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**TERMS OF REFERENCE**

**CANADIAN DEFENCE ACADEMY RESEARCH PROGRAMME**

**and**

**GUIDELINES FOR THE OPERATION OF THE COMMITTEE**

**OVERSEEING THE CANADIAN DEFENCE ACADEMY RESEARCH PROGRAMME**

**7345-3-3 (DGSR) Feb 2014**

**A0577458\_1-A-2018-01343--00001**

## TERMS OF REFERENCE

### THE CANADIAN DEFENCE ACADEMY RESEARCH PROGRAMME

#### 1.0 General

The Canadian Defence Academy Research Programme (CDARP) represents a significant source of funding for research at RMCC, RMCSJ and CFC (collectively referred to as RMC) both for University Teachers (UTs) as individuals and as groups working in Engineering, Natural Sciences, Social Sciences and Humanities. Research Awards under the CDARP programme are recommended by the CDARP Evaluation Committee to the Commander, CDA for approval through the Principal. A single committee reviews the applications for research in Engineering and Natural Sciences (ENS) and in Social Sciences and Humanities (SSH). The administration associated with the CDARP programme will lie with CDA for certain matters and with the Vice Principal-Research of RMCC for other matters.

#### 2.0 Objectives of the CDARP programme

The CDARP Research Grants

- a. promote and maintain a base of high quality research capability at RMC to ensure staff expertise in the programmes of undergraduate and postgraduate curricula,
- b. foster research excellence to sustain the quality of intellectual pursuits at RMC,
- c. enable faculty members to support the mission of the CF and DND through defence related research.

#### 2.1 Nature of the Research Supported

The CDARP programme is intended to include a relatively broad spectrum of activities ranging from investigations whose importance flows from intellectual structures of disciplines without immediately evident applications (*i.e.* fundamental science, theoretical investigations) to the solution of generic problems in aid of DND. The programme is to foster an optimum mix of activities to allow RMC teaching staff to remain healthy participants in their scholarly disciplines of Engineering, Natural Science and Social Sciences, and as such, a flexible resource for DND. All activities must, however, have some immediate, potential or perceived relevance for the mandate of the Canadian Forces or to the Profession of Arms.

The following questions may assist the CDARP Committee to decide whether a proposal is suitable for CDARP support.

- a. Will the results be appropriate for open dissemination, critical appraisal, and used in the research community?
- b. Does the proposed programme promise innovation in the discipline or results of importance to a broad range of application? What innovations does the proposed programme envisage?
- c. Does the proposed programme have some direct or indirect defence relevance?

7345-3-3 (DGSR) Feb 2014

## **2.2 Categories of Applicant**

- a. Indeterminate and determinate UTs,
- b. Members of the CF on the teaching staff,
- c. Professors *emeriti*. (Note that proposals by *emeriti* should normally be only for completion of research started before commencement of *emeritus* status)

## **2.3 Evaluation of Applications**

### **2.3.1 Criteria for Evaluation**

The criteria for evaluating applications for ARP funds are the

- a. excellence of the researcher,
- b. merit of the proposed research,
- c. need for funds.

All criteria must be assessed for each application but the relative weight accorded may vary. For example, the norm for young scholars will be adjusted for reasonable expectation of record for time in career. Substantive feedback must be provided to the unsuccessful applicants in order to assist them in the preparation of their next application.

### **2.3.2 Excellence of the Researchers**

This criterion comprises several factors that focus on applicants' contributions to the field to include knowledge, experience and expertise; past or potential contributions to and impact on the proposed and other areas of research; importance of contributions to and use by other researchers and end-users.

These may be assessed by stature in the field as evidenced by being a recipient of national or international awards, or by invitations to lecture, write review articles, chair conference sessions, to be a member of awards committees and advisory committees. Current stature is assessed based on recent accomplishments, rather than those of the distant past. Also considered are research accomplishments as evidenced by quality of recent contribution and overall level of contribution to research, and knowledge of the field and demonstrated expertise as evidenced in the application.

For established researchers, there must be evidence of significant contribution to the field in the past six years and promise of further significant contributions. For new applicants, the focus must be on research potential.

