American Meteorological Society Scholarship/Fellowship Program Sponsors

"Each year, one of the most important and exciting works of the American Meteorological Society is the granting of scholarships and fellowships to provide help to deserving undergraduate and graduate students in their educations. This year, the AMS is proud to be able to make fifty-two of these prestigious awards, and this would not be possible without the generous contributions of our individual members and support from the private and public sector. As your president, it has been my great pleasure to make the calls to notify these extremely bright young people of their awards, and then to meet with them personally at the Annual Meeting. These are the future leaders of our community and we should be very proud of our investments in their professional development. These fifty-two brilliant students were selected from among a large and incredibly competitive group of highly qualified and talented applicants, and so they truly do represent "the best of the best" student members of the AMS. Their personal achievements are already quite incredible and their futures are going to be exciting. On behalf of the AMS and the recipients of the scholarships and fellowships, I want to express our deep appreciation to all of our sponsors for their very generous support."

Manana M

— Jon Malay, AMS Past President

GRADUATE FELLOWSHIP SPONSORS

MINORITY SCHOLARSHIP SPONSORS





Lockheed Martin Corporation



Science Applications International Corporation (SAIC)/Space, Aviation, and Science Operation



Baron Services



Earth Resources Technology, Inc.



AMS 21st Century Campaign



NOAA's Climate Program Office & NOAA's National Weather Service

NAMED UNDERGRADUATE **SCHOLARSHIPS**

The Orville Family Endowed Scholarship The Dr. Pedro Grau Undergraduate Scholarship The Guillermo Salazar Rodriguez Undergraduate Scholarship The Mark J. Schroeder Endowed Scholarship in Meteorology

The Richard and Helen Hagemeyer Scholarship The Ethan and Allan Murphy Endowed Memorial Scholarship The Werner A. Baum Endowed Scholarship



DOE Atmospheric System Research



NASA Earth Science



AMS 21st Century Campaign

The Loren W. Crow Memorial Scholarship The Larry R. Johnson Memorial Scholarship The Om and Saraswati Bahethi Scholarship The Carl W. Kreitzberg Endowed Scholarship The Bob Glahn Endowed Scholarship in Statistical Meteorology The David S. Johnson Endowed Scholarship The Saraswati (Sara) Bahethi Scholarship The Dr. Yoram Kaufman Scholarship The Bhanwar Lal Bahethi Scholarship The Karen Hauschild Friday Endowed Scholarship The K. Vic Ooyama Endowed Scholarship The Dr. Robert S. Fraser Scholarship The Michael A. Roberts, Jr. Endowed Scholarship The Naval Weather Service Association Scholarship

FRESHMAN UNDERGRADUATE SCHOLARSHIP SPONSORS



Science and Technology Corporation



CLS America, Inc.



Baron Services & Baron Services, Integrated Weather Solutions



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Customer Success Is Our Mission



Earth Networks



Vaisala, Inc.



Naval Weather Service Association

The Percival D. Wark and Clara B. (Mackey) Wark **Endowed Scholarship**

The Bernard Vonnegut and Vincent Schaefer **Endowed Scholarship**



Harris Corporation

Lockheed Martin Mission

Systems and Sensors

The Edgar J. Saltsman **Endowed Scholarship**



LOCKHEED MARTIN

AMERICAN METEOROLOGICAL SOCIETY

The AMS Freshman Undergraduate Scholarship program is open to all high school students and is designed to encourage study in the atmospheric and related sciences. Serving as a unique example of various sectors of our field joining together to support young, talented minds, the scholarships are being sponsored by industry leaders and includes named scholarships either established by an AMS member or in memory of someone. The sponsors of these scholarships have all recognized the importance in encouraging young people to enter into the atmospheric and related sciences and thus have made generous contributions in support of the 2012 AMS Freshman Undergraduate Scholarship Program. AMS thanks all of the sponsors for their generous support.

SCIENCE AND TECHNOLOGY CORPORATION

Science and Technology Corporation (STC) is an innovative, private company founded by Dr. Adarsh Deepak in 1979. Our highly qualified staff provides technical support services to the U.S. Government (NASA, NOAA, DoD, and other agencies), industry, and international organizations at 20 locations across the United States and in Europe.

