Proposal Evaluation Form

EUROPEAN COMMISSION

Horizon 2020 - Research and Innovation Framework Programme

Evaluation Summary Report

Call: H2020-MSCA-IF-2018
Type of action: MSCA-IF-EF-ST
Proposal number: 832512
Proposal acronym: ChERIS
Duration (months): 24
Proposal title: Choreographies for Energy-aware Reliable Internet-of-Things Systems
Activity: ST-ENG

N.	Proposer name	Country	Total Cost	%	Grant Requested	%
1	SYDDANSK UNIVERSITET	DK	207,312	100.00%	207,312	100.00%
	Total:		207,312		207,312	

Abstract:
The OECD states the importance of the Internet of Things (IoT) to keep EU businesses competitive. However the OECD also reports that, since misbehaviours of IoT systems can have grave consequences (e.g., the misdosing of patient medications), potential users hesitate to adopt IoT solutions. Unfortunately, the heterogeneity of IoT systems prevents the direct application of existing techniques to guarantee reliability, i.e., the faithful execution of their intended behaviour.

In ChERIS we expand Choreographic Programming (CP), a state-of-the-art method to provide reliable properties on distributed systems, to build a programming framework for reliable IoT systems. Users will describe in a single program the behaviour of a whole IoT system, while a compiler will generate the correct code for each component. Key reliability guarantees will include: 1) the consistent interactions among IoT components, even when different, custom communication protocols co-exist; 2) the respect of specified energy budgets in IoT systems with battery-depended components.

ChERIS is an interdisciplinary project where we extend techniques from programming languages to cater the needs of the large community of IoT systems. In the project, I bring my expertise on architectures and language abstractions for the IoT. The supervisor is an expert in both theoretical and practical aspects of programming languages and invented CP, making him the best candidate to supervise this project.

The training in the fellowship will give me the opportunity to complete my professional profile. I will attend courses provided by the host university to certify my teaching and research-administration skills. I will increase my expertise on programming languages. I will expand my network to experts in both the host department and in the network of the host research group, led by the supervisor. I will be the first expert on IoT at the host, which will have access to my network of collaborators in Italy and France.

Evaluation Summary Report

Evaluation Result

Total score: 89.00% (Threshold: 70/100.00)

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: **4.40** (Threshold: 0/5.00 , Weight: 50.00%)

• Quality and credibility of the research/innovation project; level of novelty, appropriate consideration of inter/multidisciplinary and gender aspects
• Quality and appropriateness of the training and of the two way transfer of knowledge between the researcher and the host
• Quality of the supervision and of the integration in the team/institution
• Potential of the researcher to reach or re-enforce professional maturity/independence during the fellowship

Strengths:
- The research proposal is novel and the methodology is sound. The state of the art is well described.
- The training plan is suitable.
- The supervisor is an expert in the research domain and has already a history of fruitful collaborations with the researcher.
- The integration of the researcher in the host institution is credible and includes an appropriate set of measures.
- The potential of the researcher to reach professional maturity during the fellowship is credible, considering their research track.

Weaknesses:
- The specified objectives are too ambitious for the planned project duration.
- The researcher and the host have similar technical background, which reduces the amount of novel technical knowledge that can be exchanged.

Criterion 2 - Impact

Score: **4.50** (Threshold: 0/5.00 , Weight: 30.00%)

• Enhancing the future career prospects of the researcher after the fellowship
• Quality of the proposed measures to exploit and disseminate the project results
• Quality of the proposed measures to communicate the project activities to different target audiences

Strengths:
- The researcher has a clear target prospect in achieving a position in the European academia. This proposal has adequate possibility to promote this ambition, by providing EU visibility, increasing the research achievements and the teaching experience.
- Dissemination output, actions and strategies are well-elaborated and appropriate.
- The proposal includes a substantial and effective set of communication measures to involve different communities including the general public.

Weaknesses
- The efficiency of the exploitation plan and IPR management is not convincing.

Criterion 3 - implementation

Score: **4.50** (Threshold: 0/5.00 , Weight: 20.00%)

• Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources
• Appropriateness of the management structure and procedures, including risk management
• Appropriateness of the institutional environment (infrastructure)

Strengths:
- The work plan is well-built and realistic, with an appropriate number of tasks, milestones and deliverables.
- The allocation of tasks and resources is appropriate for the given objectives.
- The Gantt chart is clear and presenting a detailed plan.
- The management structure is effective.
- The institutional environment is appropriate. It owns all the required infrastructure to support the researcher.
- Tasks and commitment of the beneficiary to the research and training are appropriately outlined.

Weakness:
- The proposal lacks sufficient details on addressing specific technical risks.

Scope of the proposal

Status: **Yes**

Comments (in case the proposal is out of scope)

Not provided

Operational Capacity

Status: **Operational Capacity: Yes**

If No, please list the concerned partner(s), the reasons for the rejection, and the requested amount.

Not provided

Use of human embryonic stem cells (hESC)

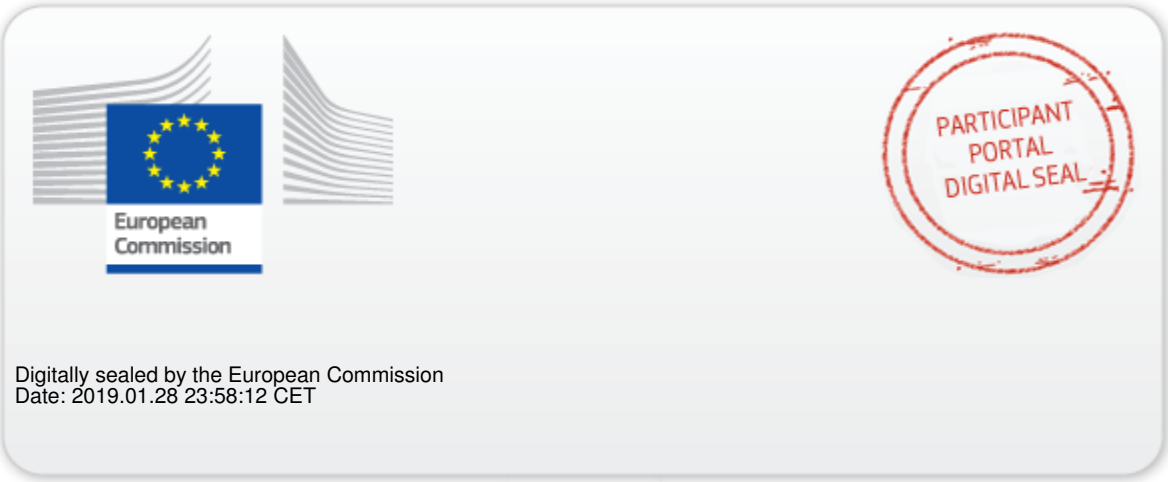
Status: **No**

If yes, please state whether the use of hESC is, or is not, in your opinion, necessary to achieve the scientific objectives of the proposal and the reasons why. Alternatively, please state if it cannot be assessed whether the use of hESC is necessary or not because of a lack of information.

Not provided

Overall comments

Not provided



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