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Call for Papers

The Malcolm D. Shuster Astronautics Symposium

**Sponsored by the University at Buffalo, State University of New York, and
The American Astronautical Society**

Location: Holiday Inn Grand Island (Buffalo/Niagara Falls, NY)

June 13–15, 2005

Dr. Malcolm D. Shuster has been one of the most important influences on Spacecraft Attitude Estimation for the past quarter century. His many papers, carefully written, self-contained, tutorial, complete, and highly innovative, have become standard references and a guide for this field, and his elegant and efficient algorithms and methodologies are a part of almost every spacecraft mission. Dr. Shuster began his professional life as a nuclear physicist and for seven years enjoyed a productive career in France, Germany, Israel, and the United States. His Physics publications continue to be cited today. In 1977 he chose to abandon Physics and joined the Attitude Systems Operation of the Computer Sciences Corporation in Silver Spring, Maryland, where he learned for the first time that *attitude* could mean something other than a mental posture. Within a year of this inauspicious beginning in Astronautics he produced the QUEST algorithm for attitude estimation, now an industry standard used extensively for spacecraft both in Earth orbit and at the farthest reaches of the Solar System. He has illuminated, organized and extended almost every area of Spacecraft Attitude Estimation. In 2000 he received the Dirk Brouwer Award from the American Astronautical Society. We wish to honor Dr. Shuster for his path-breaking work in bringing order and science to what had been a disorganized and underdeveloped area of Astronautical Engineering, for his many algorithms and methodologies for spacecraft attitude support, and for his special contributions as writer and teacher.

The University at Buffalo, State University of New York, in collaboration with the American Astronautical Society, will host a special symposium on June 13–15, 2005 to celebrate Dr. Shuster's contributions. The organizers of the symposium are Drs. John L. Crassidis, F. Landis Markley, and John L. Junkins. Dr. Kathleen C. Howell is AAS liaison.

In order to create the desired technical and social atmosphere of the symposium, attendance is strictly limited to those who receive this invitation personally. The organizers have identified individuals with important technical achievements and a personal connection to Dr. Shuster. It is clear to us that your attendance and possible technical contribution will greatly enhance this event. We are delighted to extend this invitation to you, but request that you not post or circulate this call for papers, lest it be misunderstood as a general invitation. Please note that this invitation cannot be transferred or expanded, not even to a coauthor of a technical contribution to the symposium. **In order to coordinate with the hotel, which has offered us a special rate of \$89/night, we ask that you reply by email as quickly as possible to shusym@eng.buffalo.edu to let us know: (1) if you hope to attend, (2) if you plan to present a paper, and (3) if you plan to bring a guest to the social events. Please let us know also if you think it unlikely that you will be able to attend.**

Important deadlines are:

Formal Invitation RSVP Deadline:	January 17, 2005
Abstract Deadline:	March 14, 2005

Papers from all areas of Astronautics will be considered, including but not limited to: attitude determination, control and dynamics; orbit determination and mechanics; trajectory design; space-vehicle navigation; sensor calibration; formation flying, navigation and control; and multi-body and flexible-body dynamics. We are also actively seeking survey/tutorial papers by established experts in these subject areas. A limited number of longer presentation slots will be available for some of these. For abstract submission, a one-page abstract is sufficient. The first paragraph of the abstract should be able to serve as a short abstract for the symposium program. Please include your email and standard mailing addresses at the head of your symposium abstract. The final manuscript should be prepared in a format consistent with standard AAS conference practice. Information on this format can be found at <http://www.univelt.com/paperformats/AASFormat.pdf>. All general correspondence and the submission of abstracts and papers should be directed to the symposium secretary, Ms. Linda Mehnert.

The AAS will devote a special issue of the Journal of the Astronautical Sciences to the Shuster Symposium under the editorship of the symposium organizers and Dr. Howell.

The symposium will be held at the Holiday Inn in Grand Island, NY, which boasts a magnificent setting and several excellent restaurants. Grand Island is close to both Niagara Falls and downtown Buffalo. For more information on the hotel see <http://www.ichotelsgroup.com/h/d/hi/1/en/hd/gilny>. For more information on Buffalo and Niagara Falls see <http://www.buffalo.com> and <http://www.niagara-usa.com>. A cocktail party is planned for Sunday evening, June 12. The symposium banquet and a plenary address by Dr. Shuster will take place on June 13. An evening tour of Niagara Falls is tentatively being planned for June 14. Also, for those wishing to test their “estimation” skills, Niagara Falls has a world-class casino. For more information on the casino see <http://www.senecaniagaracasino.com>. The special symposium room rate will be extended for three days before and after the symposium. Come early or stay late to enjoy the many attractions of the area.

Questions on the content or conduct of the Symposium should be addressed to the symposium organizers or the symposium secretary:

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Invitees wishing to contact Dr. Shuster before the symposium can write to him at mdshuster@comcast.net.

Again, please let **Linda Mehnert** know by email as soon as possible if you hope to attend, present a paper, or bring a guest to the social events.