

Capital Edition



ARCS® MISSION

ARCS Foundation advances science and technology in the United States by providing financial awards to academically outstanding U.S. citizens studying to complete degrees in science, engineering, and medical research.

Inside this Issue:

2013 Eagle Awardee	2
Scholar Awards Reception	3
ARCS Light	4
Fall Meeting	4
Northrop Grumman News	5
Georgetown University News	5
In Their Own Words	6
January Meeting	6
Honor Roll	7
Upcoming Events	8
Embassy Bridge	8

Fall, 2012

Metropolitan Washington Chapter

From our President

*"Coming together is a beginning.
Keeping together is progress.
Working together is success."*

Henry Ford

Dear MWC Members,

It is indeed a pleasure and an honor to write my first letter to you as President of MWC. As I reflect on the quote from Henry Ford, I feel that this Chapter has much to celebrate. Over these past months, we have focused on implementing the new board structure and operating enhancements. It has been tremendous teamwork. The results have been positive, broadening our relationships with our donor and university partners. Thanks to all for your commitment of time, talent, and enthusiasm – all of which serve to advance the mission of ARCS.

Through the various council meetings, it has been a personal pleasure to see well over half of our membership these past months. Separately, whether at our events, National Board meetings, phone calls or email exchanges, I have been delighted to have contact with another core group of members. It is gratifying to see the level of member involvement.

The first half of this fiscal year has had a number of highlights:

- The Scholar Awards Reception, coordinated by Aneta Large and her University Relations team, was wonderful. It was successful in many ways - the sponsorship from Lockheed Martin Corporation, an attendance of nearly 200 persons, and the inspiring remarks by our guest speaker, Dr. Lisa Porter.
- Our Embassy Bridge Event, led by Mary Kennedy and supported by her committee, was again a lovely occasion, raising funding for our scholars and broadening our circle of ARCS contacts.
- The September General Meeting, hosted by Marilyn Dando, Eva Lamb, and Karen Meyers, was well attended and featured Dr. Allison Whitmer from Georgetown University as our guest speaker.
- For the October Board Meeting, we invited our new members to join us to learn more about ARCS and to be our guests at the Supreme Court. Thanks to Mary Kennedy and Holly Coyne for being our hostesses and to Terry Holmes for her leadership with Membership.
- The announcement of Roger A. Krone, President of Network and Space Systems, The Boeing Company, as our 2013 Eagle Award recipient welcomes another esteemed leader to this distinguished group.
- The Endowment Fund, managed by Morgan Stanley Wealth Management under the leadership of Karen Stoner and the Endowment Committee, has a 3.6% increase in the year-to-date portfolio value.
- Appreciation is due to Ginny Lukasik and her team for continued enhancements to our communications, including the website, newsletter, and social media.

Thanks again to a terrific board and to MWC membership. The teamwork and progress of these past months are truly inspiring. Best to all and hoping to see you at the Holiday Party on December 2.



Lynn Dillon

SOARING WITH STEM - 2013 ARCS EAGLE AWARDEE**Roger A. Krone***President, Network and Space Systems,
The Boeing Company*

Roger A. Krone, President of Network and Space Systems (N&SS) for The Boeing Company, has been named the 2013 Eagle Award recipient for the Metropolitan Washington Chapter. With more than 30 years of experience in the aerospace industry, Krone has led N&SS since 2006 and exemplifies the merits represented in the Eagle Award. This includes significant personal achievement as well as leadership to support the advancement of American technological and scientific competitiveness.

“Ensuring generations to come have access to and appreciation for science, technology, engineering and math (STEM) education is key toward ensuring our nation’s economic and innovation leadership,” Krone said. “I’m thankful to work with ARCS on providing scholarship opportunities and drawing attention to the importance of STEM.”

Boeing has been a long-standing donor partner for ARCS across the country, with sponsorships in both Seattle and Metropolitan Washington. Kelli Golanoski, PhD Candidate in Chemistry at the University of Maryland, was named the 2012-2013 Boeing Scholar for the Metropolitan Washington Chapter, recognizing the generous support from the corporation this past year.

