

CHARTER RENEWAL APPLICATION

This CHARTER RENEWAL APPLICATION applies to the SIAM Activity Group on Discrete Mathematics. The SIAM Activity Group (or SIAG) to which this renewal applies was originally formed under the aegis of SIAM on July 16, 1984 by the SIAM Council and July 17, 1984 by the SIAM Board of Trustees with its initial operating period beginning January 1, 1985 and ending December 31, 1987. Its charter has been renewed by the Council and Board seven times thereafter. This SIAG had 585 members as of December 31, 2006.

According to its Rules of Procedure, the objective(s) of the SIAG are to foster research in discrete mathematics and the development of its applications, and to bring together and stimulate interaction between the various and diverse communities of mathematical scientists such as those who specialize in combinatorics, computer science, communications, and operations research.

Its purposed functions were to:

- 1) Organize minisymposia at the SIAM Annual Meeting on years where there is no SIAG conference.
- 2) Organize a track of at least six minisymposia at the SIAM Annual Meeting at least once every five years.
- 3) Organize a biennial SIAM Conference on discrete mathematics.

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The SIAG has complemented SIAM's activities and supported its proposed functions. The answers to the questions below indicate how this was accomplished and what the officers propose as the future directions for the SIAG.

1. How is the field covered by the activity group doing? Is it growing, is the focus shifting? What have been the significant advances over the last three years?

Discrete Mathematics is healthy and growing. Methods of combinatorics and graph theory are used more and more in other areas of mathematics to achieve outstanding results, such as, say, the Green-Tao theorem in number theory. Its focus is shifting more towards the study of complex networks, optimization, approximation, and randomized algorithms, and especially computational biology, with CB minisymposia becoming a regular fixture of our biennial conference.

Thus we are forging new connections with other SIAGs, including Dynamical Systems (in the area of the study of complex Networks), Optimization, Life Sciences.

2. How is the activity group doing? Is it remaining vibrant? Is the size of the SIAG stable or increasing? How is the SIAG keeping up with the changes in the field? How are the broader interests of SIAM reflected in the activities of the SIAG?

The activity had 585 members at the end of the last calendar year, of which 210 were students. This is the highest number of members over the last eight-year period.

3. Please list conferences/workshops the activity group has sponsored or co-sponsored over the past three years, and give a brief (one sentence or phrase) indication of the success or problems with each.

Our activity group organizes the biennial SIAM Conference on Discrete Mathematics. The last conference was held at the University of Victoria in June, 2006. The conference was very successful, and attracted 354 attendees, of which 78 were students. Also the group co-organizes the ACM-SIAM Symposium on Discrete Mathematics, which

is an annual conference. Thus we co-organized SODA 2006, SODA 2007 and SODA 2008 during the time period, and will be organizing SODA 2009. We officially appoint the SIAM rep to the conference steering committee. That conference also remains one of the most prestigious and selective conferences. The last attendance numbers were

SODA 2005 - 296, of which 111 were students.

SODA 2006 - 299, of which 125 were students.

SODA 2007 - 271, of which 95 were students.

4. Please indicate the number of minisymposia directly organized by the activity group at the last two SIAM annual meetings. When did the SIAG last organize a tract of minisymposia at an annual meeting?

The last time DM organized tracks at the SIAM Annual Meeting appears to be in 1999.

We have agreed that we would organize a track at the SIAM Annual meeting in 2009.

(We were initially asked if we wanted to have a track at the 2008 annual meeting, but we decided it was better to do it in an odd year, because of the SIAM DM conferences taking place in even years.)

5. Please indicate other activities sponsored by the activity group, to include newsletters, prizes and Web sites. Have each of these been active and successful?

The newsletter is being published regularly and a web archive has been established at <http://orion.math.iastate.edu/rymartin/dm-net.html>

The executive committee has established a SIAG/ Discrete Mathematics Dénes König Prize for Young Researchers, which has been approved by SIAM. We are hoping to finalize its funding soon.

6. What activities are planned and proposed for the next period of the charter? Please describe scheduled and suggested future activities in detail.

The main activity is to prepare the biennial SIAM Conference on DM in the summer of 2008 at the University of Vermont, and to co- sponsor SODA conferences in 2008 and 2009. We will also be inaugurating the SIAG/ Discrete Mathematics Dénes König Prize for Young Researchers, hopefully in time for awarding the first prize at the 2008 SIAM DM meeting. This includes finalizing the sponsorship, establishing the prize committee and soliciting nominations.

7. How can SIAM help the activity group achieve its goals?

Help fund the SIAG/ Discrete Mathematics Dénes König Prize for Young Researchers.

8. How can the activity group help SIAM in its general role of promoting applied mathematics and computational science?

By organizing minisymposia at the SIAM Annual Meetings, organizing the biennial SIAM Conference on DM, co-organizing SODAs conferences.
Circulating news in its newsletter.

This SIAG requests that the SIAM Council and Board of Trustees renew its charter for a two-year operating period beginning January 1, 2008.

Signed

Pavol Hell
SIAG/DM Chair
June 21, 2007