

**Written Testimony of
David Vogan, Ph.D., President
American Mathematical Society
On
FY 2014 Appropriations for the National Science Foundation
For
The House Committee on Appropriations
Subcommittee on Commerce, Justice, Science, and Related Agencies
Congressman Frank R. Wolf, Chair
Congressman Chaka Fattah, Ranking Member**

Chairman Wolf, Ranking Member Fattah, and members of the committee, I am David Vogan, President of the American Mathematical Society (AMS) and a Professor of Mathematics at Massachusetts Institute of Technology. The AMS is a membership organization of over 30,000 professional mathematicians. I ask the Committee to consider a FY 2014 budget of at least \$7.333 billion for the National Science Foundation (NSF), the NSF FY 2013 budget level the House passed in May 2012. This investment will allow the NSF to continue to support innovative and transformational scientific research that fuels the American economy, upholds national security, maintains our global competitiveness, improves health and quality of life for millions of Americans, and contributes to the development of the next generation of science, mathematics, and engineering researchers.

Many of our global competitors are increasing financial support for scientific research while the rate of growth of funding for research in the U.S. is slowing. The U.S. must maintain its leadership in high level scientific research and the NSF is critical to this endeavor. Even as Congress works to reduce the federal budget deficit, we must continue to make investments in the NSF. Adequate, dependable federal support will allow NSF and the scientific communities to plan, develop infrastructure, maintain a steady pipeline of graduate and postdoctoral students, and have feasible expectations of making new discoveries. Only a predictable pattern of funding will facilitate a continuous stream

of high level research and researchers that, in turn, will support the level of technological development needed for economic growth.

NSF is the only federal agency that supports research and education across all fields of science, engineering, and mathematics and at all educational levels. Research and education programs supported through the NSF are fundamental for increasing and developing the knowledge base needed for pushing the frontiers of science, mathematics, and engineering disciplines; developing new fields of inquiry; and supporting technological innovation.

Society has benefitted from the many products, procedures, and methods resulting from NSF supported research – research performed over many years and not always predetermined toward specific applications. These benefits include well known innovations such as Google, magnetic resonance imaging (MRI), and bar code technology. Today, the NSF portfolio includes research that contributes to finding cures for certain types of cancer; aids the improvement and development of arterial stents; creates novel therapies for children with heart disease; could lead to cheaper electric power; and increases the possibility of fabricating 3-D computer memory chips.

NSF is a very important agency for the mathematical sciences. Most mathematics research is done in universities and colleges. NSF accounts for 65 percent of federal support for academic research in the mathematical sciences and it is the only agency that supports mathematics research broadly across all fields.

I ask that the Committee give strong consideration to providing an FY 2014 NSF budget of at least \$7.333 billion. Thank you for considering this request.