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CANADIAN AERONAUTICS AND SPACE INSTITUTE ANNOUNCES
2011 SENIOR AWARD HONOUREES

Mr. Ron Holdway, President of the Canadian Aeronautics and Space Institute for 2010-11, announced today the recipients of the 2011 CASI Senior Awards. The Awards will be presented at the annual Gala Dinner during the CASI AERO’11 Conference, being held at the Delta Centre-ville Hotel in Montreal on the evening of April 27, 2011.

The Awards and the recipients are:
1. Trans-Canada (McKee) Trophy
   Cameron Robertson and Todd Reichert
2. C.D. Howe Award
   Mr. William Brenton Boggs
3. McCurdy Award
   Professor W.G. (Fred) Habashi
4. Alouette Award
   Dr. Allan B. Hollinger
5. Roméo Vachon Award
   Maj Dwight Bazinet

The criteria for each of the Senior Awards presented and the credentials of the recipients follow. For more information, contact the headquarters of the Canadian Aeronautics and Space Institute at (613) 591-8787.

. . . details on the following pages . . .
The Trans-Canada (McKee) Trophy

The Trans-Canada Trophy, generally known as the McKee Trophy, is the oldest aviation award in Canada. It was established in 1927 by Captain J. Dalzell McKee. In 1926 McKee, of Pittsburgh, Penn. accompanied by Squadron Leader Earl Godfrey of the RCAF, flew from Montreal to Vancouver in a Douglas MO-2B seaplane. McKee was so impressed by the services provided by the RCAF and the Ontario Provincial Air Service that he established an endowment by means of which the greatly coveted McKee Trophy is awarded to the Canadian whose achievements were most outstanding in promoting aviation in Canada.

The Trophy was deeded to the Crown in the person of the Minister of National Defence - in the days when the Department of National Defence controlled all flying, military and civil. It was retired in 1964 and reinstated in 1966, and in 1971 administration of the Trophy was transferred to the Canadian Aeronautics and Space Institute. From 1964 until its move to Canada's Aviation Hall of Fame in 1983, the Trophy was on display at the National Museum of Science and Technology in Ottawa.

The Trophy is awarded for outstanding achievement in the field of air operations. The achievement for which the Trophy is awarded may be a single brilliant exploit within the past year, or a sustained high-level performance in recent years; pioneering of new areas of air operations and advancement of the use of aviation shall receive consideration over achievements serving no useful end. Qualifications as aircrew shall be a prior claim to consideration. The recipient shall have been a Canadian citizen at the time of the achievement.

Mr. Todd Reichert and Mr. Cameron Robertson

Todd Reichert and Cameron Robertson succeeded in designing, building, and flying the Snowbird,a human-powered ornithopter that completed several sustained flights on July 31 and August 2, 2010. On the longest flight the altitude and airspeed were maintained for 19.3 seconds, setting a world first and achieving the dream of human-powered flapping wing flight first imagined by Leonardo Da Vinci. Although this can be described as a single brilliant exploit, it is also the result of a sustained, high-level performance.

The achievement of this goal required an incredible amount of dedication, perseverance, effort and ability. It took over three years and involved a larger team including Prof. Emeritus James Delaurier, but Todd and Cameron were by far the key drivers. Symbolic of the effort put in is the fact that Todd's exercise and weight loss program in preparation for the flights caused him to lose 18 lbs. It is also important to acknowledge the phenomenal engineering ingenuity involved in producing this aviation first, particularly in the areas of lightweight structures and flapping-wing aerodynamics.
The description of the McKee Trophy indicates that pioneering of new areas of air operations and advancement of the use of aviation shall receive consideration over achievements serving no useful end. The achievement of Todd and Cameron is a truly pioneering advancement that serves several useful ends. It produced several novel technical developments in the areas of lightweight structures and flapping-wing propulsion. Moreover, the most important useful end from this project is the inspiration it has provided to countless young Canadians. It has brought outstanding positive publicity internationally to the Canadian aviation sector and to the University of Toronto Institute for Aerospace Studies.

