent academic position.

Evaluation Summary Report

Evaluation Result

Total score: 86.20% (Threshold: 70.0/100.00)

Form information

SCORING

Scores must be in the range 0-5.

Interpretation of the score:

0– *The* ***proposal fails to address the criterion*** *or cannot be assessed due to missing or incomplete information.*

1– Poor. *The criterion is inadequately addressed, or there are serious inherent weaknesses.*

2– Fair. *The proposal broadly addresses the criterion, but there are significant weaknesses.*

3– Good. *The proposal addresses the criterion well, but a number of shortcomings are present.*

4– Very good. *The proposal addresses the criterion very well, but a small number of shortcomings are present.*

5– Excellent. *The proposal successfully addresses all relevant aspects of the criterion.Any shortcomings are minor.*

* mandatory fields

Criterion 1 - Excellence

Score: **4.50** (Threshold: 0.00/5.00 , Weight: 50.00%)

Quality, innovative aspects and credibility of the research (including inter/multidisciplinary aspects)
Clarity and quality of transfer of knowledge/training for the development of researcher in light of the research objectives
Quality of the supervision and the hosting arrangements
Capacity of the researcher to reach or re-enforce a position of professional maturity in research

Strengths:
+ The proposed research is credible and of good quality providing well defined objectives.
+ The innovative aspect of the work, including its interdisciplinarity, is clearly articulated.
+ There is good complementarity of background knowledge between the researcher and hosting organization.
+ Throughout his career the researcher has demonstrated his skills in developing with autonomy a coherent research path which will enable him to reach a position of professional maturity.
+ The supervisor has very good expertise in the proposed research area and also a strong track record in building collaborations.

Weaknesses:
- Methodologies to assess the usefulness and applicability of the outcome of the proposed research are not clearly elaborated.
- Training activities, related specifically to the transfer of knowledge in robotics, are insufficiently described.

Overall comments

Not provided

Criterion 2 - Impact

Score: **4.20** (Threshold: 0.00/5.00 , Weight: 30.00%)

Enhancing research- and innovation-related human resources, skills, and working conditions to realise the potential of individuals and to provide new career perspectives
Effectiveness of the proposed measures for communication and results dissemination

Strengths:
+ The fellowship will enable the researcher to create new collaboration opportunities with other researchers across Europe and will also reinforce his academic skills enabling him to achieve a good research position in the field.
+ A dissemination strategy elaborating on how the scientific results of the proposed research will be promoted to the research community is well presented.

Weaknesses:
- Public engagement activities are insufficiently described. For example, the targeted end user groups and their motivations to take up the final research outcome are not clearly identified.
- Exploitation of results and the eventual commercialization prospects, including intellectual property issues, are insufficiently considered.

Overall comments

Not provided

Criterion 3: Implementation

Score: **4.00** (Threshold: 0.00/5.00 , Weight: 20.00%)

Overall coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources
Appropriateness of the management structures and procedures, including quality management and risk management
Appropriateness of the institutional environment (infrastructure)
Competences, experience and complementarity of the participating organisations and institutional commitment

Strengths:
+ The work plan provides a clear work package identification and well defined deliverables and milestones, ensuring a successful achievement of planned goals.
+ The institutional environment and the required technical infrastructure are appropriate to support the proposed research.
+ The host organization is competent and can highly contribute to the achievement of a successful research outcome.

Weaknesses:
- Allocation of tasks and resources is not provided in a sufficient detail depth.
- Management structures, procedures and practical arrangements for project and financial monitoring are weakly elaborated.
- The overall strategy for management of scientific risks and related contingency plans are insufficiently addressed.

Overall comments

Not provided

Operational Capacity

Status: **Operational Capacity: Yes**

Not provided

Remarks

No remarks.