7345-3-3 (DGSR) Feb 2014

### 2.3.3 Merit of the Research Proposal

Research supported by CDARP must satisfy the criterion of high quality. The programme must address genuine research problems and be linked to the current state of the field, and must show some relevance to the current or perceived needs of Canadian Forces or the profession of arms in general. It must promise an original and innovative contribution and not be limited to development of specific applications of existing knowledge. The development of ideas is also important. In assessing the merit of the proposal, the following factors will be considered:

- a. Will the research make an original contribution to the field?
- b. What will be the anticipated significance and expected contributions to advance our knowledge of the field?
- c. Will the results be appropriate for dissemination to, critical appraisal by, and use in the research or receptor community?
- d. Does the programme promise a notable innovation in the discipline or results of importance to a broad range of application? Where significance depends upon application, is the application general or limited to a particular user?
- e. For clarity and scope of objectives, are there long term goals as well as short term objectives? Has the applicant placed the research in a theoretical framework with suitable reference to other work in the field? Are the objectives specific, well focussed and realistic?
- f. Do the research questions and proposed approach include all appropriate factors and areas of knowledge?
- g. Does the proposal outline clearly the methodology to be used? Is it appropriate and up-to-date?
- h. Is the proposal feasible? Will the applicant's expertise and proposed methodology allow the objectives to be reached within the proposed time frame?
- i. Collaborative Endeavours: Increasingly, research in the humanities, science and engineering requires the combined knowledge, expertise and contributions of several researchers, often from various disciplines. Such collaborative and concerted activities should be actively encouraged.

As with the first criterion above, the major emphasis for new applicants should be on the originality of the proposal and the potential to make a significant contribution to the field.

7345-3-3 (DGSR) Feb 2014

A0577458\_4-A-2018-01343--00004

### **3.0 The CDARP Committee**

#### **3.1 Composition of the Committee**

A CDARP Committee is in place for the purposes of assessment of applications. The Committee that is composed at a minimum of three academic members from the Faculty of Arts, three from the Faculty of Science, four from the Faculty of Engineering, and one each from the Royal Military College – Saint-Jean and the Canadian Forces College. Additional members may be appointed as required by the Vice-Principal – Research.

The makeup of the Committee by academic discipline should be guided primarily by the main engineering areas involved (e.g. chemical, civil, computing/electrical, mechanical), the main scientific areas involved (e.g. chemistry, mathematics/computing science, physics), and main areas of social sciences/humanities involved (e.g. history, psychology, literature, economics/politics). It is expected that most committee members will be sufficiently bilingual to be able to evaluate proposals in either official language.

Committee members are selected by the Vice Principal – Research of RMCC in consultation with the RMCC Deans, and the Directors of Study of RMCSJ and CFC. Committee members normally serve for three years. The Chair of the CDARP Committee normally serves for a period of two years, and is nominated by the Vice Principal – Research in agreement with the Principal.

Overall programme administration and support is provided by the Office of the Division of Graduate Studies and Research at RMCC. The Vice-Principal – Research will appoint a Secretary for the Committee from the DGSR staff.

#### **3.2 Legal and Ethical Principles**

##### **3.2.1 Confidentiality of Application Material**

All application material from the UTs is provided to members of the committees in confidence and should be used for review purposes only. Such material should be kept in a secure place that is not accessible by others. Competition material (except personal notes) should be left with the Secretary following the evaluation meetings for proper disposal. Material still in the possession of a Committee member after the end of a term on the Committee, (personal notes on applications reviewed), must be destroyed by a secure process.

##### **3.2.2 Communication with Applicants**

Members of the Committee must not enter into direct communication with applicants concerning additional information on their requests. If additional information is needed regarding an application, the Secretary should be contacted. All enquiries from applicants are referred to the Secretary, who will act as liaison between the Committee and the applicant.

### **3.2.3 Conflict of Interest**

Conflict of Interest guidelines for the Public Service must be followed by members of the Committee. Members who are directly or indirectly associated with an application must disclose their interest.

In the following situations, a member must not be assigned an application for review and must leave the room before discussion of the application without commenting.

