

## Guidelines for the Renewal or Termination of SIAGs

When a SIAG is up for renewal, the Charter Renewal Application asks SIAG officers to provide detailed information about the SIAG's activities during its present term as well as specific plans for future activities. A SIAG that has not been active during its present term will not be automatically renewed. Activities may be of various natures according to the SIAG's interests; examples include organization of conferences, a regular newsletter, SIAG participation in SIAM annual meetings, an up-to-date Web portal, etc. Membership is also a clear indication of the health of a SIAG. If a SIAG's membership is dropping, this may indicate that renewal is not appropriate.

SIAG leaders are expected to respond to questions from the SIAM office in a timely way, normally by email, and to organize regular elections following the SIAG Rules of Procedure.

SIAG renewals are reviewed by both the SIAM Council and Board; the renewals take place effective the beginning of a calendar year. Requests for renewal are due no later than June 1 of the previous year so that they may be considered by the Council and Board at their summer meetings. If the Council or Board decides that renewal of the SIAG may not be appropriate, the SIAG officers will be notified during the summer so that they have the opportunity to provide more information to the SIAM office during the fall. This information will be due no later than November 1. The Council will then be polled by email, and if the Council approves renewal, the Board will make a final decision regarding renewal at its December meeting.

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### Pro Forma 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 six (6) times thereafter. This SIAG has 397 members as of March 1, 2005.

According to its Rules of Procedure, the objectives 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 organize activities that support its objectives in areas such as combinatorics, discrete optimization, graph theory, cryptography, mathematical programming, coding theory, information theory, game theory, and theoretical computer science including algorithms, complexity, circuit design robotics, and parallel processing.

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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?

The DM field is very vibrant and continues to be increasingly involved in interdisciplinary research, bioinformatics being one notable recent example. The understanding of the discrete structure of various problems and the application or algorithmic exploitation of such understanding permeates many areas of applied mathematics.

The recent proof of the Strong Perfect Graph Conjecture and the development of algorithms to deal with huge data sets are two examples of recent advances.

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?

As one of the two original SIAGs, it was inevitable that our numbers would drop as other SIAGs (most notably, Optimization and CS+E) came on line. We regard the current membership size of just under 400 as a healthy steady state. Of course, if other related SIAGs were to be formed, our numbers would most likely decrease.

In order to keep abreast of the advances in DM, at the DM conference traditionally about 50% of our invited plenary lecturers and invited minisymposia are chosen to advertise recent developing areas.

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.

We sponsored the 2002 and 2004 Discrete Mathematics conferences and co-sponsored (with SIGACT) the annual SODA (Symposium on Discrete Algorithms) conferences. The DM conference attendance has grown from 159 in 2000, to 205 in 2002 and 273 in 2004. At the most recent DM conference about 20% of the attendees were students. The SODA figures have remained fairly stable in the 270-290 range with about 35% of the attendees being students.

We regard these conferences as very successful. Recently, we conducted a survey of our membership to determine whether the SODA conference was adequately serving the needs of our membership. Very few written responses were received and together with oral communication, we concluded that SODA was meeting the needs of the relevant SIAM community.

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 track of minisymposia at an annual meeting?

To the best of our knowledge there have been no minisymposia directly organized by our activity group in the last two SIAM annual meetings. The 1998 SIAM DM conference was held jointly with the SIAM annual meeting.

Clearly this is an area where we should do better; we will pass this message on to the next executive.

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?

We have an electronic newsletter that has been moderately successful. We have tried to use the newsletter as a media for two way communication with the membership; the survey about the SODA conference was one example. We expect that the newsletter will be a priority for the next executive.

Our web site is still below our expectations.

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

We are in the process of choosing the site and the program chair for the 2006 DM conference. The next annual SODA conference will be held in Miami in January of 2006.

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

Our biggest need is help with our website. This has been raised with SIAM in the past, but progress has been limited.

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

Discrete Mathematics is an area where applications and theory are sometimes very close to each other, and it is easy to convince colleagues who regard themselves as theoreticians that membership in SIAM has benefits for them. The activity group therefore helps to bridge the gap between applied and theoretical communities in both mathematics and computer science, and to extend SIAM's influence into the theoretical community as well as the community of people working on applied problems. Furthermore, our SIAG places a very high emphasis on making our meetings attractive and affordable to students, thereby increasing SIAM's appeal to young applied mathematicians.

This SIAG requests that the SIAM Council and Board of Trustees renew its charter for a two-year operating period beginning January 1, 2006.

Derek Corneil  
Chair, SIAM Activity Group on Discrete Mathematics  
April 18, 2005

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