

speed Internet connections, linking most US universities. With the complexity of research (see Marburger's speech in section 4), NSF has a strategy to provide shared computer power to all its grantees via their universities, enabling scientists to solve the complexity problems in the many important areas of science today such as; biotechnology, nano-technology, materials and the simulation of complex systems.

In addition, NSF continues to give high priority to the Math and Science Partnership begun in FY 2002 as part of the President's education plan, *No Child Left Behind*. Within the priority areas, there is a rich mix of activity that integrates areas of fundamental research with elements of practice in related fields. This synergy characterizes the interdependence of the priority areas as, for example, concepts and techniques from the mathematical sciences influence the development of our understanding of biocomplexity or nanoscale science and engineering and vice versa.

For more information on NSF's strategy see: <http://www.nsf.gov/bfa/bud/fy2003/goals.htm>.

NSF-supported centers could prove key in future science projects by encouraging researchers to collaborate more widely. Most centers are located on one university campus, but they can consist of one lead university with a small number of core partner universities. Some centers comprise consortia led by a team in one university, but include nodes at other universities, companies, government labs, schools or school districts, and non-profit research organizations. When the activities in a consortium are tightly integrated among sites, they become "virtual centers" or "centers without walls," usually linked by Internet. A summary of the centers' websites follow:

<b>Science &amp; Technology Centers</b>	<a href="http://www.nsf.gov/od/oia/programs/stc/start.htm">http://www.nsf.gov/od/oia/programs/stc/start.htm</a>
<b>Engineering Research Centers and Groups</b>	<a href="http://www.nsf.gov/home/eng.htm">http://www.nsf.gov/home/eng.htm</a>
<b>State/Industry/University Coop Research Centers</b>	<a href="http://www.eng.nsf.gov/eec/siurc_intro.htm">http://www.eng.nsf.gov/eec/siurc_intro.htm</a>
<b>Centers of Research Excellence in S&amp;T</b>	<a href="http://www.ehr.nsf.gov/hrd/Crest.asp">http://www.ehr.nsf.gov/hrd/Crest.asp</a>
<b>Materials Research Facilities</b>	<a href="http://www.nsf.gov/mps/divisions/dmr/about/c_facilities.htm">http://www.nsf.gov/mps/divisions/dmr/about/c_facilities.htm</a>
<b>Institute for Theoretical Physics</b>	<a href="http://www.itp.ucsb.edu">http://www.itp.ucsb.edu</a>
<b>Chemistry Centers</b>	<a href="http://www.nsf.gov/mps/divisions/che/about/c_facilities.htm">http://www.nsf.gov/mps/divisions/che/about/c_facilities.htm</a>
<b>Plant Genome Virtual Centers</b>	<a href="http://www.nsf.gov/bio/dbi/dbi_pgr.htm">http://www.nsf.gov/bio/dbi/dbi_pgr.htm</a>
<b>Center for Ecological Analysis and Synthesis</b>	<a href="http://www.nceas.ucsb.edu/fmt/doc?/frames.html">http://www.nceas.ucsb.edu/fmt/doc?/frames.html</a>
<b>Long-Term Ecological Research Program</b>	<a href="http://lternet.edu/">http://lternet.edu/</a>
<b>Information Technology Centers:</b>	<a href="http://www.itr.nsf.gov/">http://www.itr.nsf.gov/</a>
<b>Centers for Learning and Teaching (2) being created by NSF, for details see</b>	
<a href="http://www.interact.nsf.gov/cise/descriptions.nsf/Pages/EC85AE4B5110C7BF85256A0200659590">http://www.interact.nsf.gov/cise/descriptions.nsf/Pages/EC85AE4B5110C7BF85256A0200659590</a>	
<b>Nanoscale Science and Engineering Centers</b>	<a href="http://www.nano.gov/centers.htm">http://www.nano.gov/centers.htm</a>
<b>Physics Frontier Centers</b>	<a href="http://www.nsf.gov/pubs/2001/nsf01112/nsf01112.html">http://www.nsf.gov/pubs/2001/nsf01112/nsf01112.html</a>

**Mathematical Sciences Research Institutes:** NSF supports three world-class national research mathematics institutes: the Institute for Mathematics and Its Applications, University of Minnesota, Minneapolis (<http://www.ima.umn.edu/>); Institute for Pure and Applied Mathematics, University of California, Los Angeles (<http://www.ipam.org/>); and the Mathematical Sciences Research Institute, Berkeley, Calif. (<http://www.msri.org/>). The Institute for Advanced Study, Princeton, NJ (<http://www.math.ias.edu/>) and the National Center for Atmospheric Research, Boulder, Colo. (<http://www.ncar.ucar.edu/ncar/>) provide additional postdoctoral training. NSF also supports the new Banff International Research Station, Alberta (<http://www.pims.math.ca/birs/>).