In modern aviation, firsts are increasingly rare and difficult. This particular first absolutely deserves to be celebrated and recognized through the Trans-Canada (McKee) Trophy.
**McCurdy Award**

The McCurdy Award was introduced in 1954 by the Institute of Aircraft Technicians, one of the aeronautical groups that amalgamated to form the Canadian Aeronautics and Space Institute. The award commemorates the many engineering and other contributions made by John A.D. McCurdy during the first stages of the development of an aviation industry in North America.

The award is presented for outstanding achievement in the science and creative aspects of engineering relating to aeronautics and space research. The achievement must constitute the most significant contribution made in recent years toward the advancement of science and technology in aeronautics and space exploration, and must be worthy of special recognition. The contribution may be administrative in nature, but it must be directly related to science and technology, and have been sustained over a number of years at an imaginative and creative level above that which would normally be considered a competent and successful performance. The recipient shall have been a Canadian citizen at the time the contribution was made.

**Dr. Wagdi G. (Fred) Habashi**

Dr. Fred Habashi has been one of the most prominent, innovative and productive Canadian researchers and developers of computer codes for computational fluid dynamics (CFD) in the aerospace domain.

During the 1980s and early 1990s, while Fred was with Concordia University, he worked in close collaboration with Pratt & Whitney Canada (PWC) to develop finite-element computer codes for solution of the flows that prevail inside gas-turbine engines. Flows in gas-turbine engines are particularly complex and difficult to compute because they are compressible, involve large enthalpy changes, are dominated by viscous effects and are often unsteady. The only equations which can properly deal with such flows are the Navier-Stokes equations, solution of which presented large challenges to the worldwide CFD community especially with the relatively limited computational resources available 20 and more years ago. Fred Habashi and his students developed a world-leading finite-element computer code (FENSAP) which was (and perhaps still is) extensively and successfully used by PWC in its design and development work. The FENSAP code was certainly the most advanced and capable code to be developed in Canada during that time and was also one of the best in the world. It kept Canada 'on the map' in terms of worldwide CFD research and development.

In-flight icing of aircraft is considered by many to be the main unresolved safety issue in aeronautics. In the mid-1990s Fred Habashi turned his attention to computation of in-flight icing phenomena. So-called panel methods were used to solve the inviscid incompressible flow
equations and trajectories of hundreds of individual supercooled water droplets had to be computed to determine where and in what quantities they would impinge on an aircraft wing. Fred Habashi precipitated a revolution in de-icing codes by adapting his computational technology to the icing problem. Suddenly the international icing community was presented with a second-generation icing code (FENSAP-ICE) which solved the full Navier-Stokes equations and, moreover, sidestepped the need to compute hundreds of individual droplet trajectories by instead solving a single additional partial differential equation. This field-equation, or Eulerian, approach to solving the impingement distribution was highly original and innovative. In Canada, Bombardier Aerospace, in collaboration with Dr. Habashi, is adopting his methodologies to replace the first-generation icing code that it formerly used. The international icing community is also shifting to Dr. Habashi’s approach. Moreover, as indicated in some of the other supporting statements, Dr. Habashi continues to make innovative and groundbreaking contributions.

The McCurdy Award is presented for outstanding achievement in the science and creative aspects of engineering relating to aeronautics and space research. W.G. (Fred) Habashi’s contributions to CFD applications in gas turbine engines and to computation of in-flight icing phenomena are truly outstanding and worthy of special recognition, as represented by the McCurdy Award.
C.D. Howe Award
In 1966 CASI introduced the C.D. Howe Award in honour of The Right Honourable C.D. Howe. The Award is presented for achievements in the fields of planning and policy making, and overall leadership in Canadian aeronautics and space activities.

The achievement for which the award is given shall be of permanent significance, and its benefits to aeronautics and space activities in Canada shall have been unquestionably established. To this end, the recipient shall have sustained an outstanding personal performance in these fields for at least ten years and it shall be reasonably certain that the merits of his achievements will be unassailable in the light of history. The recipient shall have been a Canadian citizen and resident during the time the contribution was made.

