Open call for commissioned research project

Indo-Korea Science and Technology Center, Korea Institute of Science and Technology (KIST)

Control number: IKST/Research/2019-01/21012019

Indo-Korea Science and Technology (IKST), Bengaluru calls **proposals for commissioned research project** as below.

1. Classification: Research & Development (Development of CINEMAS)

No.	Field	Title of project	Budget	Period	Note
1	Research	Maintenance and development of surface builder	Rs. 1,10,000	25.02.2019 ~24.08.2019.	

2. Qualification and application

A. Qualification for application

① B.Tech / MCA or above

B. Period of tender: 21. 1. 2019 (Mon) ~ 1. 2. 2019 (Fri)

C. Required documents

① Official letter (one copy, English)

② Project proposal (original two copies, English)

※ Email submission of above documents is mandatory to Saurabh Suman (+91 80 4669 7104, hr@ikst.res.in), parallel with direct or postal submission

D. Application

- Deadline: 17:30, 1. 2. 2019 (Fri)
- Submission (Direct or Post)

- Address: NCC Urban Windsor, 3rd Floor, New Airport Road, Near Allalasandra gate, Oop. Jakkur Aerodrom, Bengaluru, Karnataka, India 560 065

※ Please contact Saurabh Suman (+91 80 4669 7104, hr@ikst.res.in) for any inquiry

Attachments: 1. Selection and operation plan for research project

2. Request for proposal

3. Project proposal (format)

4. Project result report (format). End.

Selection and operation plan for research project

1. Selection procedure and criteria

☐ Selection procedure

Application receipt	▶	Evaluation & Selection	▶	Modification & Action plan	▶	Contracting & Payment
Official letter, Project proposal (21.01~01.02)		Selection committee (~08.02)		Proposal modification and building action plan (~15.02.)		Contract signing/Payment of project budget (~22.02.)

※ Selection procedure timeline is subject to changes depending on internal schedules

☐ Evaluation & Selection

○ Method: Written and presentation evaluation

○ Criteria

- Fundamental qualification of institute and P.I.
- Clarity of objectives, differentiation of performance strategy, feasibility of research contents against the budget
- Creativity and innovativeness of objectives and contents, application availability of research results

☐ Modification & Action plan

○ Modification and improvement of project proposal of final candidate

○ Building an action plan such as interim review, regular meetings etc.

☐ Contracting & Payment

○ Signing a commissioned survey research contract

○ Major conditions/terms of contract

- Objectives/Contents in final project proposal
- Contract period: 25. 2. 2019. ~ 24. 8. 2019 (6 months)
- Payment: Advance (Inclusive tax, 100% of contracted amount, payment after contracting)

2. Result report

☐ Result reports (original two copies) submission within two months from the last date of research period.

3. Notice

☐ Selection result will be announced through email to individual(s)

☐ Duration for presentation evaluation is for 30 minutes (20 minutes for presentation and 10 minutes for Q&A)

☐ No documents will be returned after submission

Request for proposal (RFP) – 1

Maintenance and development of surface builder

"Structure Manager" is an application developed in-house at IKST, Bengaluru to visualize and modify crystal structures. This application has been developed using OpenGL within QT. This application extensively uses 3D-geometry and matrix arithmetic within OpenGL and otherwise. We are looking forward to engaging a resource to develop a couple of new functionalities in this application and fix a number of bugs present within the present version of this application.

A brief summary of the application:

1) Structure Manager uses a bulk crystal structure in file format specific to but not limited to VASP code.

2) It can create supercells in vector and scalar units.

3) it can create surfaces for a structure of any space group for any given Miller indices.

4) It can tune the number of layers, add vacuum and several other usual actions required to create a surface slab.

5) It can add an adsorbate molecule on the surface and rotate/translate it over the surface.

6) And Structure Manager can finally append the atomic positions to an output file.

Work-scope of Project

1) We now look for a resource to appropriately comment the entire source-code at various sections, after mutual discussions.

2) To fix several bugs present with the present version of the Structure Manager application.

3) Re-designing and Re-development of few elements of application GUI.

4) We look forward to developing a "catalytic module" where the application can identify available sites over a given surface and writes co-ordinates of the same on the GUI. Once the sites are identified user can choose adsorbate molecules to be placed upon the chosen site and do further manipulations like rotation/translation, deleting any atom/molecules and so on. A GUI design will be discussed and consequently developed with mutual agreement.

Project Proposal (Arial, Bold, 18 pt)

(Paragraph spacing 1.15)

1. Overview of project (Arial, Bold, 12pt)

- Title (Arial, 12pt)
- Period
- Budget

2. Information of P.I.

- Name:
- Affiliation: Position, Dept., Name of Institute
- Educational qualification:
- Contact
  - Tel.:
  - Mobile:
  - Email:

3. Necessity and objectives (Max. 1 page)

4. Details (Max. 3 pages)

5. Strategies, methods and system

6. Expected achievements and application plan

7. Deliverables

8. Timeline

9. List of participants and budget plan

Project Result Report (Arial, Bold, 18 pt)

(Paragraph spacing 1.15)

1. Overview of project (Arial, Bold, 12pt)

- Title (Arial, 12pt)
- Period
- Budget

2. Information of P.I.

- Name:
- Affiliation: Position, Dept., Name of Institute
- Educational qualification:
- Contact
  - Tel.:
  - Mobile:
  - Email:

3. Objectives (Max. 1 page)

4. Details (No limit of pages)

4.1 Introduction

4.2 Methods

4.3 Results

4.4 Conclusion

5. Deliverables

6. Expenses