Research Grants at KFUPM

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Special Talk for CCSE

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Plan of Presentation

- KFUPM Research Grants
  - » **Research, Book-writing proposals, International Conference Attendance Support, Sabbatical Leave**
- Non-KFUPM Research Grants
  - » **SABIC, British Council, Fulbright Scholarships**
- **Research Proposal Procedures**
- **Common Pitfalls in Research Proposal Submission**
- **General tips on how to increase research momentum**
- **Benefits and other benefits.**

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KFUPM Research Grants

- Available to **all** members of KFUPM Faculty
- **Earlier** covered release time (**paper money**), now translated to **actual money** (SR 1200/- per month for PI and 1000/- for CO-I), no need to spend summers here
- Covers reimbursements of payments for
  - » assistants,
  - » technicians,
  - » travel (**in addition to one supported under conference attendance grants**),
  - » Computers
  - » fax/telephone, photocopying charges, typing charges
- Application for research grant must include a research proposal in a specific format

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KFUPM Research Proposal

- Format is extremely important
- Is submitted through the office of the dept chairman
- List of reviewers are suggested by the applicant and also by the chair (make sure the two lists are different)
- URC members also provide names of reviewers if experts are on the committee
- Six reviewers (from across the world) are selected and proposal sent, discussion to fund begins as soon as three reviews arrive.

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KFUPM Research Grants

- Reviewers comments are used to
  - » Directly recommend proposal for support
  - » To help proponent in improving the proposal for resubmission
  - » Till to-date, only a very very small percentage of proposals have been rejected. (**None until last year**)
- Process is very lengthy only in the case of poorly written proposals:
  - » Example if utilization plan is missing, then the reviewer cannot comment on the utility of the project!
- Time is also wasted if requirements for submission are not met (for example no sample chapter enclosed in case of book writing proposal)

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KFUPM Research Grants

- Budget must be **realistic** and what can be obtained from the department need not be asked
- Proponent gets a chance to revise the budget
- There is usually no constraint on the budget, **until now no proposal has been returned due to lack of funds**.
- Approved budget amounts for projects has varied between SR 10,000/- to SR 500,000.
- If the budget is approved then the PI has to give a seminar to defend his proposal
  » This generally indicates the launching of the project

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Administrative Procedures

- Following the presentation of the seminar on the research proposal, the URC forwards the proposal to the **University Scientific Council** which recommends it for approval by **H.E. the Rector.**

- The PI has to submit **regular reports** on the progress of the research (six-monthly) Generally researchers avoid applying for funding because they do not like periodic reporting. **These can be simple.**

- The PI has to submit a final report to the URC which is sent to the original reviewers, (who get paid for this and for the review of the proposal) **the final report is considered as a research document for promotions in the new promotion guidelines**

Important Info

- Proper **acknowledgement** of KFUPM support must appear in all publications and presentations resulting from research funded by KFUPM.

- Between 1984 and 1999 there were 102 Research grants with 20 coming from the CCSE.
    - » SE   12
    - » COE   7
    - » ICS   1

- The total number of projects in the last five years funded by the URC has been half the number of projects in the previous 5 years **(Why?)**

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KFUPM Grants for Writing/Translating Books

- Procedure similar to research proposal
- The entire process is made very simple if the proponent gets a **contract** from a prospective publisher (else time is wasted by the URC in trying to get reviews)
- Support includes financial compensation, out-of-pocket expenses such as **travel**, wages paid for typing, **language editing, copy-editing**,   and other miscellaneous cost
- There is also an award to authors whose books are published by **reputable** publishers (whether the writing of the book was previously approved or not)

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by other Agencies

- These research grants **started** being offered in **1996** and are supervised by the URC
- Earlier, detailed proposals were invited in areas related to petrochemical industries, chemistry, petroleum, etc
- **Currently there is no such restriction**.
- Each proposal is sent to **3** reviewers.
- Review process is milder (**2** external reviews generally are sufficient) and quick (since submission times are fixed and a point system is in place to award the project.
- Info on questions to reviewers can be made available

...ng by other Agencies through KFUPM (SABIC)

- A detailed budget is requested (generally amounting to **SR 50,000/-**)
- Earlier SR 500,000/- was supplied by SABIC and was sufficient to fund about 50% of submitted proposals
- The amount this year has been increased 3 fold, and this year the URC expects to fund all submitted proposals (provided they satisfy **quality** requirements)
- An independent account is established for SABIC funding

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SABIC funding Statistics

- In 1996, 11 out of 25 received were funded amounting to SR 897,632/- (some were for over a year)

- In 1997, 4 out of 17 were approved amounting to SR 173,000/-.

