

## LETTERS / LETTRES

### RE: "THE CHANGING ROLE OF NSERC'S DISCOVERY GRANT PROGRAM" (SEE EDITORIAL, PIC, VOL.67, NO. 3 (JULY-SEPT. 2011))

December 23, 2011

Letter to the Editor, submitted by the signatories listed at the end of the letter to Dr. Fortier

The attached letter to NSERC was initiated during discussions at a recent Black Hole workshop at the Banff International Research Station. Although the signatories work primarily in the area of relativity, the letter is not intended to address the needs of a single research area. Rather the three specific suggestions contained in it are intended to help NSERC move the Discovery Grant evaluation process in a direction that will best serve the needs of the Canadian scientific community as a whole.

The letter to NSERC is of course a compromise that may be considered too weak by some and too strongly worded by others. We nonetheless hope that it will serve as a catalyst and framework for consensus that will encourage the physics community and perhaps even the entire scientific community to speak to NSERC with a unified voice concerning the perceived strengths and weaknesses of the current evaluation process. It is vital that we take timely action to provide NSERC with concrete and constructive suggestions as it nears the end of the five year Discovery Grant cycle.

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December 22, 2011

Dr. S. Fortier  
President, NSERC

Dear Dr. Fortier,

The new NSERC DG competition procedures have now been in place for almost a full five year cycle. It is therefore presumably necessary at this time for NSERC to critically assess the strengths and weaknesses of these new procedures so that any required improvements can be implemented at the beginning of the next cycle.

While we support NSERC's efforts to bring rigour to the evaluation process and to promote research excellence, the excessive coarse grained, rigid and algorithmic nature of the new system has produced a decline in both fairness and trust. We feel that these unintentional outcomes can be avoided without altering the fundamental principles underlying the changes.

The "ideal" evaluation system could require the selection panel to do the initial ranking roughly along current NSERC guideline (but with modifications proposed below) without reference to dollar amounts. This initial ranking would have the effect of eliminating a great deal of the inertia that was a large part of the original motivation for the changes. The final assignment of funds, however, cannot be done by a blind algorithm but instead needs to be guided by the panel of experts who did the initial ranking. They are best able to advise NSERC as to how the funds can be most effectively distributed among the applicants. If this is not possible at this time, then we strongly suggest the following as a short term fix: Once the quality assessments are made and the distribution of funds is assigned, the Section Chairs should have the opportunity to review the distribution with the view that some rearrangement could be made. Such a review would be facilitated by the detailed notes that Section Chairs normally keep during the evaluation process. As well, Sections could flag borderline cases for the Chair to re-examine once dollar amounts have been assigned. The restoration of expert oversight at the end of the process would go a long way towards restoring the fairness (both perceived and real) and reproducibility of the system.

All evaluation systems contain some level of noise that introduces uncertainty into the final outcome. The coarse grained nature of the initial quality assessments and rigidity of the final bins in the present system allows this noise to have significant consequences for the researchers near the boundaries of the bins. These consequences are of course particularly severe at the Yes/No boundary. In addition to restoring some panel oversight on the funding levels, we also recommend the following changes to the ranking system:

- 1) The initial assessments of quality of researcher, proposal and HQP should each be done as a simple percentage (i.e. between zero and one hundred), the final bin assignment to be determined by a suitably weighted average. Moreover, the final bin structure should also be considerably finer by at least a factor of two. A continuous distribution would offer the greatest flexibility, but we realize the logistic problems that this would entail.
- 2) The equal weighting of Researcher, Proposal and HQP is problematic particularly given the rigidity of the system. We therefore propose that the weightings be given some flexibility depending on the nature of the research, the environment in which the researcher works, the availability of HQP, etc.

The signatories feel strongly that the above minimal changes are vital to the long term health of the NSERC DG program, which was applauded by the 2008 international review panel as “an unusually effective and efficient method of research support, particularly in the Canadian context”.

Sincerely yours,

M. Choptuik, U. of British Columbia (Past Chair, GSC17)  
 V. Frolov, University of Alberta (Past Member, GSC17)  
 K. Lake, Queen’s University (Past Chair, Math. Physics Panel)  
 L. Lehner, U. Guelph/Perimeter Institute  
 D. Page, University of Alberta

A. Coley, Dalhousie University (Past Chair, GSC 17)  
 G. Kunstatter, University of Winnipeg (Past Chair, GSC 17)  
 W.G. Unruh, U. of British Columbia (Past Member, GSC17)  
 R.B. Mann, University of Waterloo (Past Chair, GSC17)  
 E. Poisson, University of Guelph (Past Member, GSC17)

### Note from M. Roney, CAP President

The CAP continues to actively monitor and assess the impact the changes to the NSERC Discovery Grant (DG) evaluation system has had on its members and, through the CAP-NSERC Liaison Committee, is providing feedback to NSERC. The CAP views the publication of the above letter as an opportunity to encourage further discussion among the membership of this critical issue.

In this regard, as NSERC approaches the five-year point of the implementation of the new system, the CAP is developing a process to collect from its membership feedback and constructive proposals that can be practically implemented to improve the DG evaluation system and to provide a path forward for the Canadian Physics community. Based on this input, and on interactions with its sister organizations, CAP will formulate a set of recommendations that it will propose to NSERC through the Liaison Committee. Please watch for requests for contributions to this process and in the meantime the CAP invites you to discuss the DG evaluation system with your colleagues and how it might be improved. Should you wish to submit feedback now, please send an email to the CAP’s Director of Academic Affairs via the CAP office at [cap@uottawa.ca](mailto:cap@uottawa.ca).

The Executive will report on this to the membership at the 2012 Congress AGM in Calgary.

### Note de M. Roney, président de l’ACP

L’ACP continue de suivre activement et d’évaluer l’impact que les changements du système d’évaluation des subventions à la découverte (SD) du CRSNG ont eu sur ses membres. À travers le comité ACP-CRSNG, l’Association tient au courant le CRSNG. L’ACP considère la publication de la lettre ci-dessus comme une occasion d’encourager chez ses membres la discussion de cette question cruciale.

À cet égard, et vu que cela fait presque cinq ans que le nouveau système est en place, l’ACP développe un processus pour recueillir les réactions et propositions constructives de ses membres, qui pourraient être mis en application pour améliorer le système d’évaluation des SD et faire avancer la communauté canadienne de physique. Se fondant sur cet apport et l’interaction avec les associations soeurs, l’ACP formulera un ensemble de recommandations qu’elle proposera au CRSNG à travers le comité de liaison. Surveillez les invitations à contribuer à ce processus. Entre-temps, l’ACP vous invite à discuter avec vos collègues du système d’évaluation des SD et de la façon de l’améliorer. Si vous voulez réagir maintenant, veuillez faire parvenir un courriel au directeur des affaires académiques de l’ACP à travers le bureau de l’ACP à l’adresse [cap@uottawa.ca](mailto:cap@uottawa.ca).

L’exécutif fera un compte rendu de cette étude aux membres lors de l’Assemblée générale annuelle de 2012 au congrès de Calgary.