A Message From the President

On behalf of the Northrop Grumman Foundation and its Board of Directors, it is my pleasure to present our 2012 annual report.

The Foundation seeks to be in the vanguard of science, technology, engineering and mathematics (STEM) education and we have partnered with outstanding organizations that are pursuing amazing initiatives and programs across America and internationally.

Our mission is to fund educational projects that make a difference in the lives of our country’s students and teachers. We seek to ultimately affect generations to come and our country as a whole. We strive to be a part of life-changing experiences.

This annual report will share highlights of our endeavors and we hope you are excited by these snapshots into the varied ways STEM can be taught and appreciated. Feel free to click on the many hyperlinks embedded throughout this report.

For quarterly news about activities and community programming across the company, check out our Community Partnerships In Motion newsletters. For more information about the Foundation, Click Here.

Thanks for your interest in the Northrop Grumman Foundation.

Sincerely,

Sandra Evers-Manly, President
Northrop Grumman Foundation
Foundation Overview

The Northrop Grumman Foundation supports diverse and sustainable national-level education programs for students as well as educators. These programs and initiatives create innovative STEM experiences. Highlights from those programs are described within the pages of the annual report.

The Foundation has two primary methods for giving: Matching Gifts for Education and Northrop Grumman Foundation grants. Our funding primarily focuses on education-related programs and in 2012, approximately $10,674,580 in giving supported a wide range of STEM education programs across the country and the globe.

2012 Matching Gifts for Education

The Northrop Grumman Foundation Matching Gifts for Education program is a popular vehicle for employees to increase their contributions to qualified education institutions and affiliated organizations (i.e., school PTAs, educational foundations). Donations for eligible programs in such areas as music, engineering, medicine are actively encouraged.

ECHO (The Employees Charity Organization of Northrop Grumman) is a non-profit agency established in 1956 to meet the needs of our employees by allowing them to contribute to charitable and non-profit organizations through workplace giving made simple by payroll deductions. Employees can also double their qualified ECHO deductions to schools through the matching gifts program.

In 2012, the Foundation matched 1,407 gifts for a total of $752,870.

- *Kindergarten through 12th grade* - 50% ($374,415)
- *Higher Education* - 50% ($378,455)

For further information about the Matching Gifts program, [Click Here.](#)

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### Top 10 Matching Gift Recipients

<table>
<thead>
<tr>
<th>Rank</th>
<th>Recipient</th>
<th>Matching Gift Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UCLA</td>
<td>$27,445</td>
</tr>
<tr>
<td>2</td>
<td>Manhattan Beach Education Foundation</td>
<td>$23,870</td>
</tr>
<tr>
<td>3</td>
<td>Peninsula Education Foundation</td>
<td>$19,267</td>
</tr>
<tr>
<td>4</td>
<td>Purdue University</td>
<td>$12,150</td>
</tr>
<tr>
<td>5</td>
<td>Kansas State University</td>
<td>$11,450</td>
</tr>
<tr>
<td>6</td>
<td>USC</td>
<td>$11,336</td>
</tr>
<tr>
<td>7</td>
<td>Hermosa Beach Education Foundation</td>
<td>$8,300</td>
</tr>
<tr>
<td>8</td>
<td>California Polytechnic, San Luis Obispo</td>
<td>$6,612</td>
</tr>
<tr>
<td>9</td>
<td>Loyola High School (CA)</td>
<td>$6,200</td>
</tr>
<tr>
<td>10</td>
<td>Orange County School of the Arts</td>
<td>$6,000</td>
</tr>
</tbody>
</table>

### In What States Do Employee Donors Give?

- California..................851
- Maryland.....................164
- Virginia.....................100
- New York.....................97
- Pennsylvania.................77
- Massachusetts...............66
2012 Highlights

Air Force Association – CyberPatriot V
CyberPatriot is the national high school cyber defense competition, fun, competitive, non-traditional teaching way to showcase and develop STEM skills. Even average students can be successful with the instructional materials and the competition that is presented in a manner that encourages learning. This cyber defense competition is “cool” and includes students not usually motivated by challenging STEM subjects. All rounds of competition teach teamwork—something useful to every student. One underlying goal is to instill an understanding of cybersecurity principles applicable to students’ lives, which includes safe computing and avoidance of predatory on-line exploitation. In addition, there is a huge amount of employee volunteerism associated with this program; Northrop Grumman employees across the company serve as team mentors.

National Society of Black Engineers – Summer Engineering Experience for Kids (SEEK)
SEEK is the National Society of Black Engineers’ NSBE) premiere solution to the under-representation of African American students in STEM fields. The free, three-week program is a pipeline designed to expose African American children to STEM fields as early as the third grade and through the twelfth grade. This exposure will be provided by utilizing current NSBE members, who are college students majoring in STEM fields.