Mr. William Brenton Boggs IV
Born in Douglas, Arizona, USA in 1918, Bill Boggs relocated to Noranda, Quebec with his parents in the late 1920’s. He graduated from McGill University with a degree in Engineering, winning the silver medal, and became an Engineering Officer of the Royal Canadian Air Force in 1940. During his World War II service, he notably served as Senior Engineering Officer of 331 Wing of Wellington bombers, which were dispatched from Algeria, North Africa and bombed Sicily and Italy. For his outstanding contribution he was made an Officer of the Order of the British Empire (O.B.E.) in 1944.

His early career included positions with Trans-Canada Airlines (1945-1950) and Canadair (1950-1957) before he joined Can-Car, a subsidiary of Hawker Siddeley Canada, and became Vice President of Hawker Siddeley Canada. In 1965, he became President of de Havilland Canada (DHC). During his term, he began the development of the 30-seat DASH-7 commuter aircraft. He then became founding President of Canada Systems Group (CSG), building the company into the largest computer services company in Canada.

In 1984, he was invited back to de Havilland Canada (DHC) in the capacity of Chairman, President and CEO when the company was being prepared for privatization. Boeing Company bought DHC in 1986 and Bill Boggs became Vice Chairman of Boeing Canada. In 1987, he became Chairman of Field Aviation Holdings Inc. and remained there until he retired in 1995.

In addition to being made an Officer of the Order of the British Empire, Bill Boggs was invested as an Officer of the Order of Canada in 1988. He became a fellow of the Canadian Aeronautics and Space Institute (CASI) in 1967. In 1983, he was named Fellow of the Canadian School of Management and in 2003 he was inducted into Canada’s Aviation Hall of Fame. He was considered a pioneering Canadian leader in military and commercial aviation.
Bill Boggs actively participated in his community and sat on many corporate and charitable boards. He served twice as Chairman of the Aerospace Industries Association of Canada and Chairman of the Canadian Manufacturers’ Association. He was a board member of the Canadian National Exhibition, Magna International and Guardian Insurance; President of the National Club; and Chairman of the Board of Directors of the Toronto Symphony Orchestra. Latterly he was a founding partner of Eden Manor where he resided in his final years.

William Brenton Boggs IV passed away on Jan. 7, 2011 at the age of 92. His life was characterized by humility, dedication and excellence in everything he did, and for his many years of service and contributions to aerospace in Canada, he is nominated as the recipient (posthumous) of the 2011 C.D. Howe Award.
Alouette Award

The Alouette is an award introduced to recognize an outstanding contribution to advancement in Canadian space technology, application, science or engineering. It may be awarded to an individual, to a group, an organization or group of organizations, as appropriate to the nature of the contribution. The terms are:

a) The trophy shall be awarded annually for an outstanding achievement in the field of astronautics as defined by the CASI By-Laws.

b) The achievement may be either a single outstanding contribution or, in the case of an individual nominee, a sustained high level of performance resulting in several advances in space.

c) The contribution on which the award is based must be recognized as a Canadian-led space endeavour or as a significant Canadian contribution to an international program.

d) Preference shall be given to contributions that lead to new benefits for mankind.

The recipient shall have been a Canadian citizen at the time the contribution was made.

Dr. Allan Hollinger

Dr. Allan Hollinger has made outstanding contributions to the advancement of Canadian space technology, applications and engineering during a career that spans more than 30 years as an expert and lead in developing Canada’s optical spacecraft payloads.

Allan Hollinger was associated with the Institute for Space and Terrestrial Science (now the Centre of Excellence for Earth and Environmental Technologies) from its inception. As the Manager of the Electro-Optics laboratory, he was responsible for budget, for staffing and for the planning and conduct of activities within the laboratory. He established two completely new facilities: one for the calibration and performance evaluation of electro-optical systems and the second to evaluate the characteristics of advanced focal plane arrays. He was responsible for strengthening industry-university ties and was an active participant in the Institute’s management.

Alan Hollinger joined the Canadian Space Agency and initiated the Canadian satellite hyperspectral program in 1995. He led the Phase 0 and Phase A development of the Canadian Hyperspectral Environment and Resource Observer (HERO) mission. Prior to the start of the mission study work, he evaluated and prioritised various technical options emphasizing those that can best be developed in Canada.
He initiated and contributes to an internal R&D project to study the application of on-board near lossless data compression techniques to the next generation of hyperspectral sensors. This work is critical to such systems, as data rates can easily exceed the available communication channel capacity, and it has led to the granting of six US patents.

