

## Trends over a Decade

**T**HIS volume opens our thirteenth year of publication. If there has been one issue that has consistently concerned me over this period it has been applications papers. A recent letter from Dr. Carl Hubert of the Astro-Space Division of General Electric in Princeton, New Jersey, caused me to conclude that it is time to revisit the subject again. Dr. Hubert sent me Figs. 1 and 2. These figures indicate, in 1979 and the first five issues of 1989, the fraction of authors coming from the four segments of our contributor community—universities, industry, government, and others (such as non-profit corporations). If any of the authors were in the latter three categories, he tabulated the papers in that category. In the last 10 years there has obviously been a substantial shift from the industrial sector to the university sector among our authors. Although this does not clearly indicate a shift away from applications papers, there is certainly a trend in that direction since the most applied work of all is no doubt done in industry where the larger budgets, more extensive facilities, and the charter of delivering real-world products focuses more attention on such applications.

In his letter Dr. Hubert asked whether or not there has been any shift in acceptance policy for the journal. The answer to this question is a clear-cut negative. We are definitely interested in applications papers and attempt to manage the journal with different acceptance criteria for such papers. These criteria were published in January of 1978, and I repeat them here to re-acquaint not only our authors but also our reviewers in this regard.

Papers on actual hardware systems and components can be accepted even if they contain no theoretical results. The criteria for acceptance of these and other applications papers are:

- 1) Novel implementation of previously developed ideas.
- 2) New application of previously developed ideas.
- 3) First journal article on a significant concept or system, whether or not the concept or system is new. It should, however, be recent or of current interest.
- 4) System or component description articles by principal participants on major systems.

The trend away from applications papers needs arresting and reversal. What can be done? Obviously more papers from the industrial sector are strongly desired. These papers will directly address the applications issue. They also should have a secondary beneficiary effect since those in the university community lacking daily involvement with actual engineering problems will be able to redirect their own efforts by understanding better the issues faced in industry. I strongly encourage those of you who are in the industrial sector to participate for this reason alone. Our segment of the world's technical infrastructure can only benefit as a result. I also encourage potential authors from industry to participate in the AIAA's technical meetings structure. Submit your papers to these meetings and attend them. They provide a wonderful opportunity to meet professional colleagues and exchange ideas and experiences. A paper prepared for that forum can be submitted for review in this journal with no additional work. You will have benefited from the interpersonal exchanges and will have developed material that, through the forum of this journal, can be shared with your colleagues.

I would like to remind authors of another useful technique to make papers more applied, even for those cases where the paper's primary contribution is mathematical or theoretical. Authors should endeavor, particularly in the Introduction, to describe in some detail how the theoretical contribution is relevant to important applications. This will make the paper more useable and will suggest to those whose careers are more

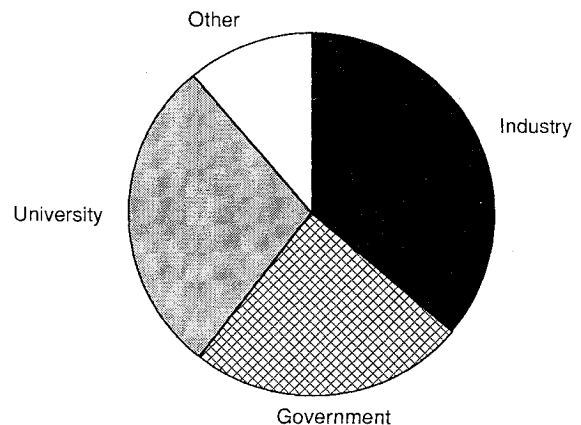


Fig. 1 Distribution of papers – 1979.

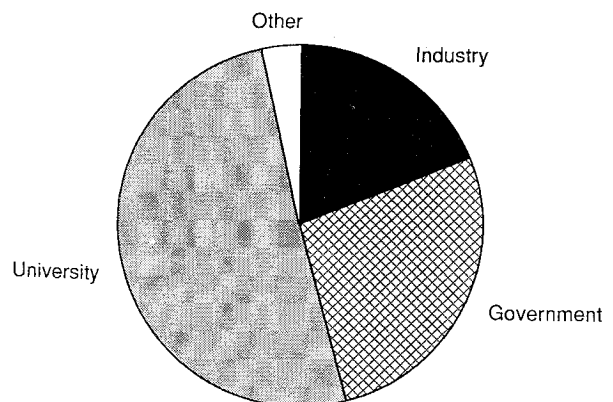


Fig. 2 Distribution of papers – 1989.

focused on applications how to pick up the new idea and use it for practical purposes. Such papers should also use relevant numerical examples from simulations or other calculations to explain the mechanics of how the theoretical idea can be reduced to practice.

In the event that my general ideas are not enough to make a potential author think he has the right kind of material, let me offer a list of subjects. If you are working in any of the following areas, consider writing a paper for this journal on the practical aspects of what you are doing: avionics; aerospace electronics; fly-by-wire control systems; missile or spacecraft guidance or control; guidance, control, or navigation sensors; and artificial intelligence or expert system applications to guidance or control. This is just a sample of possibilities. Almost any topic in the areas of guidance, control, navigation, estimation, and dynamics, which concerns the solution of a real-world problem, is what we are seeking.

Probably very few of us in 1990, particularly here in the United States, are unaware of the renewed interest in ethics in government. Many regulations have been tightened and paperwork has multiplied in efforts to assure the general public that tax dollars are being spent in an ethical fashion. The goal is worthy. It is unfortunate that such time-consuming, non-productive measures must be taken to enforce what should be a natural act. Like many societies, the AIAA has paused to reflect on the ethics of its own activities. One result of this is

the recording of ethical standards for all participants of the journal publication process. Those guidelines are published in this issue and include the standards of conduct for authors, reviewers, and editors.

Also published in this issue is a description of the review process and the review form we use. I urge our reviewers to please keep the preceding criteria in mind when reviewing an applications paper. Please also assist us in our efforts to make the papers you receive more oriented toward applications. Each step in this direction will help.

Each year brings changes to our editorial team. This year Dr. Lincoln Wood is retiring after seven years of service to this journal. We greatly appreciate the counsel, time, and effort that Dr. Wood has invested on behalf of the journal. During this period, he has served for other societies, as well as on

technical committees. At one time during his tenure as Associate Editor he was also Chairman of the Astrodynamics Technical Committee. I wish him great productivity with the time that is being returned to his busy schedule. Succeeding Dr. Wood will be Dr. John Prussing of the University of Illinois. I welcome Dr. Prussing to the masthead and look forward to working with him on papers involving astrodynamics.

Finally, it is my pleasure once again to thank the reviewers for this journal. The following is a list of those of you who have helped us between October 1, 1988, and September 30, 1989. Without your efforts and cooperation this journal (or any other like it) could not operate. Your efforts are the essence of the review process and we appreciate it.

Donald C. Fraser  
Editor-in-Chief

### Reviewers for the *Journal of Guidance, Control, and Dynamics* – 1989

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\*This list represents names received through September 1989. We regret any inadvertent omissions.