

January 28, 2007

**Re: National Consortium on System of Systems (NCSoS) – National meeting  
April 17, 2007 ... [ncsos.org](http://ncsos.org)**

Dear Peer:

I am writing you this letter to inform you of a critical national effort to solve problem related to system of systems engineering. The goal is to establish a national consortium on System of Systems (SoS). SoS is a super or meta-system consisting of a number of operationally independent systems. If you are interested in further understanding of system of systems, please look at the link [ieeesmc2005.unm.edu/SoSE\\_Defn.htm](http://ieeesmc2005.unm.edu/SoSE_Defn.htm) for only 6 of many potentially different definitions. Basic areas of SoS are all aspects of systems engineering such as modeling, simulation, control, communication, sensing (including vision), image processing, signal processing, artificial intelligence, including soft computing or computational intelligence. Applications of SoS are in defense, security, environment, energy, manufacturing, robotics, space, biologically-motivated systems, etc. Therefore, SoS encompasses a great deal of our technical community.

The objective of this Consortium is to create a network of researchers across the U.S. and the world, which can collaborate with each other to solve major problems in our world community through major contracts, grants or cooperative agreements. The Consortium has a new web site ([ncsos.org](http://ncsos.org)) and I encourage all interested peers to consult it for the latest news and plan.

On November 3, 2006 a meeting was convened in San Antonio, Texas where colleagues from 10 Texas Universities, Lockheed Martin Corporation, Southwest Research Institute and Naval Postgraduate School attended. The decision made in this meeting were:

- 1) Forming this Consortium is long over due, since the problems associated with System of Systems are too challenging for any sole entity to handle.
- 2) Organizational aspects and by-laws will need to be formed.
- 3) In order to keep the Consortium as a viable organization, a nominal financial support is needed from member organizations (possibly at a graded level) to maintain its protected web site and conduct its annual workshop.
- 4) Discussions on possible affiliating this Consortium with non-profit organizations like the IEEE or NCOSE (national council on system engineering).

Systems engineering (SE) is on an unprecedented upward slope. SE is leading us to SoS Engineering (SoSE) and on to Enterprise Systems Engineering (ESE). Therefore, it is estimated that SoS and SoSE Engineering is a few billion dollars research and development opportunity in the US alone.

In October 2005, I chaired the IEEE SMC Conference whose main theme was SoSE. In 2005 IEEE HQ approved the creation of the *IEEE Systems Council*, which consists of 16 societies and over 350,000 of the IEEE members. IEEE SMC is one of the three original founding societies of this Council and thereby will continue to play a major role in both the Council and SoSE. In June 2006, I was elected as the editor-in-chief of the *IEEE Systems Journal* ([systemsjournal.org](http://systemsjournal.org)) the first official publication of the new IEEE Systems Council. SoS is among the fields of interest of the new council as well as the scope of the new journal.

In April of 2006 I chaired the first IEEE SoS Engineering Conference in Los Angeles. There were 85 attendees – 60% of them from industry and Government. I am currently chairing the second in the series of meetings in San Antonio from April 16-18, 2007. ([ieeesose2007.org](http://ieeesose2007.org) - A call for papers is attached.)

We are inviting you to attend the National meeting on April 17, 2007 during the IEEE Conference on SoSE. The final agenda of this meeting will be announced later on when the attendees are finalized, but the tentative program will include a state-of-the art lecture on System of Systems, experience of other regional Consortia or Centers in the USA and views from Government, Military and the Industry.

**The ultimate objective of the NCSoS will be to put the best minds together to solve SoS problems – Theory & implementation**

- 1) Create a clearinghouse of all SoS (science and engineering) researchers and access to researchers for your proposals.**
- 2) Teaming of partners for national proposals to solve real SoS problems**
- 3) Commercializing and transfer of SoS technologies or policies**
- 4) Annual workshop concurrent with the IEEE SoSE conference**
- 5) Cooperation with other efforts – SoSECE (SoS Engineering Center of Excellence), SSCI (Software Systems Engineering Consortium, Inc.), and international partners.**

I encourage you, your colleagues, or peers to contribute a paper to the 2007 IEEE SoSE in San Antonio and I extend an invitation to your institution would like to be part of this Consortium, please identify one or more peers to attend this conference and the NCSoS meeting to be held on April 17, 2007 at Holiday Inn, Riverwalk in San Antonio, Texas.

Colleagues from overseas (Australia, India, the Netherlands, etc.) may also coming to add an international dimension to NCSoS (e.g. see <http://www.deakin.edu.au/scitech/eit/isr/SoS.php>)

I look forward to hearing from you or your institution. If you desire to be part of this national effort working together we can become a significant influence on the national

and/or international level. We would appreciate hearing from you *no later than February 28, 2007*. Details such as agenda, hotel, directions, etc. will be either already on the web site or will be forwarded. Specific questions and inquiries are welcome.

This invitation is being extended to over 200 researchers, deans, vice presidents for research and provost across the nation.

Please respond to:

[Carol.Mikush@utsa.edu](mailto:Carol.Mikush@utsa.edu) 210-458-6494 or  
[Mo.Jamshidi@utsa.edu](mailto:Mo.Jamshidi@utsa.edu) and [moj@wacong.org](mailto:moj@wacong.org) 210-458-7074

Thank you for interest and anticipated participation.

Sincerely yours,

*Mo Jamshidi*

Mo Jamshidi  
General Chair, 2007 IEEE SoSE  
Editor-in-Chief, *IEEE Systems Journal*  
Lutcher Brown Endowed Chair  
University of Texas  
San Antonio