

Proposal Evaluation Form



EUROPEAN COMMISSION

7 th Framework Programme for Research

EVALUATION SUMMARY REPORT

Call : FP7-PEOPLE-2013-IEF
Funding scheme : MC-IEF (Intra-European Fellowships (IEF))
Proposal number : 623862
Proposal acronym : APIMAP
Duration (months) : 24
Proposal title : Advanced Parallel Implementations for associative Memory Applications

N.	Proposer name	Country	Type	Total cost (€)	%	Grant req. (€)	%
1	ISTITUTO NAZIONALE DI FISICA NUCLEARE	IT					
Total:							

Abstract :

The APIMAP (Advanced Parallel Implementations for associative Memory Applications) project is a part of the development process of the Associative Memory (AM) system for the FastTracker (FTK) processor for the Atlas experiment at LHC and its future evolution for new applications. FTK is a high-performance "super-processor" based on the combination of two innovative technologies: powerful FPGAs (Field Programmable Gate Arrays) working with standard-cell ASICs (Application-Specific Integrated Circuits), the Associative Memory (AM) chips, for utmost gate integration density. FTK is a second generation processor which reconstructs all events coming out of the L1 (100 kHz) to provide into few dozens of microseconds all the tracks with transverse momentum above 1 GeV to the L2.

As the AM system is a massively parallel supercomputer, the exploitation of this computing paradigm by data-intensive applications should be explored for application fields such as medical image processing, neuroscience etc.

For this project the researcher has three major goals: (A) design development, optimization and parallelization of fundamental FTK modules, and testing the FTK system on real data, (B) development of firmware and software for management, monitoring, diagnostics and control of FTK, (C) exploration and development of Associative Memory applications outside HEP.

Marie Curie Intra-European Fellowships for Career Development (IEF)

SCORING

Scores must be in the range 0-5. Decimal marks may be given.

Interpretation of the score:

- 0- The proposal fails to address the criterion under examination or cannot be judged due to missing or incomplete information.
- 1- Poor. The criterion is addressed in an inadequate manner, or there are serious inherent weaknesses.
- 2- Fair. While the proposal broadly addresses the criterion, there are significant weaknesses.
- 3- Good. The proposal addresses the criterion well, although improvements would be necessary.
- 4- Very good. The proposal addresses the criterion very well, although certain improvements are still possible.
- 5- Excellent. The proposal successfully addresses all relevant aspects of the criterion in question. Any shortcomings are minor.

Criterion 1. S&T QUALITY (award)

Issues to be addressed when assigning an overall mark for this criterion:

- Research/technological quality, including any interdisciplinary and multidisciplinary aspects of the proposal
- Appropriateness of research methodology and approach
- Originality and innovative nature of the project, and relationship to the 'state of the art' of research in the field
- Timeliness and relevance of the project
- Host research expertise in the field
- Quality of the group/scientist in charge

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (bullet point structure):
- Weaknesses of the proposal (bullet point structure):
- Overall comments:

(reflecting the relative importance of the strengths and weaknesses above mentioned)

(copy the text above in the comment box)

Strengths of the proposal:

- The research quality of the project is very good. There is clear information describing the multidisciplinary aspects of the proposal.
- The methodological approach which will be used in the project is explained.
- The timeliness and relevance of the project are adequately explained
- The host research expertise in the field is very good.
- The quality of the group/scientist in charge are very good.

Weaknesses of the proposal:

- The originality and innovative nature of the project are not convincingly demonstrated.

Overall score (Threshold: 3.00/5.00, Weight: 0.25) **4.30**

Criterion 2. TRAINING (award)

Issues to be addressed when assigning an overall mark for this criterion:

- Clarity and quality of the research training objectives for the researcher
- Relevance and quality of additional research training as well as of transferable skills offered, with special attention to exposure to the industry sector, where appropriate.*
- Measures taken by the host for providing quantitative and qualitative mentoring/tutoring

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Please use the following structure in your comments to this criterion:

- Strengths of the proposal (bullet point structure):
- Weaknesses of the proposal (bullet point structure):
- Overall comments:

(reflecting the relative importance of the strengths and weaknesses above mentioned)
(copy the text above in the comment box)

Strengths of the proposal:

- *The relevance and quality of the additional research training as well as of the transferable skills are very good.*
- *The measures taken by the host for providing quantitative and qualitative mentoring/tutoring are adequate.*