Krone leads approximately 19,000 employees in 45 states and 9 countries in providing innovative, integrated technologies to government and commercial customers. Network and Space Systems works with its customers on capabilities that include critical space-exploration efforts, cybersecurity, missile defense, satellite development and intelligence networking.

Bringing both engineering and financial expertise to bear during his more than 30 years in the aerospace industry, Krone has held senior program management positions at Boeing, McDonnell Douglas Corp., and General Dynamics. He holds a bachelor’s degree in aerospace engineering from Georgia Institute of Technology, a master’s degree in aerospace engineering from the University of Texas at Arlington, and a master of business administration from Harvard Graduate School of Business.

In addition to working with ARCS, Krone is currently on the board for the United Launch Alliance, having recently served as the Chairman. He is a member of the board of WETA Public Television and Radio, a member of the Board of the Urban League – Greater Washington Chapter, and a member of the Advisory Board of Georgia Tech.

According to the U.S. Department of Commerce:

- In 2010, there were 7.6 million STEM workers in the United States (1 out of 18 employees).
- STEM occupations are projected to grow 17% over the 2008-2018 time period vs. 9.8% for non-STEM occupations.
- On average, STEM workers earn 26% more than their non-STEM counterparts.

Scholar Awards Reception

On Thursday night, October 18th, the annual ARCS/MWC Scholar Awards Reception (SAR) was held at the beautifully renovated National Academy of Sciences building. Our chapter owes a special debt of gratitude to Lockheed Martin Corporation for their sponsorship of this year's SAR. We had over 175 members and guests in attendance to honor our 19 scholars. A highlight of the reception was the scholars' display of poster presentations detailing their impressive research. Members, guests, and donors enjoyed the opportunity to meet and talk with the scholars during the reception.

Aneta Large opened the program, followed by a welcoming address from Lynn Dillon. Lynn introduced our guest speaker, Dr. Lisa Porter, a former ARCS scholar and past Director of the Intelligence Advanced Research Projects Activity (IARPA). Dr. Porter is currently a Senior Vice President with Teledyne Scientific and Imaging. Dr. Porter's inspiring and motivational speech highlighted eight rules for success and emphasized the importance of honesty and integrity. After Dr. Porter's speech, the scholars were introduced by their university's representative and awarded their certificates. Dr. John D. Evans, Corporate Vice President for Technology and Innovation from Lockheed Martin Corporation, provided closing remarks. Attendance at this important annual event and the opportunity to meet our outstanding scholars confirms why ARCS members devote their time, money, and effort to help further the advancement of STEM education.



CONGRATULATIONS MARLENE BEKEY! ARCS LIGHT 2012-2013



MARLENE BEKEY
2012-2013 MWC ARCS LIGHT

The ARCS Light award is one of the most special traditions of ARCS, celebrating extraordinary achievement and contributions by a member from each respective Chapter across the country. This distinguished honor, given annually to a Metropolitan Washington member who has exhibited outstanding service to ARCS, is selected by a committee of previously honored ARCS Light recipients.

For the Metropolitan Washington Chapter, it is a great honor to recognize Marlene Bekey as our ARCS Light for 2012-2013. Since joining MWC in 2005, Marlene has been a tireless and dedicated member, a leader on many committees, and above all a dear and special friend to all who know her. She has served on the Board as Treasurer, Assistant Treasurer, and Director of Bylaws. Throughout her years of leadership in finance positions, she has provided incredible support for all aspects of our financial operations including active engagement with both treasury and endowment funds. In addition to that selfless support, she has also been most gracious to assist with our activities in all functions including organizing and hosting meetings, handling responses to events, preparing nametags, supporting silent auction preparations, and serving as a greeter.

Marlene has had a distinguished career that includes working for a Fortune 500 company in finance, owning an interior design company and a horse ranch, and serving as CFO for a government contracting company. In her spare time, she has also supported the NSO, the Opera Guild, the Salvation ARMY, the American Antique Arts Association, and the Chapel Square Garden Club. She is truly an amazing Renaissance woman.

We are all honored to have Marlene represent our Chapter as our 2012-2013 ARCS Light. She will be honored throughout the year and at the NAM in June 2013 in Honolulu, HI. Congratulations!