- a. a member is the applicant, co-applicant, or co-signer;
- b. a member is or was in the last 6 years from the same department as the applicant; or
- c. there is an administrative or family link between the member and the applicant. (e.g. Head of Department, dean of Faculty); or
- d. there is or was in the last 6 years' direct involvement in collaborative activities with the applicant; or
- e. a member is a former research supervisor or graduate student of the applicant or has collaborated or published with the applicant within the past six years; or
- f. the member is uncomfortable with reviewing the applicant's proposal because of previous conflicts or any other reason.

### **3.2.4 Ethical Considerations**

If the Committee has any concerns with respect to research applications that require the use of animals or human subjects, research that involves radioactive materials or hazardous substances or biohazards, the matter should be discussed immediately with the RMCC Research Ethics Board.

## GUIDELINES FOR THE OPERATION OF THE COMMITTEES

### OVERSEEING THE CANADIAN DEFENCE ACADEMY RESEARCH PROGRAMME

#### 1.0 Areas of Concern for the CDARP Committee

There are several potential dangers for the CDARP Committee in evaluating the quality research proposals to include:

- a. The Committee should recognize innovation and outstanding potential in a researcher. When assessing non-mainstream applications for research, members of the Committee will be open to new research problems and innovative approaches and will assess the applications on whether the problems addressed and the methodologies used will yield new and useful contributions to the field concerned.
- b. The peer review system has been developed to avoid possible bias in assessing applications. Within the Committee, a balance between membership continuity and membership rotation will further mitigate against the potential for bias.
- c. Evaluation of proposals in Science and Engineering will avoid placing all its emphasis on *pure* science indicators of achievements such as publications in refereed journals and ignore or de-emphasize indicators of applied research achievements such as conference proceedings and accessible consulting reports.
- d. Evaluation of proposals in Social Sciences and Humanities recognises that the refereeing function played by the editorial boards of journals and book publications can sometimes assist in determining the quality of an applicant's work.

#### 2.0 Need for Funds

Award levels should reflect relative costs of research in different areas insofar as possible. Failure to take cost into account can have a steering effect toward low cost programmes over those of greatest scientific and intellectual interest. The finite limit on total CDARP monies available for distribution will limit the size of an award and the CDARP Committee can set a maximum ceiling on individual awards. In assessing the need for funds, the following must be considered.

- a. appropriateness and justification of the budget,
- b. availability of other sources of funding,
- c. special needs related to the nature of collaborative activities.
- d. ability of the funding to leverage other larger sources of research funding for the project

#### 3.0 The Period of Support

The period of guaranteed support should normally be three years. Applicants may request funding for a shorter period. The committee may recommend a reduced period in which case a message must be given to the grantee indicating the rationale for the shorter duration.

7345-3-3 (DGSR) Feb 2014

#### **4.0 The Application Process**

A standard application form is to be used and will be supplied through the office of the Division Graduate Studies and Research. The deadline for receipt of applications will be normally announced several months prior to the due date. In general, applications for an award will be due during December and results will be announced in early March. Awards are tenable in the fiscal year 1 Apr to 31 Mar.

The CDARP Committee will apply the following selectivity norms to all applications.

- a. Applications must provide a strong, well-conceived and formulated proposal which addresses a significant research issue, describes a feasible methodology, justifies travel and other expenses associated with the research, and demonstrates awareness of other research pertinent to the issue.
- b. Applicants must provide evidence of an intellectual ability to make original contributions to research. As appropriate to the discipline, evidence may come from research contributions, comments of the external referees, and the application itself.
- c. Except in rare and exceptional circumstances, only one application from each UT staff will be considered, irrespective of whether the application is for an individual grant or that individual UT is one member of a group application. A major equipment proposal that involves one or more UTs will be considered an exception.
- d. Except in rare and exceptional circumstances, only one CDARP grant may be held at a time.

#### **5.0 Operation of the Committee**

##### **5.1 Work preceding the Evaluation Meetings**

Applications are assigned by the Chair and Secretary to two members of the Committee, one of whom serves as the discussion leader with the main responsibility for analysis, evaluation, and the feedback report to the applicant.

