

AHS International 72nd Annual Awards

By Valerie Sheehan, AHS Membership Director

AHS International — *The Vertical Flight Technical Society* — honored members and vertical flight leaders for their outstanding achievements during the Grand Awards Banquet on May 18, 2016, in West Palm Beach, Florida. The Awards Banquet, sponsored by Sikorsky, was one of the highlights of the 72nd Annual Forum & Technology Display. Mark Miller, Vice President of Research and Technology at Sikorsky, welcomed attendees on behalf of the host company, with its nearby Development Flight Center (DFC). This was the first time that the AHS Forum had ever been held in Florida.

Mike Hirschberg, Executive Director of AHS International, welcomed attendees and thanked all of the AHS volunteers supporting the Annual Forum, including the authors, technical committees, session chairs, chapter members, and more than 70 student volunteers. The AHS Awards Program was initiated in 1944 and, over the years, has paid tribute to the world's outstanding leaders in industry, government and academia, and acts as a catalyst for stimulating technological advances in vertical flight.

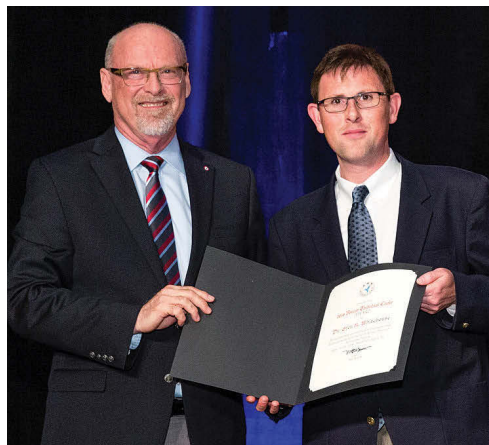
AHS Membership Awards

The winner of the **Individual Member Sponsor** contest for this year was **Dr. William G. Warmbrodt**, NASA Ames and AHS San Francisco Bay Chapter member, who recruited nine new AHS members during the year. The **Philadelphia Chapter** won the contest for the **AHS Chapter Increase**, with the largest net growth in members, adding 68 new members during the year. Brittany Selman, The Boeing Company, accepted the award for the chapter. The winner of the **AHS Chapter Percentage Increase** contest was the **Jake Fortner Chapter**, with a 49% increase in its membership. Dr. Robert L. King, the Director of the Southern US Region, accepted the award on behalf of the chapter. The **AHS Philadelphia Chapter**, represented by Keith Conaron, Piasecki Aircraft, won the **Every-Member-Get-a-Member** contest; seven members of the chapter sponsored at least one new member.



Left to Right: Keith Conaron, Every-Member-Get-a-Member; Brittany Selman AHS Chapter Increase; Dr. William Warmbrodt, Individual Member Sponsor; and Dr. Robert King, AHS Chapter Percentage Increase.

AHS Technical Awards



The AHS International Technical Director, Dr. David Peters (left), McDonnell Douglas Professor of Engineering at Washington University in St. Louis, presented the Society's technical awards.

The **Forum Technical Chair** this year was Dr. Glen Whitehouse (right) of Continuum Dynamics. The role of the Forum Technical Chair is critical to the success of the Annual Forum, and Whitehouse's leadership and dedication resulted in the greatest number of technical papers that have ever been presented at an AHS Forum. This is in no small part due to his insightful approach to pairing technical papers to form hybrid sessions.

Robert L. Lichten Award



The Robert L. Lichten Award is given to the best new author of a technical paper presented at a chapter meeting during the preceding calendar year, is based upon the author's personal contribution, originality of the work and its technical content. The winner this year was Carl Runco (left), Texas A&M University, with his paper titled "On the Development of the World's Smallest Cyclocopter," which was presented at Forum 72's Advanced Vertical Flight Session. Mark Kotwicz HERNICZEK (right), Carleton University, was recognized as the Lichten Award Runner-Up with his paper, "Rotor Blade Optimization and Flight Testing of a Small UAV Rotorcraft," which was presented in the Unmanned VTOL Aircraft & Rotorcraft Session at this year's Forum.