STEMFlix™
STEMFlix™ is a new, interactive video series provided for your viewing pleasure by the Northrop Grumman Foundation with help from popular Boston science teacher and frequent TV guest, Science Bob. This four-part video series is designed to show young people how fun STEM can be, while also teaching how the disciplines of science affect our everyday lives. STEMFlix™ aired in select theaters across the country between June 8 and September 7, and with its own dedicated website (http://www.northropgrumman.com/stemflix).
USA Science and Engineering Festival
Northrop Grumman employee volunteers helped to inspire the next generation of scientists and engineers by participating in the USA Science and Engineering Festival, sponsored by the Northrop Grumman Foundation. The festival, which ran April 27-29, is the nation’s largest celebration of science and engineering and is a free, family-friendly event that draws more than 150,000 people to the Walter E. Washington Convention Center in Washington, D.C.

Space Camp®
Space Camp® was held July 29-Aug. 3, at the U.S. Space and Rocket Center in Huntsville, AL. Student campers experienced the ultimate space adventure participating in activities such as experiencing rocket building, weightlessness in an astronaut-training simulator and simulating space travel preparation.
Conservation International – ECO Classroom

ECO Classroom provides a unique opportunity for teams of middle and high school teachers to integrate analysis of global-scale environmental data into their classrooms. The first field experience led 16 teachers to Costa Rica in July 2012. It gives teachers and students real-world opportunities to learn about climate change impacts on ecosystems and people by creating an education portal to facilitate use of data and analytical tools; conducting teacher-training workshops at science teacher association meetings; and designing and leading teacher professional development field expeditions.
The four teams, teachers and schools they represented were:

<table>
<thead>
<tr>
<th>Team Name</th>
<th>Geographic Area</th>
<th>Teacher Names</th>
<th>Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anne Arundel</td>
<td>Baltimore/Annapolis, MD</td>
<td>Dr. Tanya Marushak</td>
<td>South River High School</td>
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<tr>
<td></td>
<td></td>
<td>Rachael Morrison</td>
<td>Southern High School</td>
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<tr>
<td></td>
<td></td>
<td>Dr. Carrie Graff</td>
<td>Annapolis High School</td>
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<tr>
<td></td>
<td></td>
<td>Lauren Purple-Sales</td>
<td>Annapolis High School</td>
</tr>
<tr>
<td>Ecologically Minded Long Island Educators</td>
<td>Long Island, NY</td>
<td>Elizabeth Platt</td>
<td>Smithtown High School West</td>
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<tr>
<td></td>
<td></td>
<td>Kimberly Christian</td>
<td>Smithtown High School East</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lillian Vitalo</td>
<td>Nesaquake Middle School</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adrienne Davis</td>
<td>Brentwood High School Ross Campus</td>
</tr>
<tr>
<td>Chicago - Northwest</td>
<td>Northwest Chicago, IL</td>
<td>Lisa del Muro</td>
<td>Wheeling High School</td>
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<td></td>
<td></td>
<td>Mollie David</td>
<td>Prospect High School</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Francis (Bud) Mathieu</td>
<td>Glenbrook North High School</td>
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<tr>
<td></td>
<td></td>
<td>Shelby Childress-Rita</td>
<td>Maine East High School</td>
</tr>
<tr>
<td>SOL Sisters</td>
<td>Southern California</td>
<td>Debby West</td>
<td>Oak Park High School</td>
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<td></td>
<td></td>
<td>Mary Denise Powell</td>
<td>Thousand Oaks High School</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Katie Cohen</td>
<td>Medea Creek Middle School</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jennifer Boyd</td>
<td>Westlake High School</td>
</tr>
</tbody>
</table>
The Robotics Education and Competition Foundation - VEX Robotics Competition

This partnership with Northrop Grumman will allow the Robotics Education and Competition Foundation to reach more schools across the United States, support the formation of new events across the United States, execute the VEX Robotics World Championship Event, continue to develop volunteer resources, and assist in improvement of their website.
Great Minds in STEM – Viva Technology

For over 12 years, the Viva Technology™ Program has engaged underserved and under-represented youth, teachers and parents in the applications of technology to create an understanding of and access to STEM-related education and career fields. The three-part program (Parent Orientation, a Teacher Orientation and the Viva Technology Student Day) stimulates interest in STEM through innovative lesson plans and specifically-designed hands-on activities. To date, Viva Technology™ has been implemented in 18 states, reaching over 70,000 students, teachers and parents. Our funding directly supports a school in Maryland and one in California associated with this program; Northrop Grumman employees across the company serve as team mentors.

2012 Partnerships

AIA Team American Rocketry Challange

Camp Invention

Let's Go

MATHCOUNTS Foundation

NACME, Inc.