SEPTEMBER GENERAL MEETING

On September 20, the Chapter held its Fall General Meeting at Columbia Country Club. For the 45 members attending, it was an opportunity to welcome new members, to celebrate our 2012-13 ARCS Light - Marlene Bekey, and to be updated on the breadth of Chapter activity over the summer months. It has been an active start to the year – with significant contributions from all of the Board Members and all of the Councils.



Dr. Allison Whitmer, Associate Dean of Georgetown College/Georgetown University, was the guest speaker. She was an engaging presenter, encouraging an active exchange with all attendees. Her remarks focused on the multiple dynamics impacting STEM education at the university level. Key drivers of change are the expansion of cross-disciplinary studies, the priority to build conceptual knowledge (rather than memorization of facts), and active research by students at both the undergraduate and graduate levels. With these adaptations, the goals are to encourage greater exploration and achievement – all geared to advancing science in America.

Northrop Grumman Corporation Commitment to UM

Unique Program to Educate the Next Generation of U.S. Cybersecurity Leaders

Excerpts reprinted with permission from a website article from the University of Maryland Cybersecurity Center

The University of Maryland and the Northrop Grumman Corporation will launch a landmark honors program designed to educate a new generation of advanced cybersecurity professionals. The unique program, Advanced Cybersecurity Experience for Students (ACES), will immerse undergraduate students in all aspects of the field to meet growing manpower needs in the nation and in the State of Maryland.

ACES will engage a highly talented, diverse group of students – majors in computer science, engineering, business, public policy, and the social sciences - in an intensive living-learning environment that focuses on the multifaceted aspects of cybersecurity and develops team-building skills. Students will take an advanced, cross-disciplinary curriculum developed through industry consultation, and will interact directly with industry and government cybersecurity mentors. Students enrolled in the program will have the option of interning with Northrop Grumman and preparing for security clearance. ACES will produce skilled, experienced cybersecurity leaders highly sought by corporate and government organizations.

The Northrop Grumman Corporation will provide a grant of \$1.1 million to launch the program, which will begin in the fall of 2013, and support it for an additional two years. The University of Maryland will match that amount.

Finding employees fully prepared to take on complex cybersecurity issues is a major challenge for corporations and government agencies. Wes Bush, Chairman, CEO and President of Northrop Grumman, said, “We are fully committed to developing solutions to help eliminate the nation’s shortage of critical STEM educated talent and by partnering with the University of Maryland, we will address workforce challenges in the increasingly important field of cybersecurity. The university has an outstanding track record for developing innovative educational programs to answer real-world needs, excellent research capabilities through its Maryland Cybersecurity Center, and close relationships with the many federal agencies and corporations in the Washington, D.C., area likewise concerned about cybersecurity.”

New Science and Education Building and Georgetown University



On October 4, Georgetown College, a school of Georgetown University, officially celebrated the opening of its new science education building, Regents Hall. ARCS/MWC Chapter was represented at this event by three of our Board members, - Aneta Large (VP-University Relations), Karen Stoner (VP-Finance) and Kristen Blosschok (At Large Board Member and a former ARCS Scholar from Georgetown).

This 155,000 square foot facility offers state-of-the art laboratory and lecture space and is an important component of the university’s long term plan to enhance its science teaching and research capabilities. Classes were initiated in the facility starting in the fall semester, 2012. Academic work completed in the building encompasses majors in the fields of biology, chemistry, and physics as well as cross-disciplinary studies. The laboratory space is evenly split between facilities dedicated to research versus those dedicated to teaching. Regents Hall provides critical and valued resources, accelerating Georgetown’s strategic commitment to scientific advancement.

Our Scholars: In Their Own Words



Christopher McFarland
The Joyce Pratt and Jeffrey Harris Scholar

I am a graduate student working with underwater robotic vehicles in Professor Whitcomb's Dynamical Systems and Control Laboratory at John Hopkins University (JHU). Our goal is to develop underwater robotic vehicles which facilitate scientific research in the world's oceans. Working closely with colleagues at Woods Hole Oceanographic Institute, my research group both supports current underwater oceanographic research vehicles and develops new vehicles.