Vertical Flight Foundation Scholarships

Mike Hirschberg gratefully recognized that, through the generous donations of AHS members, the Vertical Flight Foundation Scholarships continue to increase in size. The \$74,000 awarded for this year's scholarships is \$6,000 more than last year and nearly three times as much as a decade ago. Through February 2016, more than 50 donors had given between \$100 and \$800, and five members donated more than \$1,000. In addition, the AHS Stratford Chapter donated \$12,000, for a total of more than \$80,000 in the past decade, primarily from the proceeds of their very successful annual golf tournament. Hirschberg urged members to consider giving to the extent of their ability, in order to continue increasing the size and number of VFF awards in the future. AHS covers all administrative costs for VFF, so 100% of donations go towards scholarships.

Dan Newman, VFF Selection Committee Chair, thanked the VFF Scholarship Selection Committee, which performed the difficult process of selecting the outstanding students to receive scholarships this year, and announced the winners. The following VFF Scholarship winners are the future of the vertical flight community and tomorrow's leaders. Congratulations to the following students:

Bachelor Degree Recipients

Mr. Bryce Connelly, The Pennsylvania State University: Henrich Focke Scholarship
Mr. Jason Cornelius, The Pennsylvania State University: Eugene K. Liberatore Scholarship
Mr. Andrew Dallas, University of Maryland College Park: Alfred & Elaine Gessow Scholarship
Ms. Avani Gupta, Georgia Institute of Technology: Michael Rutkowski Scholarship
Mr. Brett Himmelberg, Texas A&M University College Station: Tom Wood Honorary Scholarship
Mr. Jackson Merkl, Georgia Institute of Technology: H.I. (Jeff) MacDonald Scholarship
Mr. Kevin Williams, Ohio State University: John Zuk Scholarship

Master Degree Recipients

Mr. Miguel Alvarez, The Pennsylvania State University: Joseph P. Cribbins Scholarship
Mr. Matthew DiPalma, Rensselaer Polytechnic Institute: Thomas G. Green Scholarship

Mr. Brandon Draper, University of Maryland College Park: Hal Andrews Scholarship
Mr. Mark HERNICZEK, Carleton University: Jean Boulet Scholarship
Mr. Dustin Jee, Carleton University: E. Roberts Wood Scholarship
Mr. Jackson Morris, University of Alabama Tuscaloosa: Barry Baskett Scholarship
Mr. Edward Rocco, The Pennsylvania State University: Samuel T. Crews V Scholarship
Mr. Atif Salahudeen, University of Maryland College Park: Marat Tishchenko Scholarship
Mr. Nathan Tappendorf, Arizona State University: Ray Prouty Scholarship
Ms. Belen Veras-Alba, The Pennsylvania State University: Ray Kvatnerik Scholarship

Doctorate Degree Recipients

Mr. Ethan Corle, The Pennsylvania State University: Bell Helicopter Vertical Flight Scholarship
Ms. Amanda Grubb, Georgia Institute of Technology: Harry Hleva Scholarship
Mr. Mohit Gupta, Georgia Institute of Technology: Charles C. Crawford Scholarship
Mr. Kevin Jacobson, Georgia Institute of Technology: Richard M. Carlson Scholarship
Mr. Jean-Paul Reddinger, Rensselaer Polytechnic Institute: Jeff Pino Scholarship
Mr. Jared Soltis, The Pennsylvania State University: John J. Schneider Scholarship
Mr. Lee Whitcher, Georgia Institute of Technology: John R. Olson Scholarship

AHS Awards Recognition

Mick Maurer, former Sikorsky President and this year's Chair of the Board of AHS International, presided over the remainder of the Grand Awards Banquet. The recognition of those who have demonstrated excellence in our community is an important purpose of the Society, which depends upon its members to nominate candidates for these prestigious awards. Maurer thanked the members of the AHS Awards Committee: Professor David Peters from Washington University, the AHS Technical Director; Charles J. Kilmain from Bell Helicopter, our industry representative; Dr. Inderjit Chopra

from University of Maryland, our academic representative; and David Friedmann from the US Army Aviation Development Directorate, our government representative. With nearly 50 extremely impressive nominations this year, the effort and commitment put forth by the



members of this committee was considerable. The results of their deliberations have ensured that this year's award winners exemplify excellence in every category.