STC is a leader in numerous aspects of atmospheric sciences and related remote sensing research, to include

- meteorological satellite data processing and analysis
- modeling and analysis of clouds, aerosols, ozone, and atmospheric gases
- radiation propagation studies
- global and mesoscale model development
- air quality forecast improvements

In addition, we have a distinguished record of providing superb management support for Earth science program activities. Current/recent atmospheric science support activities include

- NOAA's Earth System Research Laboratory (ESRL)
- National Environmental Satellite Data and Information Service (NESDIS)
- NOAA's Air Resources Laboratory (ARL)
- Office of the Federal Coordinator for Meteorology (OFCM)
- International Global Energy and Water Cycle Experiment (GEWEX) Project Office

Beyond our strength in atmospheric sciences, STC has several other scientific and technical capabilities of excellence, to include

- multidisciplinary scientific software development, to include High-Performance Computing (HPC)
- instrument systems design, development, fabrication, implementation, and calibration for ground, satellite, airborne, and ship platforms
- Computational Fluid/Structural Dynamics (CFD/ CSD) modeling for advanced rotorcraft and NASA spacecraft
- polar and cold regions technology applications
- naval architecture for design and testing of icebreaking ships
- electronic, mechanical, composite, and machining fabrication of NASA flight-certified and ground support equipment and test articles
- chemical and biological demilitarization, monitoring, and laboratory activities
- developmental and operational testing and evaluation
- small satellite design, development and fabrication

BARON SERVICES, INC.

Baron Services' products span the globe serving government, business, and consumer markets with state-of-the-art weather technologies and integrated solutions. We provide comprehensive weather solutions from advanced radar systems, data integration, forecast modeling including air quality and hydrology, numerous display solutions, and distribution to authorized users and the public.

Baron Services continues to lead the weather industry through innovation. Through its partnership with L-3 STRATIS, Baron Services was awarded a five-year contract from NOAA's National Weather Service (NWS) to provide a systemwide upgrade of the 171 NWS, Federal Aviation Administration (FAA), and Department of Defense (DOD) NEXRAD radars to dual-polarization capability. This application will result in benefits across several categories, including tornado debris cloud detection and forecasting for flash floods, hail, and winter precipitation. The project is currently scheduled for completion in late summer of 2013.

Baron has also built dual-polarized radars for television broadcasters throughout the country. This includes the powerful C-band Klystron radar that packs more than one million watts of power and houses a revolutionary calibration technique that vastly improves the radar's accuracy and performance.

Baron Services' mobile division, WxWorx, is the exclusive weather data provider for XM WX Satellite Weather, a trusted information source for pilots and mariners. The company supplies both hardware and software solutions for onboard weather to the aviation, marine, and emergency management industries. Part of the XM NavWeather service, Baron Services' Threat Matrix technology is available as standard/ standard option on select models from Acura, Honda, Hyundai, Infiniti, Lexus, Nissan, and Porsche.

Baron is headquartered in Huntsville, Alabama, with offices in Oklahoma, North Carolina, and Florida. Despite quick company growth, Baron Services' mission has remained the same for more than 20 years: to produce tools that provide accurate, site-specific weather information. The company philosophy is solidified by technology and people committed to saving lives.

BARON SERVICES, INTEGRATED WEATHER SOLUTIONS

Baron Services, Integrated Weather Solutions products are in use throughout the world. In the international marketplace, Baron has delivered weather solutions in countries including Paraguay, Romania, Taiwan, Brunei, Saudi Arabia, Indonesia, and most recently, Uzbekistan.

Baron Services provides comprehensive weather solutions including advanced radar systems, data integration, forecast modeling including air quality and hydrology, numerous display solutions, and distribution to governments, business, and public users. Through Baron's Integrated Observational Network Solution (IONS), the company provides comprehensive turn-key integration of new and existing meteorological assets for nowcasting and forecasting activities including weather detection, data processing, numerical weather prediction, 2D and 3D visualization, and weather data dissemination.

In Uzbekistan, for example, Baron installed two Doppler weather radar systems as part of an instrumentation modernization to achieve higherresolution weather surveillance and enhance weather forecasts. In Brunei, a modernization project is incorporating both Baron Services' meteorological hardware, including an S-band dual-polarization Doppler weather radar, as well as patented technologies, providing remote weather monitoring, storm tracking and display, web distribution, advanced hydrological forecasting and modeling, and the ability to disperse weather information to authorized users, including the public.

In the United States, Baron Services continues to lead the weather industry. Through its partnership with L-3 STRATIS, the company was awarded a fiveyear contract from NOAA's National Weather Service (NWS) to provide a systemwide upgrade of the 171 NWS, Federal Aviation Administration (FAA), and Department of Defense (DOD) NEXRAD radars to dual-polarization capability.