My work focuses on using analytic modeling techniques to increase vehicle performance and quantifying those gains experimentally. To develop our analytic results, we rely on modeling the vehicle's drag, buoyancy, inertia, and hydrodynamic forces. We hope this will enable underwater vehicles to better utilize their preexisting performance capabilities. To experimentally evaluate these performance gains, our laboratory has created the JHU Hydrodynamic Test Facility. This facility includes the JHU ROV (an underwater robotic vehicle), a 50,000 gallon tank, and a full suite of state-of-the-art sensors. The JHU ROV was designed such that performance gains shown in our facility should be similar to those seen for oceanographic research vehicles. Using this facility, the final component of my research is to perform an experimental head-to-head comparison of our methods with those currently deployed on underwater oceanographic research vehicles.

Ultimately, the goal of my research is to allow scientists (such as climatologists, geologists, biologists or archaeologists) to consider addressing research topics previously thought impractical or impossible. I feel this work is a critical step towards increasing our knowledge of this planet's oceans; I am grateful that ARCS has provided the opportunity to develop these analytic results and quantify experimentally their utility for scientists.

ARCS Winter Meeting

ARCS/MWC's Winter Meeting on January 24, 2013, promises to be a lively event! We are fortunate to have as our guest speaker Mr. Glenn Gaffney, Director for Science and Technology for the Central Intelligence Agency. Mr. Gaffney is a distinguished leader in the Intelligence Community, and is an internationally recognized cyber expert. His presentation – CYBER – is certain to be interesting and thought provoking. Mr. Gaffney is passionate about this topic, and he speaks from an extraordinarily well informed position. If you have the opportunity, ask Mr. Gaffney what his career aspirations were before his father convinced him to study engineering.

Mr. Gaffney was appointed as the Director for Science and Technology effective 26 January 2010. In January 2008, Mr. Gaffney was named as Deputy Director of National Intelligence for Collection. In this role, Mr. Gaffney worked on behalf of the Director of National Intelligence to coordinate and integrate the collection efforts of the 16 intelligence agencies and ensured that Intelligence Community priorities were appropriately reflected in future planning and systems acquisition decisions.

Mr. Gaffney began his career with the CIA in 1986 as a technical analyst in the Directorate of Intelligence responsible for the analysis of Soviet space systems and space launch vehicles. His experience in this area led to a position as a senior analyst to support designing and conducting clandestine technical collection operations to address critical technical intelligence gaps.

In 1996, the predecessor to today's Information Operations Center (IOC) was established and Mr. Gaffney was part of a team which laid the foundation for this new office and initiated its targeting program for Information Operations (Cyber). He was appointed Deputy Chief/IOC in October 2002 and Chief/IOC in November 2005. Mr. Gaffney served as the Deputy Director for Science and Technology in 2007.

Mr. Gaffney was born and raised in New Jersey. He earned a Bachelor of Science degree in Engineering Science with a specialty focus in astrophysics from the New Jersey Institute of Technology. He, his wife, Debbie, and their three children, Lauren, Taylor, and Joseph, live in northern Virginia.



Glenn Gaffney
Director for Science and Technology

2011-2012 ARCS Foundation Honor Roll

BENEFACTOR CIRCLE

\$30,000-\$74,999

Anonymous
Booz Allen Hamilton
Lockheed Martin Corporation
Raytheon Company

PATRON CIRCLE

\$15,000-\$29,999

The Boeing Company
General Dynamics Corporation
Hoernig Family Endowment Fund
The Gerald and Paula McNichols Family Foundation
The JCM Foundation
Mars Foundation
Joanne and Peter Powers
Joyce Pratt and Jeffrey Harris

SPONSOR CIRCLE

\$5,000-\$14,999

The Aerospace Corporation
Association of Universities for Research in Astronomy
(AURA)
Clark Construction Group, LLC
The Education Institute
Ileene and Gary Hoffman
Walter M. Oliver
Virginia and Paul Wright

FRIEND CIRCLE

\$2,500-\$4,999

Anonymous
American Institute of Aeronautics and Astronautics
(AIAA)
June and Stephen Chaudet
Lynn and John Dillon
Dominion Jewelers