Recognition of the AHS Technical Director



Professor David Peters (right) of Washington University will have completed his two-year term of office on July 1 and pass the baton to Dr. Judah Milgram of the US Office of Naval Research (ONR). As the AHS Technical Director, Dr. Peters, shown with Mick Maurer (left), has been a steadfast leader of the AHS Technical Council, as well as a key contributor of the Executive Committee of the AHS Board of Directors. His leadership has strengthened the technical standing of AHS International, and has provided both strategic and tactical guidance on governing the Society.

Alexander A. Nikol'sky Honorary Lectureship



This award is given to an individual who has a highly distinguished career in vertical flight aircraft research and development, and is skilled at communicating his/her technical knowledge and experience. Established in 1981, the award honors a member of Igor Sikorsky's original team,

and later Princeton University professor, who educated a generation of helicopter engineers.

This year the Awards Committee has bestowed this high honor on Tom L. Wood (right), Bell Helicopter Textron. Wood was chosen in recognition of his half-century of contributions to advancing the state of the art of helicopter and tiltrotor technology. Wood's perspectives on past technical challenges and accomplishments by the rotorcraft industry, as well as what technologies will pave the way to realizing the next generation of rotorcraft, were the subject of his Nikol'sky Lectureship presented at this year's Forum.

Paul E. Haueter Award



This award is given for an outstanding technical innovation in the development of a vertical take-off and landing aircraft other than a helicopter. Instituted in 1966, the award honors an aeronautical engineer, devoted public servant, and AHS officer who was instrumental in fostering the early development of vertical take-off and landing (VTOL) aircraft in the United States.

The recipient of the 2016 Paul E. Haueter Award is Mike Nyalko, Col (Ret.), US Marine Corps, who contributed to advancing the state of the art in vertical flight through his role as the USMC project test pilot for the AV-8B Harrier II during the developmental flight test program in the early 1980s; as the Director of the joint DARPA/Navy Advanced Short Takeoff and Vertical Landing (ASTOVL) Advanced Development Program Office in the early 1990s; and then the first Director of Systems Engineering for the Joint Advanced Strike Technology (JAST) / Joint Strike Fighter (JSF) Program. Accepting on his behalf was Kevin M. McCarthy (right) of the Naval Air Systems Command.

Technical Fellows

AHS Technical Fellow Awards are granted to Society members whose career-based accomplishments towards the goals and objectives of the vertical flight community constitute an outstanding technical achievement. Four Technical Fellow Awards were presented: Prof. Olivier A. Bauchau, the Igor Sikorsky Professor of Rotorcraft, University of Maryland; Mr. Christopher L. Blanken, Lead for the Vehicle Management and Control Technical Area, US Army Aviation

Development Directorate; Mr. Daniel I. Newman, Senior Technical Fellow in Aircraft Configuration Development, The Boeing Company; and Dr. Gloria K. Yamauchi, Aerospace Engineer, National Aeronautics and Space Administration (NASA).

Dr. Bauchau is recognized for his world-renowned research, education and service contributions to the field of rotorcraft multi-body dynamics, structural dynamics and aeroelasticity. His pioneering contributions have directly advanced the understanding and modeling of rotors. His research has resulted in the development of the industry standard multibody dynamics solver, Dymore. He has mentored several new generations of rotorcraft engineers through his academic engagement at top universities, and his service to AHS and other professional organizations. In the course of his career, he has written two major textbooks, presented 140 conference papers, and made over 180 presentations.

Mr. Blanken is recognized for his technical expertise and international collaborations in the field of helicopter flight mechanics, active flight controls and especially handling qualities. These efforts led to defining the requirements for handling qualities and flight control systems of vertical take-off and landing aircraft documented in the landmark design standard for handling qualities: Aeronautical Design Standard (ADS-33), "Handling Qualities Requirements for Military Rotorcraft." Blanken's contributions in terms of technical innovation in the document and championing of its application have been paramount to its world-wide acceptance. He has more than 65 publications as a scientist and engineer, ranging from pure analysis to simulation and flight test.