- In 1998, 14 out of 29 were approved, money provided was SR 500,000/-.

- Number of SABIC grants received by CCSE in the last three years was
  - » 1996 01 (SE)
  - » 1997 00
  - » 1998 00

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British Council Summer Award

- Available to Saudi faculty from all universities in the Kingdom
- On an average 8 to 10 awards annually (based on a point system)
- The Award carries a grant of 3,850 Pound Sterling, plus, 8 days per diem support from KFUPM
- The Award enables a faculty to spend a Summer semester (**8 weeks**) in a UK university
- Application for the Award must include a research proposal which would be sent to 2 **internal referees**

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British Council Summer Award

- The applicants are ranked on the basis of the refereesq comments and the selection is made on the number of positions offered to KFUPM

- Preference is given to applicants who have not availed themselves the opportunity and to those who have not obtained degrees from the UK.

- As of now, 10 (1993· 04, 1994· 02, 1995· 01, 1996· 02, 1997· 00, 1998· 00, 1999--01) faculty of the CCSE have applied/received.

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Fulbright Scholarship Program

- This is the US counterpart of the British Council Summer research Grants.

- The difference is that only 5 places are available for Saudi faculty members from all over the Kingdom. The duration of the program is 6 months to a maximum of one year

- This program is jointly sponsored by KFUPM and the United States Information Service

- Can be combined with a sabbatical leave

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Writing a research Proposal

- Research is never a solo effort - - not an individual excursion (most funded projects had 2 to 3 investigators)

- It begins by researchers communicating their thoughts, plans, methods, objectives and hypothesis for others to read, to discuss, and to act upon. The vehicle to bring about such a research dialogue is the research proposal

- It is as essential as the architects drawing are to the construction of a building

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Writing a research Proposal

- Most proposals are rejected because of the way they are written, not because of the problem they address or the quality of researchers

- Research demands that those who undertake it are able to think clearly, **without confusion**. The proposal will demonstrate, fortunately or unfortunately, whether the proponent of a research project possesses that quality

- All proponents must contribute to the writing of the proposal (like one put it ``it is not a party'' where you invite people whether they are needed or not) and carefully review the tasks each will be responsible for.

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Characteristics of a Research Proposal

- A proposals is a straightforward document.

- A proposal is not a literary production (perhaps this is why it is not given much attention); its purpose is to communicate clearly. Its language must be clear, precise and sharp

- A proposal has to be clearly organized in line with the requirements of the funding body (the questions asked to reviewers assume this)

  » For example, if the reviewer is   asked of the utility value of the proposal then generally this is one of the required sections in the proposal.

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Some Hints

- When you have completed the first draft, lay it aside for a couple of weeks or so. long enough to be able to read it with detachment and objectivity. If you re-read it too soon, you may read what you thought you wrote, not what you actually put down on the paper

- Read first for logical order and coherence, accuracy, clarity of purpose, unity of thesis, and consistency; then for grammatical integrity, punctuation, grace of expression, and mellifluence (exaggerated promises)

- Note, too, whether the narrative flows smoothly and logically from one statement to the next and from one para to the next. **Be precise with your choice of words**.

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Never forget

- A proposal is a promissory note. It is a mistake to promise mountains and deliver molehills, because the day of reckoning will come . when you will have to write a formal report of your research project.

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URC Research Proposal Outline

1. Title Page (in both Arabic and English)

2. Table of Contents

3. Abstract (in both Arabic and English) including the overall **objective**, **significance** of the proposed research, the **techniques and methods** to be used, its **anticipated accomplishments** and its **duration**

4. Introduction . This is an **overview** which should briefly describe **background info** on the proposed research such as **why the research is important**, what the **main needs** are, what the **benefits** are to the community, country, region and/or the world

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URC Research Proposal Outline

5. Literature review . and how the proposed research relates to the literature . **what you intend to add/subtract from the literature**. This section should also show how **your past activities** and those of your co-investigators relate to the research; in fact, **how you qualify to undertake the research**.