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RAYTHEON COMPANY

Raytheon Company, with 2010 sales of \$25 billion, is a technology and innovation leader specializing in defense, homeland security, and other government markets throughout the world. With a history of innovation spanning 89 years, Raytheon provides state-of-the-art electronics, mission systems integration, and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems, as well as a broad range of mission support services. With headquarters in Waltham, Massachusetts, Raytheon employs 72,000 people worldwide. For more about Raytheon, visit us at www.raytheon.com and follow us on Twitter at @raytheon.

Raytheon's MathMovesU[®] program is committed to increasing students' interest in math and science

education by engaging them in hands-on, interactive activities. The innovative programs of MathMovesU include Raytheon's Sum of all Thrills[™] experience at INNOVENTIONS at Epcot[®], which showcases math in action as students design and experience their own thrill ride using math fundamentals; the "In the Numbers" game, a partnership with the New England Patriots on display at The Hall at Patriot Place[™] presented by Raytheon; the company's ongoing sponsorship of the MATHCOUNTS[®] National Competition; and the MathMovesU scholarship and grant program providing more than \$1 million in annual funding to students and teachers. Follow MathMovesU and other Raytheon community outreach programs on Twitter @RaytheonCSR.

VAISALA, INC.

Vaisala contributes to a better quality of life by providing a comprehensive range of innovative observation and measurement products and services for meteorology, weather critical operations, and controlled environments. Vaisala is recognized world over for its contribution to the development, manufacturing, and marketing of high-quality sensors, instruments, systems, and services to solve measurement needs or observation requirements. For over 70 years, our strong customer focus, combined with reliability and convenience, provides our partners and customers distinct performance advantages and cost savings from the total solutions that we can deliver.

Vaisala is committed to measuring environments of all proportions, from the Earth's atmosphere to the inside of an engine component. Striving for worldwide market leadership in selected businesses, our competitive edge lies in product leadership. We are global market leaders in upper-air observations; airport weather observation equipment; fire weather and resource management systems; hydrology applications; road weather observation systems; surface weather-measuring networks; lightning detection data networks and instruments; and in professional equipment for measuring relative humidity, dewpoint, CO₂, and barometric pressure. High investment in research and development guarantees that Vaisala products are in the forefront of environmental measurement technology both now and in the future.

Therefore, it is again with great pleasure that Vaisala provides a scholarship to individuals who share this company's enthusiasm and commitment toward the science of meteorology.

LOCKHEED MARTIN MISSION SYSTEMS AND SENSORS

Lockheed Martin Mission Systems and Sensors (MS2) provides systems engineering, software development, and complex program management for global security, civil, and commercial markets. MS2 executes nearly 500 programs for the U.S. Navy, Coast Guard, Air Force, Army, and Marine Corps, as well as industrial, research, and medical customers in 50 nations.

The company's Marion, Massachusetts, facility has a proud heritage of more than 60 years in the development and production of specialized instrumentation for environmental observations. Hundreds of demanding customers around the world including NOAA, all U.S. Department of Defense agencies, and meteorological/oceanographic services around the world rely on our expendable instrumentation to understand global climate challenges. The MS2 Marion operation provides advanced GPS upper-air sounding systems for synoptic and research atmospheric measurements, from the surface to the upper atmosphere. Our oceanographic instrumentation and data acquisition systems enable users to obtain realtime profiles of ocean temperature, current velocity, and salinity.

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security company that employs about 123,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration, and sustainment of advanced technology systems, products, and services. The Corporation's net sales for 2011 were \$46.5 billion.

Lockheed Martin is proud to support the American Meteorological Society and its AMS Freshman Undergraduate Scholarship Program. We wish this year's recipients all the best.

HARRIS CORPORATION

Harris Corporation is an international communications and information technology company serving government and commercial markets in more than 150 countries. The company has annual revenue of more than \$6 billion and 17,000 employees—including nearly 7,000 engineers and scientists.

Harris provides the most advanced, NISTcompliant, weather information systems available today, offering real-time information and high-quality resolutions/enhancements for effective analysis and decision making by operational meteorologists in NOAA, FAA, DoD, and the international community. Harris has been developing and delivering weather, satellite command and control, and information systems for over six decades, and is a recognized leader in the development and deployment of ground systems for the ingesting, processing, displaying, and manipulation of meteorological satellite data. Our systems incorporate current technology for high-capacity processing in a totally secure NISTcompliant environment.

Harris is the prime contractor and systems integrator, leading a world-class team on the \$781 million effort to design, develop, deploy, integrate, and sustain NOAA's Ground Segment for the GOES-R next generation of geostationary weather satellites. The Ground Segment includes the Mission Command and Control of the new spacecraft, as well the processing, product generation, and product distribution of the satellite data. In April 2010, Harris was also selected to furnish the final piece of the Ground Segment—the \$130 million Ground Antenna Subsystem. This effort will result in a robust, reliable, end-to-end ground infrastructure that will support the operational requirements of the GOES-R system for the life of the mission.