Mr. Newman is recognized for his long and successful record of research and development in the design, analysis, and test of vertical flight aircraft, subsystems and components, as well as military and civil operations and applications. He is recognized nationally and internationally as an expert in the field of conceptual design and analysis. In that context, he is a creative engineer and leader, who is innovative and thinks disruptively. He has consistently combined his high energy, unwavering focus, and determined technical acumen to formulate both strategic and technical solutions to the benefit of multiple programs at both Boeing and DARPA.

Dr. Yamauchi is recognized for her 30+ years of complex experimental research in rotary-wing aerodynamics and aeroacoustics. She pioneered experimental techniques

that acquired data that is both world-class and unique. The range of her projects includes performance and loads predictions, noise of tail rotors, rotor/airframe aerodynamic interference, inflight measurements of rotor noise, surface flow visualization, rotor/ship aero interaction, and tiltrotor/tiltrotor interactions. Her significant contributions to the body of fundamental knowledge and understanding in these areas, as well as the advances in the state of the art in experimental techniques, have been of incredible benefit to the vertical flight community.

François-Xavier Bagnoud Vertical Flight Award

This award is given to a Society member under the age of 35 for outstanding career-to-date contributions to vertical flight technology. The award, created in 1992, honors the memory of a young helicopter engineer, Swiss citizen, author and rescue pilot who founded the AHS student chapter at the University of Michigan. This year the award was presented to Dr. Moble Benedict, Texas A&M University. His career-to-date spans vertical flight research, first as a graduate student and research scientist at the University of Maryland, and currently as an Assistant Professor at Texas A&M. He is one of the pioneers in micro air vehicle (MAV) technology — namely, aeromechanics design, autonomous controls and micro-sensors/actuators. His research has produced over 40 papers presented at leading conferences and 24 articles in key archival journals.

Grover E. Bell Award

Given for an outstanding research and experimentation contribution to the field of helicopter development brought to fruition during the preceding calendar year, this award was created in 1957 by Larry Bell, founder of Bell Aircraft (now Bell Helicopter). The award honors his pioneering older brother, Grover E. Bell, who was killed in an aircraft crash in 1913.

The Sikorsky S-97 Raider First Flight Team was recognized for the successful industry-funded, rapid-prototyping design and development of an entirely new aircraft, moving from conceptual design to first flight in less than five years. The prototype aircraft leveraged the technologies proven on the X2 Technology demonstrator, while strategically applying additive manufacturing technologies to transform their development manufacturing processes for critical



Left to Right: Technical Fellow Award Winners Prof. Olivier A. Bauchau, Christopher Blanken, Daniel Newman and Dr. Gloria Yamauchi, with Mick Maurer.



Mick Maurer and Dr. Moble Benedict, winner of the François-Xavier Bagnoud Vertical Flight Award.



Mick Maurer with with Sikorsky S-97 Raider team members Steve Cizewski, John Cox, Bill Fell, Mark K. Wilson, Mark Hammond, Dave Banquer, winners of the Grover E. Bell Award.

components. Through Sikorsky's collaborative "one team" approach, the first flight revealed the viability of designing, tooling, manufacturing, assembling and testing the next generation of prototypes.

Supplier Excellence Award

Created in 1995, this award is given in recognition of a supplier who, through the quality, innovativeness and cost-effective technology of its products, has made a notable contribution to improving the state of the art of vertical flight aircraft. The Triumph Group was selected for this year's award, which was accepted by corporate representatives Don Fowler and Pat Coward. The Triumph Group was lauded for "its outstanding performance on development programs at Sikorsky, specifically the design and build of the S-97 Raider landing gear and the build of the S-97 transmission." Triumph provided exemplary performance on multiple Sikorsky leading edge and innovative programs, being recognized as a Gold-Level Sikorsky supplier, something achieved by less than 2% of its companies.



Mick Maurer with Don Fowler and Pat Coward of The Triumph Group as they accept the Supplier Excellence Award.