##### **5.2 The Evaluation Meetings**

The annual evaluation meetings of the Committee will normally take place during February preceding the fiscal year of the award. The committee as a whole discusses each application, based on the detailed evaluation of the two reviewers, and determines a merit level of the application and a recommended level of funding. Once all application has been assessed, the recommended levels of funding are reconciled to the total amount of funding available. The committee also determines the feedback required for each applicant by confidential letter. Substantive feedback is expected in those cases of unsuccessful applications.

7345-3-3 (DGSR) Feb 2014



### **5.3 Work following the Evaluation Meetings**

The Chair of the Committee finalizes the list of recommended funding and presents it to the Principal – RMCC for approval through the Vice Principal – Research. The letters are prepared for the applicants that contain the Committee’s recommendations for funding and the Committee’s confidential evaluation. Under the authority of the Principal, the Vice Principal – Research will inform all applicants of the status of their requests, the level of funding awarded and feedback from the committee on the application.

An applicant may request that the Committee review its decision. Such a request with rationale should be transmitted to the CDARP Secretary within 6 weeks after the applicant has been notified of the decision, normally by 15 May. The Committee’s reply should be sent to the applicant no later than 30 Jun.

7345-3-3 (DGSR) Feb 2014

A0577459\_3-A-2018-01343--00009

### CDARP Research Grant Evaluation Form

Name of applicant:									
Title:									
Rating scale:	Excellent	Reader no	5	4	3	2	1	Poor	Comments:
a) Merit of proposal									
♦ Anticipated outcomes	1								
	2								
♦ Clarity of objectives	1								
	2								
♦ Methodology and feasibility	1								
	2								
♦ Clarity & details of budget	1								
	2								
b) Excellence and Potentiality of Applicant									
♦ Past Record (according to career stage)	1								
	2								
♦ Productivity (quantity and quality)	1								
	2								
♦ Impact of Support	1								
	2								
♦ Leverage/Funding	1								
	2								
c) Overall rating									
	1								
	2								
♦ Funds requested by Applicant			2018/19			2019/20			2020/21
♦ Recommended based on rating :									
♦ 1 <sup>st</sup> reviewer-----									
♦ 2 <sup>nd</sup> reviewer-----									
♦ Others-----									
♦ 1 <sup>st</sup> Iteration-----									
♦ Final allocation-----									

**Rating Scale:**  
 1: Insufficient  
 2: Below average  
 3: Average  
 4: Good  
 5: Excellent

## Formulaire d'évaluation – Subvention de recherche du PRACD

Nom du postulant :									
Titre :									
Cote d'évaluation :	Excellent	Juge n°	5	4	3	2	1	Faible	Remarques :
a) Mérite de la proposition									
◆ Résultats anticipés	1								
	2								
◆ Clarté des objectifs	1								
	2								
◆ Méthodologie et viabilité	1								
	2								
◆ Clarté et détails du budget	1								
	2								
b) Excellence ou potentiel du postulant									
◆ Bilan des productions (selon l'avancement de la carrière)	1								
	2								
◆ Productivité (quantité et qualité)	1								
	2								
◆ Impact du support	1								
	2								
◆ Influence/financement	1								
	2								
c) Impression générale									
	1								
	2								
◆ Montant demandé par le postulant	2018/19			2019/20			2020/21		
◆ Cote recommandée (1-5) :									
◆ 1 <sup>er</sup> examinateur-----									
◆ 2 <sup>e</sup> examinateur-----									
◆ Autres -----									
◆ 1 <sup>re</sup> itération-----									
◆ Allocation finale-----									

**Catégories :**  
 1 : Insuffisant  
 2 : Inférieur à la norme  
 3 : Moyen  
 4 : Bon  
 5 : Excellent

### CDARP Research Grant Evaluation Form

Name of applicant:									
Title:									
Rating scale:	Excellent	5	4	3	2	1	Poor	Comments:	
<b>a) Merit of proposal</b>									
◆ Originality	1								
	2								
◆ Clarity of objectives	1								
	2								
◆ Methodology and feasibility	1								
	2								
◆ Anticipated significance	1								
	2								
<b>b) Excellence of Applicant (Potential for new applicants)</b>									
◆ Stature (professional contributions)	1								
	2								
◆ Productivity (quantity and quality)	1								
	2								
◆ Knowledge (expertise)	1								
	2								
◆ Leverage/Funding	1								
	2								
<b>c) Overall rating and bin number (1-5)</b>									
	1								
	2								
<b>◆ Funds requested by Applicant</b>		2017/18			2018/19			2019/20	
<b>◆ Recommended based on rating :</b>									
◆ 1 <sup>st</sup> reviewer-----									
2 <sup>nd</sup> reviewer-----									
Others-----									
1 <sup>st</sup> iteration-----									
◆ Final allocation-----									