CLS AMERICA, INC.

The CLS Group of Companies entered its twentieth year of operations in the United States of America in January 2006 with a new look and a new way of doing business. In 1986, Service Argos, Inc., was established near Washington, D.C., in order to provide operational services and end-user support for the joint French/USA Argos System. Argos is a satellite-based tracking and data collection system that employs a French electronics package flying aboard a number of U.S. NOAA polar-orbiting weather satellites. In 1987, a second company—North American CLS, Inc.—was established in order to provide Argos-based services to a number of commercial users and nonenvironmental agencies throughout North America.

The Argos Data Collection and Geo-Location System is devoted to monitoring and protection of the Earth's environment. In operational service since 1978, the Argos instruments fly on NOAA's Polar-Orbiting Environmental Satellite System and the operating terms of the service are defined by an intergovernmental bilateral agreement between the United States and France. Argos can locate any platform carrying a suitable transmitter, anywhere in the world, and collect data from sensors connected to that transmitter. Half of the Argos system capacity is currently used for meteorological and oceanographic operations and research. Much of the data collected from the more than 20,000 transmitters active today are relayed around the world via the World Meteorological Organization's Global Telecommunications System (GTS). The next generation of Argos systems will enable increasingly lower power transmissions from the users platforms, higher data rates through the satellites, and the capability to dialog with the transmitter/platform device. Argos system enhancements will enable the scientific community to satisfy increasingly difficult data relay needs with a proven, reliable, and robust data collection system as Argos continues its Earth observation and monitoring mission.

On January 1, 2006 Service Argos, Inc., and North American CLS, Inc., merged into a single unit, called CLS America, Inc. The single company will enable a stronger and more cost-effective support of all Argos applications, especially the U.S. governmental scientific users.

In January 2007 CLS became an approved reseller of Iridium data services, thus enabling CLS to provide an even wider variety of data-collection capabilities to complement our core Argos services.

CLS America continues to be based in the Washington, D.C., metropolitan area, with headquarters in Largo, Maryland. Mr. Bill Woodward, former president of Service Argos, Inc. is the president and CEO of CLS America.

STINGER GHAFFARIAN TECHNOLOGIES (SGT)

SGT is an award-winning, nationwide service provider, offering a full spectrum of systems engineering, IT, science and program management services. Founded in 1994 and headquartered in Greenbelt, Maryland, we support a wide array of government agencies and are committed to our ICE principles—focusing on Integrity, Customers, and Employees. SGT works closely with our customers and teammates to ensure the best possible solutions for today's most challenging problems. We hold the following certifications: ISO 9001:2008; AS9100; ISO2000; CMMI Level 3.

We are involved in a wide range of Earth and space science research ranging from studying the ice loss over ice sheets to monitoring sea level rise, developing advanced intelligent computer systems for planetary rovers to science data processing and dissemination. From missions exploring distant planets and asteroids, near to Earth, and circling the moon, to rovers traversing planetary surfaces and missions that provide telescopic views of the heavens, SGT's engineering and scientific expertise assist in the furtherance of human inquiry.

Our scientists study geodynamical processes to gain insight into the structure and composition of the Earth and the redistribution of mass associated with both tidal and nontidal sources of forcing. SGT, partnered with NASA Goddard Institute for Space Studies (GISS) program, is a leader in the study of climate change.

In addition to this, SGT provides end-to-end IT services for science and archival data centers, mission control centers, ground data acquisitions, campuswide network management, and numerous other areas, delivering innovative, customer-focused IT support.

We infuse and deploy advanced information systems technology into missions using numerical analysis and high performance computing, algorithm development, modeling, GIS and web mapping, intelligent systems, agile science data processing and archiving systems.

SGT is recognized for our successful contract performance and advantageous cost management solutions, and have received some of the industry's most prestigious awards, including NASA's prestigious Georg M. Low Award for Quality and Excellence.

SGT is proud to be a corporate member of the AMS! Visit us at www.sgt-inc.com.

EARTH NETWORKS

Owner of the WeatherBug Brand of Products and Solutions

About Earth NetworksSM–WeatherBug[®]

Earth Networks–WeatherBug, the leading provider of weather information and services, will again sponsor an AMS Freshman Undergraduate Scholarship for the 2011/2012 school year. Since its founding nearly 20 years ago, Earth Networks (formerly AWS) has been strongly invested in the education sector and is firmly committed to fostering the careers of future scientists and meteorologists.