Team was this year's recipient. Bristow Helicopters Ltd. and team members Sikorsky and Leonardo-Finmeccanica were honored for their extraordinary international cooperation in transitioning the UK maritime SAR mission from military to civilian responsibility. In April 2015, Bristow began conducting SAR missions on behalf of the United Kingdom's Maritime and Coastguard Agency. The UK SAR helicopter service employs a new fleet of specially-commissioned Sikorsky S-92 and AgustaWestland AW139 and AW189 SAR aircraft, and is responsible for all maritime and inland search and rescue. This entire effort has involved an extensive international team to design, develop and equip the aircraft, train the crews, and create and manage the logistics and operations systems. Accepting the award on behalf of the team were Jonathan Baliff, CEO, Bristow Helicopters Ltd.; Luca Medici, Head of Research and Technology, Leonardo Helicopters; and Mark Miller, Vice President of Research and Technology, Sikorsky Aircraft.

AgustaWestland International Fellowship Award



Mick Maurer with the UK Search and Rescue (SAR) Team, represented by Mark Miller, Jonathan Baliff and Luca Medici.

This award is given for the most significant contribution to international vertical flight cooperation by an individual or group. Established in 1989, the award honors the memory of Paolo Bellavita, whose career at Gruppo Agusta was marked by his dedication to furthering international cooperation in the world of vertical flight. The UK Search and Rescue (SAR)

Robert L. Pinckney Award



Mick Maurer congratulates Robert L. Pinckney winners Keith Stanney, Stan Unruh, Jim Simister, Robert Soulliere and Dr. Robert Benton, part of the V-280 Wing Development Team.

Given in recognition of notable achievement in manufacturing research and development for rotorcraft or rotorcraft components brought to fruition in recent years, this award was created by The Boeing Company in 1995 to honor the memory of Robert L. Pinckney, an eminent manufacturing engineer. This year's recipient is the V-280 Wing Development team, with members from Bell Helicopter, Leading Edge Aerospace, Kaman Composite Structures, KUKA Systems Corporation and the US Army Aviation Development

Directorate (ADD). From innovative product design to next-generation composite materials and fabrication processes, the V-280 wing design results in greater than 50% non-recurring cost savings and 57% recurring savings over legacy tiltrotor wings with a raw material utilization improvement of 25%. The improvement in material utilization translates not only to cost savings, but also “green credit” for reducing the volume of scrap material. The efficiencies demonstrated by the team are key enablers in achieving the affordability goals for future rotorcraft and set an example for future aerospace development programs with respect to reducing both recurring and non-recurring costs. Accepting the awards were Keith Stanney, Bell Helicopter; Stan Unruh, Leading Edge Aerospace; Jim Simister, Kaman Composite Structures; Robert Soulliere, KUKA Systems; and Dr. Robert Benton, US Army ADD.

Harry T. Jensen Award

This award is given for an outstanding contribution to the improvement of vertical flight aircraft reliability, maintainability and/or safety through improved design brought to fruition during the preceding year. Established by Sikorsky Aircraft in 1986, the award honors Harry Jensen’s contributions to enhance helicopter qualification, structural reliability and safety. This year the award is presented to the Sikorsky S-92 Program for an unprecedented one million hour safety record due to stringent transport category helicopter safety requirements developed by US and international regulatory authorities, groundbreaking safety features, an extraordinary commitment to safety by operators, and Sikorsky’s continued safety enhancement and fleet support.

Howard Hughes Award

Given for an outstanding improvement in fundamental vertical flight technology brought to fruition during the preceding year, the award is intended to foster



Mick Maurer and Howard Hughes Award Winners Ed Brouwers, Perry Ziegenbein, Jeff Coffman, Friedrich Straub and Lou Centolanza.

accomplishments in the basic science and technology disciplines of the vertical flight community. The award was established in 1977 by Hughes Helicopters to honor the memory of Howard Hughes and his pioneering accomplishments in aviation.

