November 25, 2024

RE: Call for participation in the 8th Annual Andrew P. Sage Memorial Capstone Design Competition (on April 24, 2025)

Dear Professor,

On behalf of the Department of Systems Engineering and Operations Research at George Mason University, I invite student design teams in your department (undergraduate and master's level) to participate in the *8th Annual Andrew P. Sage Memorial Capstone Design Competition*. The conference will be held at our Fairfax campus and online on Thursday, April 24, 2025.

Professor Andrew P. Sage was one of the Founding Fathers of the field of Systems Engineering and was the Founding Dean of the Engineering School at George Mason University.

The Sage Competition is a student-focused forum for the design of complex systems and a leading showcase for undergraduate and graduate (master's) design projects. Systems engineering, with the global perspective of the system, combined with an emphasis on computer technology, mathematics and science, is uniquely suited to address the challenges associated with the complexity of many of today's pressing issues such as global warming and national security. The competition presents a forum for students to demonstrate systems engineering skills and the knowledge to perform all the activities associated with a systems developmental life cycle.

The Sage Competition will consist of both a technical paper and a 20-minute oral presentation. Both the technical paper and the oral presentation will be judged by an independent industry panel, with equally weighted scores for each. The paper should be submitted in the IEEE format and should not exceed 8 pages.

In each of the last few conferences, we have had over 200 students participating in the competition. We have had teams from a diverse set of universities including University of Pennsylvania, UVA, Virginia Tech, Purdue University, The US Military Academy at West Point, James Madison University, University of Texas, UIUC, University of Binghamton, WPI, University of Oklahoma and George Mason University. We also had participations from multiple international universities in the last two conferences, including University of Chinese Academy of Science, National University of Taiwan, (Pakistan) Institute of Business Administration, etc.

Submitted papers will be divided into tracks based on topics of the papers. In the past, our conferences have included tracks in areas such as:

- Systems Engineering and Design
- Model-based System Engineering
- Climate, Sustainability and Resilience
- Process Engineering and Improvement
- Cybersecurity Engineering (Hardware, Software, Vulnerability, etc.)
- Digital Twins
- Industry Applications (Healthcare, Energy, Transportation, Government, Military, Communications, etc.), and
- Advanced Methodologies (ML/AI/NLP, Optimization, Simulation, etc.)

The important dates related to the upcoming competition are as follows:

Paper Abstract Due	Feb. 21, 2025
Registration & Fee Payment	Mar. 28, 2025
Final Paper Due	Apr. 18, 2025
Day of Competition	Apr. 24, 2025

Abstracts should be 300-1000 words and concisely summarize the project. Please visit the conference website and the call for papers link for instructions for abstract submission. The abstract should be entered in plain text in the space provided. Please save the file attachment space for submission of the final paper on or before April 18. The conference website and call for papers can be found at the following link: https://easychair.org/cfp/SMDC25.

The registration fee will be $45.00 per participant, to be paid on or before March 28, 2025. For further information and intentions to participate, please contact the Conference Chair Songjun Luo (sluo4@gmu.edu).

Please pass this invitation to other faculty members in charge of your senior Capstone Design courses. We hope your teams can join us in the competition.

Sincerely,

Songjun Luo, Ph.D.
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Dept. of Systems Engineering and Operations Research
Volgenau School of Engineering
College of Engineering and Computing
George Mason University