National Engineers Week

National Science Teachers Association

Sally Ride Science

Science Buddies

SHPE Foundation

Society For Science And The Public

Teach For America, Inc.

U.S. Space and Rocket Center

United Through Reading

U.S. Naval Acadamy Foundation

Wolf Trap Foundation
**White House Summer Intern Program**

In May 2012, President Barack Obama and his Administration announced commitments from 95 companies, non-profits, three municipalities, two federal agencies and the White House to provide jobs for low-income and disconnected youth. In combination with the Summer Jobs+ Bank, the push totals nearly 300,000 employment opportunities. The Foundation partnered with non-profits and 94 students were employed by 20 organizations.

Some of the participant organizations include:
- American Association of People with Disabilities - Washington DC
- Tomorrow’s Aeronautical Museum – Compton, CA
- DC College Access Program – Washington D.C.
- Feeding America Southwest Virginia – Salem VA
- Baltimore City Foundation, Inc – Baltimore MD
- American Indian Science and Engineering Society (AISES) – Albuquerque, NM

**Hurricane Sandy Relief Effort**

The Northrop Grumman Foundation activated a matching gift program specifically directed to local non-profits when Hurricane Sandy (unofficially known as “Superstorm Sandy”) hit the northeast coast in October 2012. More than 500 employees donated funds to nearly 25 organizations totaling more than $100,000; the Foundation matched those donations.

In addition, Northrop Grumman is a proud member of the Red Cross Annual Disaster Relief program. This program enables the Red Cross to readily respond to disasters.

With nearly all employees at Long Island facilities affected in some way, company team members took steps to assist employees directly. Even as storm damage was being tallied, more than 400 bags of ice went out to employees to help them preserve food. Also, showers in the gym area of company facilities were opened for employees unable to take a warm shower at home.

Boxes, bubble wrap and tape were made available to employees for salvage efforts. Over 40 requests for immediate financial assistance were approved for employees who were severely impacted by the storm.
University & College Partnerships and Diversity Scholarships

Over $150,000 was allocated to support higher education programs, ranging from STEM initiatives and diversity and inclusion to academic organizations. National diversity association scholarships were provided for the American Indian Science and Engineering Society, the National Society of Black Engineers, the Society of Women Engineers and the Society of Hispanic Professional Engineers (SHPE). SHPE’s National Institute for Leadership Advancement, the Hispanic Scholarship Fund, and the United Negro College Fund and completed a multi-year commitment to the National Action Council for Minorities in Engineering in support of pre-engineering programs and scholarships. These contributions will further increase the enrollment, retention and graduation rates for women and under-represented minority students.

A grant was presented to the Virginia Institute of Technology, Center for the Enhancement of Engineering Diversity, Hypatia community program. Twenty-five mentors were trained to work with mentees before the fall semester began and an additional ten weeks into the semester. Each week mentors met with their mentees to discuss adjustment to college life and assistance with academic success. There was a 61% increase in students applying to remain in the program this year. When asked why applicants wanted to remain in the program, many answered that it was due to the mentoring benefits they received and the desire to give the same experience to incoming freshman.

The Community College of Baltimore County (CCBC) received a grant from the Foundation to enhance opportunities for students interested in pursuing STEM degrees with a focus on engineering. Working in partnership with Baltimore County Public Schools (BCPS) and the National Science Foundation (NSF), CCBC will develop the Enhancing the STEM Engineering Pipeline initiative which will create successful pathways to engineering careers. This initiative is designed to encourage more two-year college STEM graduates to pursue four-year and graduate-level engineering degree programs by focusing on the barriers and potential solutions for increasing the number of STEM-educated professionals.

The Enhancing the STEM Engineering Pipeline initiative has three goals:

1. To improve the recruitment and retention of CCBC students.
2. To encourage participation of under-represented groups as STEM scholars by developing three components - mentoring, counseling and scholarships to assure success.
3. To establish multiple pipelines and bridges to connect students to four-year engineering programs and potential employers. CCBC will work with BCPS to train high school teachers and counselors and align curriculum, provide scholarships for students pursuing their degree through NSF grants. In addition, engineering faculty mentors will advise students about how to transition to and complete an engineering degree at a four-year institution or obtain a position in their desired field.
The Northrop Grumman Foundation
Board and Staff

Sandra Evers-Manly
President

Sheila Cheston

Frank Flores

Darryl Fraser

Denise Peppard

Silva Thomas
Treasurer

Carleen Beste
Manager and Secretary

Reyna Gaar
Administrator

For additional information on the Northrop Grumman Foundation or the grant application process, visit: www.northropgrumman.com and keyword search: foundation.
E-mail: ngfoundation@ngc.com
Telephone: 1-888-478-5478