This year, the prestigious Hughes award went to the Multi-Role Rotor-Adaptive Performance (MRRAP) Team for demonstrating a new active rotor design that would increase rotorcraft hover and cruise performance while simultaneously reducing vibration and noise for current and future rotorcraft. The three-year Boeing/US Army program matured and demonstrated a new active rotor design and included full-scale testing of electromechanical actuators, fatigue testing of blade structural components, and ended with a quarter-scale wind tunnel test of the morphing blade. Blade twist changes of $\pm 10^\circ$ were routinely conducted during the wind tunnel test while the rotor was operating, representing a major improvement over previous morphing rotor technologies. Dr. Louis Centolanza, US Army ADD; and Edward Brouwers, Jeffrey Coffman, Friedrich Straub and Perry Ziegenbein of The Boeing Company accepted the award.

Frederick L. Feinberg Award

This award is presented to the pilot or crew of a vertical flight aircraft who demonstrated outstanding skills or achievement during the preceding year. The award, sponsored by the Kaman Corporation, honors the memory of an outstanding helicopter test pilot and an exemplary person. This year’s award was given to Troy Caudill, Bell Helicopter; in addition to flight testing the world’s first fly-by-wire commercial helicopter, Caudill was deeply involved in establishing the helicopter’s design requirements during initial development, testing the 525’s redundancy management architecture, assisted with certification plans, and coordinating 525 training for additional pilot staff as more aircraft are flying — three are currently in flight test.



Mick Maurer and Jensen Award winners Jim Munda (S-92 Chief Engineer), John Gendreau, Bert Howard, Dave Buyak and Paul Inguanti.



Troy Caudill is congratulated for winning the Frederick L. Feinberg Award by Kaman representative Jim Simister.

John J. Schneider Historical Achievement Award

Established in 2003 in memory of vertical flight historian John J. Schneider, this award is given to an individual for distinguished achievement in encouraging appreciation of, and enhancing access to, the history and legacy of vertical flight aviation. This year's award was presented to Dr. Bruce H. Charnov (right), Professor Emeritus, Hofstra University.



Dr. Charnov is a world-renowned expert on the history of rotary-wing aircraft with a specialization in autogyros and gyroplanes. During his tenure at Hofstra University, he performed world-class research on early rotary-wing aircraft and industry pioneers. In 2003, he directed a major conference at Hofstra entitled, "From Autogiro to Gyroplane: The Past, Present and Future of an Aviation Industry." That same year, he served as guest curator for the Hofstra Museum for an exhibit on autogyros and gyroplanes. For the last 10 years, he has served as the historical editor for Rotorcraft magazine, the official publication of the Popular Rotorcraft Association. In 2012, he wrote a 1,200+ page, four-volume history of PRA.

Vertical Flight Heritage Site Awards

The Vertical Flight Heritage Sites program is intended to recognize and help preserve locations with the most noteworthy and significant contributions made in both the



theory and practice of vertical flight aircraft technology. This year the committee selected two sites to be recognized for their historic significance.

Leonardo da Vinci's Studio, in Milan, Italy, was the site of the first known VTOL design (c. 1487). Although the exact location is not known, Leonardo di ser Piero da Vinci — while working for Ludovico Maria Sforza (il Moro), Duke of Milan — designed the Helix Aerial Screw, a flying machine capable of vertical take-off and landing using a hand-cranked rotating wing. The Helix is generally considered to be the first known engineering design for a manned helicopter. The award was accepted by Leonardo-Finmeccanica's Luca Medici (center) for the city of Milan. [Note: AHS announced the selection of this and our other awards on March 15, the same day that Finmeccanica announced that it was changing its name to Leonardo.]

Hammondsport, New York, was the site of the first VTOL flight in the US (1908). The experimental (tethered) coaxial helicopter of John Newton Williams, powered by an engine designed and built by Glenn Hammond Curtiss, lifted a person in vertical flight for the first time in the United States. This site, known as Kingsley Flats, hosted the work of Alexander Graham Bell's Aerial Experiment Association in the support of the Williams Helicopter experiments and testing from January to May 1908, resulting in this aeronautical first. The award was accepted by Paul Fardink (right) on behalf of the Glenn H. Curtiss Museum.

