

**Title of Proposal** Mathematical Performance Contest**Contact information***The one person and place to  
Communicate with the applicant(s).*Name George GadanidisE-mail ggadanid@uwo.caTelephone 519-661-2111 x88682Fax 519-661-3833**Institution or department to administer grant funds**

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**Summary** *Less than 100 words* **Total amount requested in this competition** \$ 5,000

**The \$5,000 requested from CMS will be used to support the pilot of a Mathematical Performance Contest, for the 2008 calendar year. In this pilot year, the contest will be open to grades 4-6 students across Canada. The pilot Contest has support from the Fields Institute (\$5,000) and from UWO (\$5,000). The pilot Contest will be used as a basis for seeking further funding from other agencies and corporations so that the contest may be extended to a broader range of students in subsequent years, including senior grades and the university level.**

**Applicants***Put any specific information on the relevant experience or expertise of an applicant in "Other".*

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<b>Position</b>	<b>Associate Professor</b>	<b>Assistant Professor</b>	<b>Professor</b>
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CMS member number   Current Grants

## **Mathematical Performance Contest**

### **The Contest**

The Contest will invite grades 4-6 students across Canada to submit mathematical performances by the end of June 2008. Adjudication will take place during July-September and results will be announced in October of 2008. The performances may be individual or group efforts. The performances may take the form of a math poem, a math song, a math skit, an advertisement for a math idea or concept, an imaginary math news report, etc.

Submissions will be live performances, uploaded to the Contest Portal using a Web cam. The use of a Web cam, which may be purchased by a school for under \$30, rather than a much more expensive video camera, helps put students across Canada on a more level field. Also, the recording and data transfer will be done seamlessly by the Contest Portal and will not require technical expertise by teachers or students. Safeguards (such as requiring a valid email address before a Portal login is assigned) and monitoring procedures will be implemented to maintain the integrity of the Portal (for example, UWO Faculty of Education student volunteers will monitor the performances posted).

Performances will be adjudicated by a committee organized by the Fields Institute, consisting of mathematicians, mathematics educators and public figures. The criteria for adjudication will be: (1) the complexity of the mathematical ideas performed; (2) the imaginative thinking evident in the performance; and (3) the quality of the performance. Medals will be awarded to students for the top 10 mathematical performances.

All submissions will be publicly available on the Portal and may be rated by users who have a valid login. The Portal will keep track of the ratings and the number of times a performance is viewed, and will use this data to determine and identify the most "popular" performances.

The technology for the Portal was developed as part of an Online Mathematics Preparedness Project by Gadanidis & Jardine. The current draft of the Contest Portal is available at <http://www.edu.uwo.ca/mathscene/mp/default.asp>. By December 2007, this Portal will be fully functional and its interface designed by a graphic artist.

### **Rationale**

The goal of the proposed Contest is two-fold: (1) to help make mathematics a subject that can be discussed outside of mathematics classrooms and the community of mathematicians (as one does with a good book or a favourite movie); and (2) to help students, teachers and the public associate mathematics with imaginative thinking.

It is crucial that support for this endeavour comes initially from the two leading mathematics organizations in Canada: CMS and the Fields Institute. This support will add mathematical credibility to the Contest, draw attention to its mathematical focus, and associate our leading mathematics organizations with school-based concerns.

The Mathematics Performance Contest idea grows out of the Digital Mathematical Performance research project funded by SSHRC (see <http://www.edu.uwo.ca/dmp/> and <http://www.edu.uwo.ca/mathscene/>) and the 2006 Digital Mathematical Performance Symposium funded by the Fields Institute (see <http://www.edu.uwo.ca/mathstory/>).

The pilot Contest will be used as a basis for seeking further funding from other agencies and corporations so that the contest may be extended to a broader range of students in subsequent years, including senior grades and the university level.

## Budget

Description	Revenue		
Fields Institute Contribution	5,000		
Faculty of Education, UWO Contribution	5,000		
CMS Endowment Grant requested	5,000		
<b>Total Revenue \$</b>	<b>15,000</b>		
<b>Expenses</b>			
Advertising, Communication, Adjudication (estimated \$5,000 cost covered by the Fields Institute)	\$5,000		
Hosting of the Mathematics Performance Contest Portal (estimated \$5,000 cost covered by UWO)	\$5,000		
Programmer to maintain and refine the Mathematics Performance Contest Portal during 2008 (requested from CMS) \$40/hour x 10 hours/month x 12 months = \$4,800	\$4,800		
20 medals and ribbons (assuming an average of 2 students per performance) = \$200	\$200		
<b>Total Expenses \$</b>	<b>\$15,000</b>		

## Other

*Funding, partners, revenue potential, information on applicants such as publications or awards, at most 20 lines.*

### Information about the Principal Investigator

#### CMS Service

Organizer of the Education Session at the CMS Winter 2007 meeting.

Organizing committee member for the 2005 CMS Forum in Toronto.

#### Funded Projects

Digital Mathematical Performance (Gadanidis & Borba, \$40,000, SSHRC, 2006-2008); The effect of applets on mathematics thinking and pedagogy (Gadanidis, \$82,500, SSHRC, 2004-2007); Digital Windows into Mathematics (Gadanidis & Sedig, \$80,500, Inukshuk, 2006-2007); Online Mathematics Preparedness Program (Gadanidis & Jardine, \$50,000, Maurice Price Foundation, 2006-2007).

#### Partners

The Fields Institute will provide logistic support (advertising to school districts, secretarial support for communication about the project). The Fields Institute will also organize the adjudication committee (mathematicians, mathematics educators, and public figures).

The University of Western Ontario will host the Mathematical Performance Contest Portal that will allow for the submission and sharing of mathematical performances.

CMS will (hopefully) provide \$5,000 to hire a programmer to maintain and refine the Mathematical Performance Contest Portal and to purchase medals for students, during the first pilot year.

#### Awards

Fields Institute Fellow (inducted in 2006).

#### Most recent publication

Gadanidis, G. & Borba, M. (forthcoming). Our lives as performance mathematicians. *For the Learning of Mathematics*.

For a list of publications by Gadanidis, by Gerofsky and by Jardine, please see:

- <http://publish.edu.uwo.ca/george.gadanidis/>
- <http://cust.educ.ubc.ca/faculty/gerofsky.html>
- <http://www.math.uwo.ca/~jardine/papers/>

Project start date: January 2008

Project finish date: December 2008