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Nom du postulant :										
Titre :										
Cote d'évaluation :	Excellent	5	4	3	2	1	Faible	Remarques :		
<b>a) Mérite de la proposition</b>										
◆ Originalité	1									
	2									
◆ Clarté des objectifs	1									
	2									
◆ Méthodologie et viabilité	1									
	2									
◆ Portée prévue	1									
	2									
<b>b) Excellence du postulant (ou potentiel pour les nouveaux postulants)</b>										
◆ Stature (contributions professionnelles)	1									
	2									
◆ Productivité (quantité et qualité)	1									
	2									
◆ Savoir (expertise)	1									
	2									
◆ Influence/financement	1									
	2									
<b>c) Impression générale (1-5)</b>										
	1									
	2									
◆ Montant demandé par le postulant	2017/18			2018/19			2019/20			
◆ Cote recommandée (1-5) :										
◆ 1 <sup>er</sup> examinateur-----										
◆ 2 <sup>e</sup> examinateur-----										
◆ Autres -----										
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◆ Originality	1								
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	2								
◆ Anticipated significance	1								
	2								
<b>b) Excellence of Applicant (Potential for new applicants)</b>									
◆ Stature (professional contributions)	1								
	2								
◆ Productivity (quantity and quality)	1								
	2								
◆ Knowledge (expertise)	1								
	2								
◆ Leverage/Funding	1								
	2								
<b>c) Overall impression</b>									
	1								
	2								
<b>◆ Funds requested by Applicant</b>		2014/15	BIN #	2015/16			2016/17		
◆ Recommended bin # (1-5) : 1 <sup>st</sup> reviewer----- 2 <sup>nd</sup> reviewer-----  Others----- 1 <sup>st</sup> Iteration-----									
◆ Final allocation-----									

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Titre :									
Cote d'évaluation :	Excellent	5	4	3	2	1	Faible	Remarques :	
<b>a) Mérite de la proposition</b>									
◆ Originalité	1								
	2								
◆ Clarté des objectifs	1								
	2								
◆ Méthodologie et viabilité	1								
	2								
◆ Portée prévue	1								
	2								
<b>b) Excellence du postulant (ou potentiel pour les nouveaux postulants)</b>									
◆ Stature (contributions professionnelles)	1								
	2								
◆ Productivité (quantité et qualité)	1								
	2								
◆ Savoir (expertise)	1								
	2								
◆ Influence/financement	1								
	2								
<b>c) Impression générale</b>									
	1								
	2								
◆ Montant demandé par le postulant		2015/16	CAT		2016/17			2017/18	
◆ Cat recommandée (1-5) :									
1 <sup>er</sup> examinateur-----									
2 <sup>e</sup> examinateur-----									
Autres -----									
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Rating scale:	Excellent	5	4	3	2	1	Poor	Comments:		
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◆ Originality	1									
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◆ Clarity of objectives	1									
	2									
◆ Methodology and feasibility	1									
	2									
◆ Anticipated significance	1									
	2									
<b>b) Excellence of Applicant (Potential for new applicants)</b>										
◆ Stature (professional contributions)	1									
	2									
◆ Productivity (quantity and quality)	1									
	2									
◆ Knowledge (expertise)	1									
	2									
◆ Leverage/Funding	1									
	2									
<b>c) Overall impression</b>										
	1									
	2									
◆ Funds requested by Applicant		2015/16	BIN #	2016/17				2017/18		
◆ Recommended bin # (1-5) :		1 <sup>st</sup> reviewer-----								
		2 <sup>nd</sup> reviewer-----								
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