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Application Form for the CMS 2023 Endowment Grants Competition

Deadline September 30

Title of Proposal

Math Teachers' Enrichment Program

Contact information

The one person and place to communicate with the applicant(s).

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Institution or department to administer grant funds

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Summary

Less than 100 words

Total amount requested in this competition \$

1500

The School of Mathematical and Statistical Sciences at Western University will initiate an outreach program focused on high-school and primary math teachers. The program will enhance and broaden their math backgrounds and enrich their math education skills. The program will run from October to June as monthly meetings of two hours each. Math teachers will be invited to attend sessions consisting of discussion panels and presentations from the School. In parallel with Western math outreach programs which are focused on students, this program aims to strengthen relationships with math teachers in the community to address challenges in teaching math as well as to provide them with an opportunity to review mathematical topics and learn new concepts.

Applicants

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

Name(s)	David Jeffrey	Asghar Ghorbanpour	
E-mail	djeffrey@uwo.ca	aghorba@uwo.ca	
Position	Professor	Assistant Professor	
Employer	Western University	Western University	
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CMS Member #	015133		
Current grants		Non Grant Holder	

What you propose to do

at most 40 lines

Detailed account of motivations and how the program will run.

Throughout the past year, Western has hosted or participated in a number of meetings with local math teachers and math department heads, and it has become evident that there exists a mutual curiosity and some misconceptions between the university and the schools. These interactions also shed light on the various challenges each of us encounters in the realm of math education, as well as the inner workings of high schools and universities. Moreover, we have observed the authentic enthusiasm displayed by math teachers when they were exposed to novel mathematical concepts and topics during other math-related events.

Western already promotes student-centric math outreach programs, including summer math camps, weekly challenge programs and public talks. This program aims to strengthen relationships with math teachers in the community, to address challenges in teaching math as well as to provide them with opportunities to review mathematical topics and learn new ones.

We are in the process of organizing a series of monthly meetings, where math teachers will receive invitations to participate in two-hour programs. Each session will comprise two primary segments, with the flexibility to explore additional ideas:

1. Mathematics Discussion: During this segment, a member of our School will deliver a math talk designed to spark interest in exploring new areas and fields within mathematics. These talks will also showcase captivating expansions on topics at present covered in classroom instruction, and share compelling mathematical history and stories.

2. Math Learning and Teaching Dialogue: In this part, we will actively encourage teachers to voice their concerns regarding their students' learning experiences and teaching methods. These topics will be revisited in subsequent sessions, as we engage our faculty members and the Faculty of Education to collaboratively devise effective solutions.

These sessions will be scheduled either on weekends or during non-working hours to maximize participation and accommodate the schedules of as many teachers as possible. Additionally, we have plans to organize one or two special sessions focusing on specific topics. These sessions will delve into areas such as math education for indigenous students and issues related to women's math education. These specialized discussions aim to promote inclusivity and address unique challenges and opportunities within these specific domains of mathematics education.

Proposed budget and expense

The expenses for the program will cover two main items:

1. Advertisements: print posters and postage expenses to advertise the program
2. Refreshments and pizza: During the sessions, the teachers will be served refreshments as well as pizza.

With the estimation of 20 teachers for each session and considering nine sessions for 2023-24, the estimated budget for the program will be \$3000.

Expenses	per session	total	
Advertisement printing poster and postage			\$300
Pizza	\$250	\$2250	
Refreshments	\$50	\$450	
Total Income		\$3000	

Budget

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Description

Revenue

School of Mathematical and Statistical Sciences

500

Department of Mathematics of Western University

500

Department of Statistical and Actuarial Sciences

500

CMS Endowment Grant requested

1500

Total Revenue \$

3000

Expenses

Advertisement Printing posters and postage

300

Pizza and refreshments

2700

Total Expenses \$

3000

Other

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

Professor David Jeffrey is the SMSS Outreach and Research Director and Dr. Asghar Ghorbanpour is the coordinator of the outreach programs at the Department of Math at Western University.

The applicants actively engaged in fostering connections by organizing meetings with local teachers and math coordinators from school boards. During these sessions, usually with 5-7 attendees, participants have had meaningful discussions on a wide range of topics. They've explored the intricacies of math teaching and uncovered the nuances in student expectations and performance across primary and secondary schools compared to post-secondary classes. The challenges posed by the pandemic underscored the necessity of a strong connection between math educators at various levels.

Dr. Ghorbanpour has been actively involved in outreach programs of the department since he joined the department in 2020. He is coordinating the Western Math Summer Camps and coordinates with the local teachers to run a problem-solving program run by teachers and initiated the Western Math Poster Competition. For his vital role in these programs, he was awarded the Faculty of Science Outreach Award winner for 2022/2023.

Project start date

Finish date