6. Statement of the proposed objectives . The general and specific objectives of the proposed research should be clearly described. For better understanding, the objectives should be classified to identify those that are related to

Basic   or   Applied

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URC Research Proposal Outline

7. Description of the proposed research. This section deals with the **data collection, their treatment, and their interpretation**. State whether the research is theoretical, experimental, empirical or a combination of them and whether the research is pure/basic or applied (that is, does it have a policy or practical application).

This is probably the most examined section of the research proposal

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URC Research Proposal Outline

8. Resources required . You are expected to detail the major piece of capital equipment and lab space you require. If the research is experimental, then details of the experimental design and procedure must be provided. To defend your choice of procedure, you must obviously be familiar with the capabilities and limitations of all available methods.

If you are requesting equipment in the budget then indicate in the proposal text how you intend to use it in your research

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Scheduling the Proposed work

9. Scheduling the proposed research: **According to me this is the most critical part**.

Breakdown into phases, tasks, each with well defined expected outcomes. Research fund providers want to know how long it will take you to complete the research and how you would utilize the resources for which you are seeking financial support

Hint: Each task could be an MS thesis project, or a sub-task of an MS thesis project. It will be easy to attract MS students by discussing with   them the reviews and tasks

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Personnel Requirement

10. You should list the names of all to be involved with the research (yourself, co-investigators, and graduate students), indicating their specific tasks, and degrees of involvement (e.g., percentage of academic year, summer work or no, etc. You should also state if you require the services of a consultant, post-doctoral fellows, secretaries, and technicians. (It is very difficult to seek financial support for personnel who have been left out)

Monitoring and Evaluation

11. You should state how the URC or the funding agency can monitor performance (during the project) and evaluate the project findings and objectives

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Utilization Plan

12. You should indicate how the outcome from the research would be used. You should state clearly the expected results, honestly and objectively. Any tests, instruments, software, models, data, publication, films, patents, possible implementation of the results, or other byproducts of the research project should be clearly specified.

It is in this section that you discuss the potential significance of the prospective results.

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Utilization Plan (contd)

12. Indicate any specific qualities of this research as compared with previous studies. Wild speculation is an anathema. This is the place you persuade your reader that your proposed project holds real promise. You may also wish to suggest new directions for subsequent or concurrent projects in related research.

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What else?

13. References

14. Budget

15. Resumes . Submit the vitas of the PI and his
   CO-I(s), including the list of most significant
   publication, especially those that relate to the
   proposed research.

Remember that everything in the proposal (including
   budget, vitas) will be reviewed and discussed

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...knesses found in URC Proposals

Statement of the Research Problem:

- The problem is of insufficient importance or is too unlikely to produce any new or useful info. The proposed idea has already been tried and failed. Significance is unimportant, unimaginative, unlikely to provide **new** information.

- The proposed research is based on hypothesis that rests on **insufficient evidence**, is **doubtful**, or is unsound. Hypothesis is ill-defined, lacking, faulty, diffuse, and unwarranted.

knesses found in URC Proposals

- The problem is more complex that the investigators appears to realize

- The problem is scientifically premature and warrants, at most, only a pilot study

- The problem, as proposed is over-involved, with too many elements under simultaneous investigation

- The description of the nature of research and its significance is without clear research aim

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...knesses found in URC Proposals

On Proposed research method or approach

- The proposed tests, methods, or scientific procedures are unsuited to the stated objectives

- The description is lacking clarity to permit adequate evaluation. The proposal is phrased in terms that are too general, ambiguous, or inexact to be useful for evaluation.

Meaningless phrases must be avoided. Be specific but not too specific.

Proposals are rejected for being filled with verbal fog than for any other reason.

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...knesses found in URC Proposals

- The overall design of the study has not been clearly thought out. Data management and analysis are vague, unsophisticated, and not likely to provide accurate and clear-cut results.

- Approach lacks scientific imagination

- Statistical aspects have not been given enough consideration

- The number of proposed observations is unsuitable

- The equipment and/or research procedure contemplated is outmoded or otherwise unsuitable.

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Investigator Related Weaknesses

- Credentials (experience and training) of the PI and others to be involved in the proposed project are such that they raise doubts about the competence and/or that of the members of the research staff to conduct the study

- The PI appears to be unfamiliar with recent pertinent literature and/or methods

- The PI's previously published work in the field does not inspire confidence

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Investigator Related Weaknesses

- The PI proposes to rely too heavily on inexperienced CO-Is.

