

Guidelines for Woodward Fund Support

Approved by the Department of Mathematics, SJSU, Jan. 28, 2004

1. **Statement of Principle.** The funds should be spent prudently and in accordance with the wishes of Mrs. Woodward. She wanted to honor her son, Henry Tynham Woodward, who received a Masters degree in Mathematics from SJSU in 1957 and then did computer work for the Planetary Atmospheres Research Group at NASA Ames. The mathematics used in atmospheric study is the same as that used in a variety of areas of applied mathematics, and this is the appropriate subject for activities support by the Woodward Fund. Such mathematics includes, but is not limited to, partial differential equations, fluid flow problems, inverse problems, wave equations, and numerical analysis.

2. An activity supported by the Woodward Fund should include the following statement in any materials published as a result of the activity:

“This project (activity) was supported by the Woodward Fund for Applied Mathematics at San Jose State University, a gift from the estate of Mrs. Marie Woodward in memory of her son, Henry Tynham Woodward. He was an alumnus of the Mathematics Department at San Jose State University and worked with research groups at NASA Ames.”

3. The subject of a Woodward sponsored project or activity should be mathematics applicable to atmospheric studies. Interdisciplinary projects are appropriate when the project or activity involves applied mathematics in a substantial way, beyond routine statistical analysis of data. As a rule, an interdisciplinary project should have a co-leader from the mathematics faculty, in order to enrich the applied mathematics program and enhance its connections with other programs.

4. Any Woodward sponsored project or activity should be of broad interest and should benefit SJSU students as much as possible.

5. Possible projects or activities include the following:

- a. Faculty-led student research projects* or individual faculty research projects which may or may not involve students directly. Preference will be given to projects that do involve one or more students.
- b. Conferences, similar to the three previous Woodward Conferences, on appropriate applied mathematics topics.
- c. Scholarships for outstanding graduate or undergraduate students who are interested in applied mathematics applicable to atmospheric studies.
- d. Support for distinguished visiting scholars, whose research is in mathematics applicable to atmospheric studies, if their interaction with faculty and students at SJSU would be substantial and productive.

* Proposals for faculty-led student projects are encouraged. It is very difficult to obtain funding for this type of project from traditional granting agencies or from CSU budgets. The benefits of such projects have been proved at SJSU. During 1985-1992, many projects of this type were organized by the Center for Applied and Computational Mathematics at SJSU (CAMCOS) and proved to be extremely beneficial to all who participated in them. Four of these projects were supported in part by Woodward funds (two were projects for NASA and a third was on wave phenomena). Team members were stimulated to learn new material, apply it, learn to work in a team setting, and learn to write and present professional reports. Those projects had other benefits. Team members were often hired by the sponsor of their project when they graduated. Students from a variety of departments and colleges participated in them, and they fostered other interdisciplinary activities such as the three Woodward Conferences held in 1988, 1989 and 1990. The topics of these projects led to additional research by faculty. Mrs. Woodward's lawyer, Mr. Kennedy, and estate executor, Mr. Davenport, as well as scientists at NASA Ames who advised CAMCOS, were all very pleased with the concept of faculty-led student projects.

6. Proposals and Reports.

- a. Deadlines. Beginning in Fall 2002, the deadlines for proposals will be:
October 1 for projects to begin the following Spring or Summer
March 1 for projects to begin the following Summer or Fall
Announcements of awards will usually be made by October 15 and March 15 respectively.
- b. Format of proposals. A proposal should be succinct, within 5 pages if possible, and should include:
 - A) Title and description of project proposed, dates work will be done, and names of proposer(s). If this proposal is to continue a project previously funded by Woodward, also describe briefly the accomplishments of that project, or attach its Final Report.
 - B) Brief statement explaining how the proposal meets the Woodward Fund Guidelines.
 - C) Budget. As a rule, the budget would include 3 units of release time for each faculty proposer, each semester, and salaries for student team leaders or assistants. Software and minor incidental expenses may also be included. In 2002, a typical project would cost \$7,000-\$20,000 for one semester.
 - D) Final report. The leader(s) of a project must submit a 1-2 page final report about their project, within 2 months after the end of the project. Such reports must be in a form which can readily be posted on the SJSU Mathematics Department Woodward web page. Failure to comply will cause the denial of further support.

7. The Woodward Committee will consist of three tenured or tenure-track faculty from the Department of Mathematics, elected by that Department; the Department of Mathematics Chair; and also a representative from NASA and a representative of the SJSU Foundation. Each year, the first four will choose one of them to be Chair of the Committee, and they will invite the NASA and Foundation representatives.

The first three elected members should serve terms ending December 31, 2003, December 31, 2004 and December 31, 2005 respectively. As each of these terms ends, the Department will elect a tenured or tenure-track faculty member for a three year term. A person may serve consecutive terms. If an elected member cannot complete his/her term, the Department will elect a replacement to serve the remainder of that member's term.

The Committee will consider proposals for expending Woodward funds.

The Committee asks that proposers be available to meet with them briefly, in case there are questions.

When there are proposals from other departments, consultants may be invited to help evaluate those.

When a member of the Committee submits a proposal, that person will not participate in the evaluation of proposals that semester; instead the Committee members will invite another faculty member to substitute for the member who submitted a proposal, when proposals are evaluated that semester. The recommendations of this Committee will be reviewed by the Dean of the College of Science and a Director of the SJSU Foundation to ensure they meet the guidelines.

8. It is not necessary or expected that all the interest earned each year will be expended that year.
9. If the Woodward Committee believes that a particular project is of sufficient value, it is possible that both interest and principal could be spent to support it. Such a project would be very exceptional.