

SIAM Council
July 9, 2009

Agenda Item 8(a)

Board of Trustees Regular Session
July 11, 2009

Agenda Item 9(a)

CHARTER RENEWAL APPLICATION

This CHARTER RENEWAL APPLICATION applies to the SIAM Activity Group on Control and Systems Theory. The SIAG/CST was originally formed under the aegis of SIAM on July 20, 1986 by the SIAM Council and July 25, 1986 by the SIAM Board of Trustees. Its initial operating period began January 1, 1987 and ended December 31, 1989. Its charter has been renewed by the council and board seven times thereafter. This SIAG has 657 members as of December 31, 2008.

According to its Rules of Procedure, the objective of the SIAG is to foster activity and interaction between mathematicians, engineers and other scientists interested in control and systems theory. The SIAG plans to encourage further development of theory and methods for the estimation and control of systems.

Within the framework of SIAM, the SIAG will conduct activities that implement its purposes.

Its purposed functions are to organize activities, including conferences, sessions at SIAM meetings, sessions at meetings of other organizations cooperating with SIAM, and publications, to (1) promote interaction between mathematicians, engineers and other scientists interested in control and systems theory, (2) keep SIAM membership up to date on developments in this area, (3) facilitate the development of system theory and (4) encourage its application.

The activity group awards two prizes: (1) the SIAM Activity Group on Control and Systems Theory (SIAG/CST) Prize, established in 1997, is awarded every two years to a junior researcher for outstanding research contributions, as determined by the prize committee, to mathematical control or systems theory and (2) the SIAG/CST Best SICON Paper Prize established in 2007. The prize is awarded every two years to the author(s) of the two most outstanding papers, as determined by the prize committee, published in SICON in the two calendar years before the year of the award.

* * *

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 [two/three] years?

Mathematical control theory remains a vital and important field as witnessed by the health of journals such as the SIAM Journal on Control and Optimization and the IEEE Transactions on Automatic Control and the growth of several large meetings in this field that include the Control and Decision Conference (CDC) of the IEEE and the conference of this SIAG. Recent focuses in the field include a heavier emphasis on quantum control, stochastic control, financial modeling and control, systems biology and control, and control and optimization of distributed parameter systems (PDEs). This is illustrated by the large number of minisymposia on these topics at the 2009 SIAM Conference on Control and Its Applications.

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 group is continuing to grow as evidenced by the fact that it had 472 members at the end of 2006 and 657 at the end of 2008. Part of this growth reflects the fact the focus is continuing to expand in the manner detailed in the first question.

SIAM Council
July 9, 2009

Agenda Item 8(a)

Board of Trustees Regular Session
July 11, 2009

Agenda Item 9(a)

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

The activity group sponsors the SIAM Conference on Control and Its Applications which has changed from every three years to a biennial schedule. The last conference was held in San Francisco on June 29 – July 1, 2007. The next meeting will be held jointly with the SIAM Annual Meeting in Denver on July 6 – 8, 2009. Additionally, representatives from the SIAG CST serve on the Program Committees for the IEEE Conference on Decision and Control (CDC) that is held each December and the American Automatic Control Council (AACC) that is responsible for organizing the annual American Control Conference (ACC).

4. Please indicate the number of minisymposia directly organized by the activity group at the last [two/three] SIAM Annual Meetings. When did the SIAG last organize a track of minisymposia at an annual meeting?

The 2005 SIAM Conference on Control and its Applications was held jointly with the annual meeting in New Orleans. This model was again adopted for CT09 which will be held jointly with the Annual Meeting in Denver.

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 instituted a list server siam-cst@siam.org for the membership of the SIAG CST. We have also instituted the SIAG CST Best SICON Paper Prize, which will be awarded for the first time at CT09. The authors of two papers published in SICON during calendar years 2007 and 2008 will be recognized for their achievements.

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

The SIAG CST plans to hold the ninth SIAM Conference on Control and Its Applications in 2011. The SIAG will continue to cooperate with the IEEE Conference on Decision and Control to select accepted SICON papers to be presented at those meetings. Additionally, a representative from the SIAG CST will coordinate with the AACC to solicit minisymposia at the ACC on topics germane to the SIAG.

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

The group continues to be an active and successful SIAG. The book series, journal, and SIAG (with its biennial conference) all complement each other to help the SIAG promote its mission to advance this area of mathematics and its applications.

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

We feel the SIAG accomplishes this through the various activities that go well beyond conferences. Assisting the SIAG to cooperate with the IEEE CDC and ACC is one important example.

SIAM Council
July 9, 2009

Agenda Item 8(a)

Board of Trustees Regular Session
July 11, 2009

Agenda Item 9(a)

This SIAG requests that the SIAM Council and Board of Trustees renew its charter for a two-year operating period beginning January 1, 2010.

Signed
Ralph C. Smith
June 29, 2009