Dr. Hollinger has had many scientific assignments and responsibilities at CSA, including major roles on the SWIFT instrument program to measure wind velocities in the stratosphere, and the Near Earth Object Surveillance Satellite program. As an expert in optical payloads, he has also contributed to missions such as MOPPITT and OSIRIS and he was a co-Investigator on the Boreal Ecosystem Atmosphere Study program. He is currently the Meteorological Payload Manager of the Polar Communications and Weather (PCW) satellite mission. This mission will carry a meteorological payload (optical payload) and communications payload on each of two satellites that will provide quasi-continuous weather coverage of the circumpolar region - data which is unavailable from geosynchronous satellites.

Allan Hollinger's responsibilities at CSA have also covered the full cycle of research management: strategic planning, preparation of statements of work, review of technical and management proposals, guidance, participation and review of the work as it progresses and planning of subsequent work. He has provided overall direction for these activities, placing them in the context of the CSA mandate, and of international development and future R&D activity.

Dr. Hollinger shared the Canadian Government Inventor Award in 2004. He is co-holder of seven patents and has contributed to 120 publications and technical reports. For his long and dedicated career in the Canadian space sector and his many brilliant accomplishments, Allan Hollinger is nominated to be the recipient of the 2011 CASI Alouette Award.
The Roméo Vachon Award

The Roméo Vachon Award was introduced in 1969 by the Canadian Aeronautics and Space Institute in memory of one of Canada’s outstanding bush pilots.

It is presented for outstanding display of initiative, ingenuity and practical skills in the solution of a particular challenging problem or series of challenging problems in aeronautics and space activities in Canada. The achievement for which the award is given shall be of technological nature, particularly practical skills, not necessarily in the scientific or engineering fields. The recipient shall have been a Canadian citizen at the time the contribution was made.

Capt Dwight Bazinet

As a former Chief of the Air Staff, I have had the distinct pleasure to observe the innovativeness and ingenuity of many of Canada’s finest aeronautical technicians and aviators. While the complexity of the aerospace field demands high-level technical and scientific skills that are usually only available in large commercial enterprises and engineering support units, it is a little known fact that much of the truly remarkable innovation that drives progress actually occurs in the front line wings and squadrons of the Air Force. This innovation is often the product of talented individuals working on their own, with few resources, but a strong commitment to their vision of progress. These rare individuals are huge force multipliers, able to quantify and address challenges in a direct and immediately productive manner, and able to work independently to invent, fabricate and implement practical solutions to problems that would confound more specialized personnel.

Capt Bazinet is just such a person, and the outstanding results he has achieved to date with his Augmented Surface Plot (ASP) tactical computer project mark him as a uniquely capable aviator and technical expert. With my own background in Sea Kings, I have personally known Capt Bazinet for many years and can attest to his dedication, focus and unwavering determination to contribute to the effectiveness of the Canadian Forces.

Though the design and implementation of the ASP tactical navigation system is impressive in itself, what is truly remarkable is the linkage that Capt Bazinet maintained from the outset between his work, and the future of Canada’s Maritime Helicopter capability as it transitions to the CH148 Cyclone in the next few years. Understanding the pivotal roles technology and procedures play during difficult transitional periods, Capt Bazinet always viewed the ASP effort as much more than a simple technology demonstrator. Instead, he modeled and adhered to process discipline in such domains as software change management, hardware configuration control, and built-in training philosophy.
In doing so, he created opportunities for the personnel of 12 Wing to begin to learn essential lessons in agile development and modern aircraft avionics, well in advance of the introduction of the Cyclone into service.

By his past record, and by the results he achieved with the most recent series of ASP flight trials, it is clear that Capt Bazinet is an individual of rare high quality. Coupled with his relentless quest for excellence in operations, and his obvious focus on the future of Canada’s Maritime Helicopter capability, he personifies what it means to be an innovator and technical leader and is hereby nominated to be the recipient of the 2011 CASI Roméo Vachon Award.

For more information, contact Geoffrey Languedoc at CASI Headquarters