Captain William J. Kossler, USCG Award

This award is given for the greatest achievements during the preceding year related to the operation or application of a vertical flight aircraft. Established in 1951, the award honors the memory of a US Coast Guard airman, aeronautical engineer and early advocate of helicopters in search and rescue operations. This year, the Kossler Award was presented to the Crew of United States Coast Guard Helicopter 6027 for their heroic efforts.

On the night of Oct. 1, 2015, Coast Guard Florida Rescue Coordination Center received a distress call from a 212 ft (65 m) freighter that was rapidly taking on water approximately 60 miles (100 km) west of Haiti. Coast Guard Air Station Clearwater was contacted to dispatch their deployed crew operating out of Great Inagua, Bahamas. The crew of CG 6027, commanded by LT David McCarthy, copilot LT John Post, flight mechanic AMT2 Joshua Andrews and rescue swimmer Ben Cournia, responded to the call from the merchant vessel MV Minouche during the passage of Hurricane Joaquin.

CG 6027 launched into the poor visibility and winds



exceeding 50 kt (90 km/h) generated from Joaquin, a Category 4 storm whose eye was a mere 90 miles (145 km) away. Despite thick clouds and heavy rain that rendered both night vision goggles and radar nearly useless, the crew navigated the MH-60T Jayhawk helicopter to the stricken vessel whose captain had ordered his 12-person crew to abandon ship into 15 ft (5 m) seas. As the freighter slipped under the sea, CG 6027 located the struggling raft and immediately deployed the rescue swimmer to begin hoisting each survivor. After the eighth hoist, they returned to Great Inagua for fuel, navigating between imbedded thunderstorms. Upon touchdown, storm debris flew into the rotor system requiring a delayed turn-around, so that the aircraft could be inspected for damage. Undeterred, the crew flew back through the storm for the four remaining survivors. During the first hoist, the Flight Mechanic found damage to the hoist cable from the violent swinging action caused by high winds and turbulent seas. Not wanting to further endanger the rescue swimmer or the survivors, CG 6027 again flew back to Great Inagua, transferred into CG 6009, and returned to the scene for a third time to hoist the final three survivors. Battling fatigue after flying over seven hours at night, the crew again flew through gale force winds and heavy rain to deliver the last three survivors to safety. The crew's heroic actions were vital in saving a dozen lives. The AHS Kossler Award was accepted by LT John Post (center) and AMT2 Joshua Andrews (right).

Dr. Alexander Klemin Award

The Dr. Alexander Klemin Award is the highest honor the AHS bestows on an individual for notable achievement in advancing the field of vertical flight aeronautics. The award, created by Frank Piasecki in 1951, honors the memory of an eminent aeronautical engineer, educator and pioneer in rotary-wing aeronautics. This year the Society recognized Dr. William G. Warmbrodt (right), NASA Ames Research Center.

Dr. Warmbrodt is honored for outstanding technical accomplishments, managerial leadership and student mentoring in rotary-wing aeromechanics. He has spent his 35+ year career dedicated to improving understanding of aeromechanics of rotorcraft both from an analytical and experimental perspective, and to instilling the drive for further discoveries in those who will follow. His early technical work involved full- and small-scale experimental research into rotor dynamics, and analytical research into wind turbine and helicopter aeroelasticity, performance, loads, and



Mick Maurer congratulates Dr. William Warmbrodt on the Dr. Alexander Klemin Award.

active controls. Subsequently, he planned and managed critical portions of the NASA Rotorcraft Base and Systems Programs, the NASA Rotorcraft Focused Programs, the NASA Noise Reduction Programs, the NASA High Speed Rotorcraft Program, and the NASA Short Haul Civil Tiltrotor Program. In addition to his technical contributions, an important part of his legacy will be the more than 500 college and high school interns he has brought into the NASA Aeromechanics Branch in the last decade, mentoring many of them personally, and having a tremendous impact on the future of all of them, the next generation of vertical flight engineers.

AHS Honorary Fellow Award

Honorary Fellow status is granted to highly distinguished Society members who have made exceptional leadership, innovative or technical contributions that have significantly advanced AHS International and the vertical flight community during their career. The Society honored COL (Dr.) Arvind Kumar Sinha, Director of Engineering, Helicopter Systems Division, Capability Acquisition and Sustainment Group, Department of Defence Australia; and Steven D. Wiener, Chief Engineer for the Sikorsky-Boeing Joint Multi-Role (JMR) Rotorcraft and Chief Engineer of Innovations at Sikorsky.