Earth Networks began in the education market by pioneering a program that installed and networked thousands of professional-grade weather stations at schools. The data from these stations enabled teachers to apply real-world weather information when teaching core STEM courses and lessons on other key topics, such as geography. The company's rigorous curriculum meets national and state education standards for grades K–12.

Today, Earth Networks operates the world's largest weather observation and lightning detection net-

works and is building what will become the largest greenhouse gas-monitoring network. Observations from Earth Networks inform and alert consumers, enterprises, and governments around the world, providing them with advanced environmental intelligence for decision making and safety. The company's popular WeatherBug website, desktop application, and mobile apps provide millions of consumers with real-time, local weather information and dangerous severe weather alerts. Enterprise solutions from Earth Networks enable organizations, including energy and utilities, agriculture, sports and recreation, emergency operations, and government entities, to safeguard lives, prepare for weather and climate events, and improve business operations. Earth Networks (www. earthnetworks.com) is headquartered in the Washington, D.C., area with offices in Mountain View, California; New York, New York; Milan, Italy; and a local presence in 50 countries worldwide.

NAVAL WEATHER SERVICE ASSOCIATION

The Naval Weather Service Association (NWSA) is an association of naval officers, enlisted men and women, and civilians who have provided meteorological, oceanographic and numerical predictions services to the United States Navy as well as all other military services. The membership consists predominately of current and former meteorological specialists (aerographers mates), meteorologists and oceanographers, computer scientists and academics. The NWSA was formed in August 1976 in order to preserve friendships beyond active service and sustain an ongoing relationship with active duty members of the Naval Meteorological and Oceanography Command.

In 1978 the Association established a scholarship fund to support those seeking degrees in meteorology, oceanography and atmospheric sciences, and has provided annual awards for more than 30 years.

In 2011 the membership approved the transfer of management responsibilities of the Naval Weather Service Association Scholarship to the AMS. The AMS will safeguard and manage the funds gifted by the NWSA for the specific purpose of sustaining two annual awards based on selections of the AMS scholarship committee. The fund provided by the generous contributions of the NWSA membership will allow the Naval Weather Service Association Scholarship to be awarded for at least the next 10–15 years. For more information about the NWSA please visit the Association's website: www.navalweather .org/home.html

THE PERCIVAL D. WARK AND CLARA B. (MACKEY) WARK ENDOWED SCHOLARSHIP

The Percival D. Wark and Clara B. (Mackey) Wark Endowed Scholarship honors the late parents of Dr. David Q. Wark, a longtime AMS member. Dr. Wark, a United States federal employee for over a half-a-century, and a longtime AMS member and Fellow of AMS, has endowed an AMS Named Scholarship in honor of his parents, Percival Damon Wark and Clara Belle (Mackey) Wark. As stated by Dr. Wark, "The establishment of this scholarship is prompted by the donor's acknowledgment of the outstanding scientific and cultural leadership of the AMS, as well as its unique and universal position in promoting the science of meteorology. It is fitting that Percival D. Wark and Clara B. (Mackey) Wark should be memorialized in this milieu."

THE BERNARD VONNEGUT AND VINCENT SCHAEFER ENDOWED SCHOLARSHIP

The Bernard Vonnegut and Vincent Schaefer Scholarship honors two individuals who worked as colleagues and were friends over many years, and who made significant contributions to science and meteorology. In addition to their outstanding scientific contributions, those who knew Bernie and Vince, knew of their zest for learning and discovery that carried through their entire lives, and most importantly the positive outlook and encouragement that they conveyed to all of their students. In an effort to honor these two individuals and their contributions to the sciences, the Vonnegut/Schaefer Scholarship Fund has been established in their name. To reach the scholarship endowment level necessary, Bernie's first graduate student has pledged a two-for-one challenge match of \$50,000 over the next two years. For every dollar contributed to the Vonnegut/Schaefer Freshman Scholarship, it will be matched with a two-dollar gift.

THE EDGAR J. SALTSMAN ENDOWED SCHOLARSHIP

The Edgar J. Saltsman Endowed Scholarship honors the late Ed Saltsman, a longtime AMS member. After graduating from high school, Mr. Saltsman continued his education at Cleveland College and Indiana University where he majored in math. Following school he enlisted in the United States Air Force and served as a climatologist and meteorologist. He earned the rank of major before retiring from service. After serving in the air force he worked with the U.S. Weather Bureau (now known as NOAA's National Weather Service) in both Washington, D.C., and in New Orleans.