ASSOCIATE CIRCLE

\$1,000-\$2,499

Anonymous
Mrs. Lawrence J. Adams
Deborah N. Allen
AMH Consulting
Norma C. Barfield
Bodman Family Foundation
Sonja and Raj Boveja
Antoinette and Lawrence Delaney
George W. Elliot
Exelis, Inc.
Betsy and Pete Forster
Nancy and Joseph Gofus
Laura D. Mateo (UVAS Foundation)
Karen and William Meyers
Florine Mullins and John LaTulippe
Donna J. and Homer A. Neal
Andrea and William Purple
Carole and John Sanders
Antonia and Hans Schierling
Van Scoyoc Kelly & Roberts, PLLC
Leslie and Takataka Yamada

On behalf of all members of ARCS/MWC and our scholar recipients, the generosity of our donor partners is crucial. It provides critical resources to fund scholar awards, it advances research conducted by the best and brightest of American students, and it serves as an investment in our nation's scientific and technological future.

In terms of giving, ARCS/MWC is fortunate to receive gifts in many forms, including time and effort in support of Chapter activities, in-kind donations for our gala and other events, and donations in support of operating needs. We are appreciative of each and every gift.

This Honor Roll recognizes gifts of \$1,000 and greater to our Chapter and/or to the ARCS Endowment Fund during our 2012 Fiscal year (ended 5/31). Please note that donations to or purchases from the Silent Auction at the ARCS 2012 gala have not been included. Our thanks to all who support ARCS. You truly make the difference!

Mark Your Calendars!!

December 2, 2012

January 24, 2013

April 6, 2013

May 16, 2013

May 29 - June 1, 2013

Holiday Party at the home of Holly and Jim Coyne (Evening)

General Meeting at Washington Golf and Country Club

Gala at Congressional Country Club (Evening)

General Meeting at Washington Golf and Country Club

National ARCS Meeting in Honolulu, Hawaii

2013 GALA: STARRY STARRY NIGHT

Plan to join us for our 2013 "Starry, Starry Night" Gala where our motto is "ARCS: Today's scholars are tomorrow's stars." Help raise scholarship funds for our STARS!

Mark your calendars for Saturday, April 6, 2013 and celebrate a "Starry, Starry Night" with us at Congressional Country Club. The Silent Auction Committee is eagerly preparing for an exciting evening, and we would love your help. Please join the fun by contacting one of our co-chairs: Aneta Large, Maureen Wingfield, or Bev Herrington.

We need everyone's support with the Silent Auction. This year, we will be focusing on 5 always popular auction categories:

- Dining experiences, (restaurants, dinner you host, etc.)
- Destinations (beach houses, vacation houses, resorts, hotels, boats, etc.)
- Wine and spirits
- Cultural and sporting events (i.e., tickets to Nationals and Redskins games, golf games, the Kennedy Center, etc.)
- Jewelry (Dominion Jewelers will participate again)

We also plan to auction gift baskets. Will you donate a basket? Be creative! Pick a theme and fill a basket (work with friends and have some fun). We already have Mexican and French baskets promised. Possible themes are: spa, Italian, spices, wine and cheese, books, writing, gardening, tools, chocolate and sweets, gourmet, California, Texas, golf, children (children's items, not the actual child), coffee and tea, beach, picnic, kitchen -- any idea is a good idea. Also, ask stores or shops you regularly do business with if they will contribute a basket. Call us if you need help with ideas, packaging, or bows. If we all contribute, we can really help our scholars.

EMBASSY BRIDGE

On November 8, ARCS/MWC hosted its annual Embassy Bridge event at the Residence of the Indian Ambassador, Ambassador Nirapama Rao. In every regard, it was a terrific success – building connections with over 125 women in attendance, raising funds to support ARCS scholars, enjoying the beautiful setting in the diplomatic residence, and visiting over a lovely lunch. The guests were delighted that Ambassador Rao not only welcomed them, but also shared much of the day with them. Her diplomatic career has been most distinguished and has spanned over 30 years, including prior assignments as the Ambassador to China, Peru, Bolivia, and Sri Lanka.

A most sincere thank you to Mary Kennedy for her leadership and to her committee, including Sally Burns, Marie Carr, Holly Coyne, Lita Harrison, Leslie Hayes, Terry Holmes, Jane Lion, Mary Snitch, and Jean Thompson for their tireless efforts. As always, this was a most special event for our Chapter.



https://www.arcsfoundation.org/metro_washington/