- The PI is spreading himself too thin and will be more productive if he concentrates on fewer issues or projects.

- The PI needs more liaison with colleagues in this field or in collateral fields.

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Other Problems

- The requirements for personnel or equipment, or both are unrealistic

- It appears that other responsibilities would prevent devotion of sufficient time and attention to this research

- The research costs too much.

- The proposal does not follow proposed direction or conform to the guidelines set forth in the Research Manual

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Increasing Research Momentum

- We are all doing research all the time
- Treat the faculty as a society of researchers
- Treat RAs and Grad-As as colleagues
- Don't have to "know"
- Avoid the "I can do it better" attitude
- Research is finding out what the right questions are
- Is often interdisciplinary, especially the fund winning ones (often requires a change of field or collaboration with colleagues from other disciplines)
- To be a PI you need to work out things first yourself

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Increasing Research Momentum

- We all have to combine research with other work (teaching, administration and committee work), no excuses

- Remember that research without writing is futile and writing without research is dangerous and un-academic

- Do not ignore referees comments. If you do not understand them, ask your colleagues to help you make sense of those comments.

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Make Research Visible

- Apply for funding to the URC
- Amount of money available is **unlimited (or atleast we have not hit the ceiling yet)**
- Seed money on small projects (for up to one year) can be made available through SABIC grants
- Last year, 14 out of 26 projects were funded, the amount of money received this year will enable double the number of projects to be funded (may be all who apply can get an award)
- SABIC proposals can lead to funding of large proposals
- This year CCSE has 4 members in the 12 member URC . This is the year not to miss!

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Some More hints

» A point system is in place for SABIC funding, questions asked to reviewers include:

- Overall impression of the proposal
- Utilization
- Methods employed
- PI is evaluated
- Literature review
- Design
- Contribution to Basic research
- Contribution to Applied research
- Manpower requirement
- Time allocated
- Familiarity with the area
- Familiarity with PI

- Each point has weight.

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URC Funding Benefits

- Gives you direction

- Free opinion from peers/experts abroad (transparent, all reviews are sent to proponents, nothing is hidden)

- A payment (up to 10-15%) of your salary

- Confidence (since both proposal and the final report are refereed)

- support to hire/attract Research Assistants for Master's thesis work

URC Funding Benefits

- Publications in journal and conferences . since you are forced to write what you did (in the new promotion guidelines even the final report of funded project is counted as a publication)

- Annual evaluation for contract renewals

- Promotions to higher ranks (reviewers will look at the amount of fund you got for your department)

- Equipment (the first SUN workstations came to CCSE from funded projects, first Ultra-Sparcstations also, hope the first Pentium 600/666 MHz machines on faculty desks will be from projects)

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URC Funding Benefits

- Internal/External exposure

- Double conference attendance (attendance from funded projects is extra, book writing proposals are also considered as funded projects and have travel support in budget category)

- Per diem for travel is at least 5 extra days for the US (far east) and 4 for Europe

- Until now no computers (PCs) but workstations, yes

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URC Funding Benefits

The biggest difference when compared to other funding agencies is: No deadlines for submission, no direct rejections, and authors are given a chance to use reviewers comments to educate themselves, and to improve the content more than once.

All that is required is a proposal of sound quality, **regardless** of the budget.

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R   e

- Suggest reviewers intelligently (make sure that they are really experts in the area, and are available at the address you give)

- Externals reviewers are more fair and quick (perhaps because they get paid)

- Make sure that the list suggested by the Chairman is not a carbon copy of what you provided

- Include e-mail address along with the postal address, and make sure that he has not moved.

Image of the URC

- Quality is a primary factor, and the majority of 12 member committee has to be satisfied if the project must be funded.

- The image has been distorted by few whose proposals were not funded.

- The fact is, the standards are high (remember it is KFUPM funded research)

- Everything within reason and if justified will be supported, but this is the responsibility of the proponent.

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URC Manual and some facts

- No need to spend summers anymore

- Max limit of 2 projects per proponent (one PI and one CO-I) in order to spread funding to other faculty

- Currently, only a very very small percentage of faculty are involved in research, URC is modifying procedures to encourage others to get involved.

- Electronic version of URC manual is available, and is also being modified to incorporate new regulations

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can the CCSE Research Committee Do?

- Help in providing sample proposals
- Internal review of proposals for requirement check
- Help in making a realistic budget that will benefit the proponents and the department

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