Dr. Sinha has had an extensive, successful career in support of military helicopters. Both in India and Australia, he has been exceptional in his passion and commitment to making aircraft more effective and safer. Sinha has been leading AHS activities since 2000, serving variously as the President of the AHS Australia Chapter, the principal organizer of numerous AHS and other technical conferences, and Director of the Asia-Australia Region on the AHS International Board of Directors. A former professor and director of the Aerospace and Aviation Research Centre at Royal Melbourne Institute of Technology, he holds two undergraduate and three postgraduate degrees, and a PhD in aerospace engineering. He has been in active military service as an engineering officer and combatant paratrooper for over two decades.

Weiner, an active AHS member since 1976, has provided significant leadership in the design, build and test of many of the highest performance helicopters ever flown. Among numerous other accomplishments, Wiener was instrumental in the development of technologies for the RAH-66 Comanche



Honorary Fellows COL Dr. Arvind Sinha (left) and Steven Weiner (right).

and personally led the technical activity that successfully demonstrated the 252 kt (467 km/hr) Collier Award-winning X2 Technology Demonstrator. He holds two master's degrees, as well as eight patents related to Fantail anti-torque systems and X2 Technology.

Passing of the Gavel



Mick Maurer (left) was presented an honorary engraved gavel plaque for his outstanding service as the AHS International Chair of the Board by Mike Hirschberg (right).

Mick Maurer thanked the AHS staff and all the committee members, authors and other members who made Forum 72 such a great success. Maurer articulated the tremendous contributions that vertical lift provides to the world from saving lives as exemplified in several of the awards presented, disaster relief, medevac, support of the US militaries and its allies, to providing transport to workers employed in places that would be otherwise almost impossible to get to. AHS International fosters collaboration within the

technical community to enhance the capabilities of vertical lift serving present and future needs. Maurer noted that he was honored to have served on AHS International's Board of Directors Executive Committee for the past three years, which reinforced for him the great value that AHS makes to the vertical lift community.

Jean-Brice Dumont, Chief Technology Officer and Executive Vice President of Engineering, Airbus Helicopters, is the incoming Chair of the Board of AHS International; as he was unable to attend the banquet, Mike Hirschberg recognized Maurer's outstanding work on behalf of the Society as AHS Board Chair, and Chair of the AHS Awards Committee. Hirschberg thanked Maurer for having led the AHS Board with a great deal of passion, advocating for the Society across the industry. Maurer was presented an honorary engraved gavel plaque in recognition of his efforts on the AHS International Board.



For more photos, check out our gallery at www.vtol.org/qr/forum-72 or scan this QR code!



History Committee Award

The AHS History Committee makes this award annually for the best historical paper presented at the Forum. It is meant to encourage authors to research and publish papers that capture the rich and continuing history of vertical flight. This year's recipient of the prestigious honor is Dr. Berend G. van der Wall (right) for his paper "Göttinger Monograph N: A Historic Document is Back." Dr. Bruce Chernov (left) presented the award to Dr. van der Wall during the History Session.



Student Design Competition

Each year for the last 32 years, an AHS corporate member has sponsored the Annual Student Design Competition. The sponsor for the 2014/2015 was The Boeing Company. The request for proposal was "Distributed Logistics in an Urban Setting Using Small Unmanned Aerial Vehicles." Such a system of vehicles has been seen as having positive impacts in both the commercial marketplace, where on-demand delivery is a premium service, and the military where getting supplies to the point-of-the-spear quickly and efficiently by air has been shown to improve military effectiveness and reduce soldier exposure to enemy forces.

The winning Graduate Level proposal, "AirEZ," was presented at Forum 72 by Stacy Sidle, University of Maryland. The Undergraduate Level winning proposal was "Air Buzz," presented by Chelsea Fuller and Caitlin Berrigan, Georgia Institute of Technology.