Weaknesses of the proposal:

- *The training objectives are not specific to the applicant. They are developed only in general terms.*

Overall score (Threshold: 3.00/5.00, Weight: 0.15) **4.30**

Criterion 3. RESEARCHER (award)

Issues to be addressed when assigning an overall mark for this criterion:

- Research experience**
- Research results including patents, publications, teaching etc, taking into account the level of experience
- Independent thinking and leadership qualities
- Match between the fellow's profile and project
- Potential for reaching or re-enforcing a position of professional maturity*
- Potential to acquire new knowledge

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (bullet point structure):
- Weaknesses of the proposal (bullet point structure):
- Overall comments:

(reflecting the relative importance of the strengths and weaknesses above mentioned)
(copy the text above in the comment box)

Strengths of the proposal:

- *The research results of the applicant are presented.*
- *The match between the fellow's profile and project is very good.*
- *The potential for reaching a position of professional maturity is very good.*
- *The researcher demonstrates a good attitude towards learning new techniques and skills.*

Weaknesses of the proposal:

- *The researcher is at a very early stage in his career and his experience is not thoroughly demonstrated.*
- *The independent thinking and leadership qualities in research are not yet completely proven.*

Overall score (Threshold: 4.00/5.00, Weight: 0.25) **4.00**

Criterion 4. IMPLEMENTATION (selection)

Issues to be addressed when assigning an overall mark for this criterion:

- Quality of infrastructure / facilities and International collaborations of host
- Practical arrangements for the implementation and management of the research project*
- Feasibility and credibility of the project, including work plan
- Practical and administrative arrangements, and support for the hosting of the fellow*

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (bullet point structure):
- Weaknesses of the proposal (bullet point structure):
- Overall comments:

(reflecting the relative importance of the strengths and weaknesses above mentioned)
(copy the text above in the comment box)

Strengths of the proposal:

- *The host has excellent infrastructure and facilities for the implementation and development of the project. Moreover, the host has very good experience in managing projects with international researchers.*
- *The practical arrangements for the implementation and management of the research project are adequately described.*
- *The practical and administrative arrangements, and the support for the hosting of the fellow are good.*

Weaknesses of the proposal:

- *The feasibility and credibility of the project are not completely demonstrated.*
- *There is an over-ambitious work plan.*
- *The time frame for each objective and the respective contingency plans are not sufficiently detailed.*

Overall score **4.10**

Criterion 5. IMPACT (award)

Issues to be addressed when assigning an overall mark for this criterion:

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- Impact of competencies acquired during the fellowship on the future career prospects of the researcher, in particular through exposure to transferable skills training with special attention to exposure to the industry sector, where appropriate*
- Contribution to career development or re-establishment where relevant*
- Benefit of the mobility to the European Research Area
- Development of lasting cooperation and collaborations with other countries
- Contribution to European excellence and European competitiveness regarding the expected research results
- Impact of the proposed outreach activities*

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (bullet point structure):
- Weaknesses of the proposal (bullet point structure):
- Overall comments:

(reflecting the relative importance of the strengths and weaknesses above mentioned)

(copy the text above in the comment box)

Strengths of the proposal:

- *The impact of competencies acquired during the fellowship on the future career prospects of the researcher is demonstrated.*
- *The contribution to career development and re-establishment is demonstrated.*
- *The benefit of the mobility to the European Research Area is outlined.*
- *The development of lasting cooperation and collaborations with other countries is good.*
- *The contribution to European excellence and European competitiveness regarding the expected research results is discussed.*

Weaknesses of the proposal:

- *The proposed outreach activities are not adequately addressed. They are described only in general terms.*

Overall score (Threshold: 3.50/5.00, Weight: 0.20) **4.30**

***Sub-criteria to be evaluated in the light of the principles of the 'European Charter for Researchers' and the 'Code of Conduct for the Recruitment of Researchers'.**

****Any leave of absence in the research career of more than one year such as maternity/parental leave, sick or family care leave, military service, humanitarian aid work, etc. will be taken into account.**

RECOMMENDATIONS FOR NEGOTIATION AND/OR INDICATORS TO MONITOR PROGRESS OF PROJECT:

TOTAL SCORE

Total score (Threshold: 70.00/100.00, Weight: 1.00) **83.90**

Does this proposal raise ethical issues?

No

Other Issues

Do you believe that the applicant has more than ten years of research experience?

No