



**ROYAL
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SOCIETY**
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<https://www.facebook.com/groups/RAeSSydney/>

NEWSLETTER

Astronaut Stories Australia

Dr. Sandy Magnus



Col. Pam Melroy



Date: **Thursday 21st September, 2017**

Time: **18:00 for 18:30 hours**

Venue: **Abercrombie Business School Lecture Theatre (Map Ref H70)**

University of Sydney (Attendance for the evening will attract 2.5 CPD hours.)

SYNOPSIS: Astronaut Stories Australia - Joint meeting with AIAA, AYAA, RAeS, University of Sydney, and supported by The Powerhouse Museum. Join us for an evening of astronaut stories, a free public event. You are invited to listen and ask your questions to our astronaut panel. The panel will be mediated by Author, Radio host, Science communicator and astronomer Fred Watson. Please register: <https://astrostoriessyd.eventbrite.com.au>

PROFILES: **Dr. Sandra H. "Sandy" Magnus** is the Executive Director of the American Institute of Aeronautics and Astronautics (AIAA), the world's largest technical society dedicated to the global aerospace profession. Born and raised in Belleville, Ill., Dr. Magnus attended the Missouri University of Science and Technology, graduating in 1986 with a degree in physics and in 1990 with a master's degree in electrical engineering. She received a Ph.D. from the School of Materials Science and Engineering at Georgia Tech in 1996. Selected to the NASA Astronaut Corps in April, 1996, Dr. Magnus flew in space on the STS- 112 shuttle mission in 2002, and on the final shuttle flight, STS-135, in 2011. In addition, she flew to the International Space Station on STS-126 in November 2008, served as flight

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engineer and science officer on Expedition 18, and returned home on STS-119 after four and a half months on board. Following her assignment on Station, she served at NASA Headquarters in the Exploration Systems Mission Directorate. Her last duty at NASA, after STS-135, was as the deputy chief of the Astronaut Office. While at NASA, Dr. Magnus worked extensively with the international community, including the European Space Agency (ESA) and the Japan Aerospace Exploration Agency (JAXA), as well as with Brazil on facility-type payloads. She also spent time in Russia developing and integrating operational products and procedures for the International Space Station. Before joining NASA, Dr. Magnus worked for McDonnell Douglas Aircraft Company from 1986 to 1991, as a stealth engineer. While at McDonnell Douglas, she worked on internal research and development and on the Navy's A-12 Attack Aircraft program, studying the effectiveness of radar signature reduction techniques. Dr. Magnus has received numerous awards, including the NASA Space Flight Medal, the NASA Distinguished Service Medal, the NASA Exceptional Service Medal, and the 40 at 40 Award (given to former collegiate women athletes to recognize the impact of Title IX*).

*Title IX of the Education Amendments Act of 1972 is a short and simple federal law:

"No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance."

The law applies to educational institutions that receive any federal funds and prohibits discrimination in all educational programs and activities, not just athletics. Athletic programs are considered educational programs and activities. Title IX gives women athletes the right to equal opportunity in sports in educational institutions that receive federal funds, from elementary schools to colleges and universities.

Col. Pam Melroy graduated from Bishop Kearney High School in 1979. She received a bachelor's degree in physics and astronomy from Wellesley College in 1983. She then earned a master's degree in earth and planetary sciences from the Massachusetts Institute of Technology in 1984. On May 18, 2008 Col. Melroy received an honorary degree from Iona College in New Rochelle, NY.

Col. Melroy was commissioned through the Air Force ROTC program in 1983. After completing a master's degree, she attended Undergraduate Pilot Training at Reese Air Force Base in Lubbock, Texas and was graduated in 1985. She flew the KC-10 for six years at Barksdale Air Force Base in Bossier City, Louisiana, as a co-pilot, aircraft commander and instructor pilot. Col. Melroy is a veteran of Operation Just Cause and Operation Desert Shield/Desert Storm, with over 200 combat and combat support hours. In June 1991, she attended the Air Force Test Pilot School at Edwards Air Force Base, California. Upon her graduation, she was assigned to the C-17 Combined Test Force, where she served as a test pilot until her selection for the astronaut program. She has logged over 5,000 hours of flight time in over 50 different aircraft. Col. Melroy retired from the Air Force in February 2007.

Selected as an astronaut candidate by NASA in December 1994, Col. Melroy reported to the Johnson Space Centre in March 1995. She completed a year of training and evaluation and was qualified for flight assignment as a shuttle pilot. Initially assigned to astronaut support duties for launch and landing, she also worked Advanced Projects for the Astronaut Office. She also performed CAPCOM duties in mission control. Melroy served on the Columbia Reconstruction Team as the lead for the crew module and served as deputy project manager for the Columbia crew survival investigation team. In her final position, she served as branch chief for the Orion branch of the Astronaut Office. Col. Melroy served as pilot on two flights (STS-92 in 2000 and STS-112 in 2002), and was the mission commander on STS-120 in 2007, making her the second woman to command a space shuttle mission (after Eileen Collins). Col. Melroy made history with Expedition 16 Commander Peggy Whitson in October 2007 when the hatches between the space shuttle and space station were opened. They became the first female spacecraft commanders to lead the space shuttle and space station missions concurrently. She has logged over 924 hours (over 38 days) in space. Since retiring as an astronaut in 2009 Col. Melroy has taken on many interesting roles. First as Deputy Program Manager, Space Exploration Initiatives with Lockheed Martin. Then in 2011 she joined the Federal Aviation Authority in the Office of Commercial Space Transportation as a senior technical advisor. As of 2013, she serves as Deputy Director, Tactical Technology Office, at the Defence Advanced Research Projects Agency.

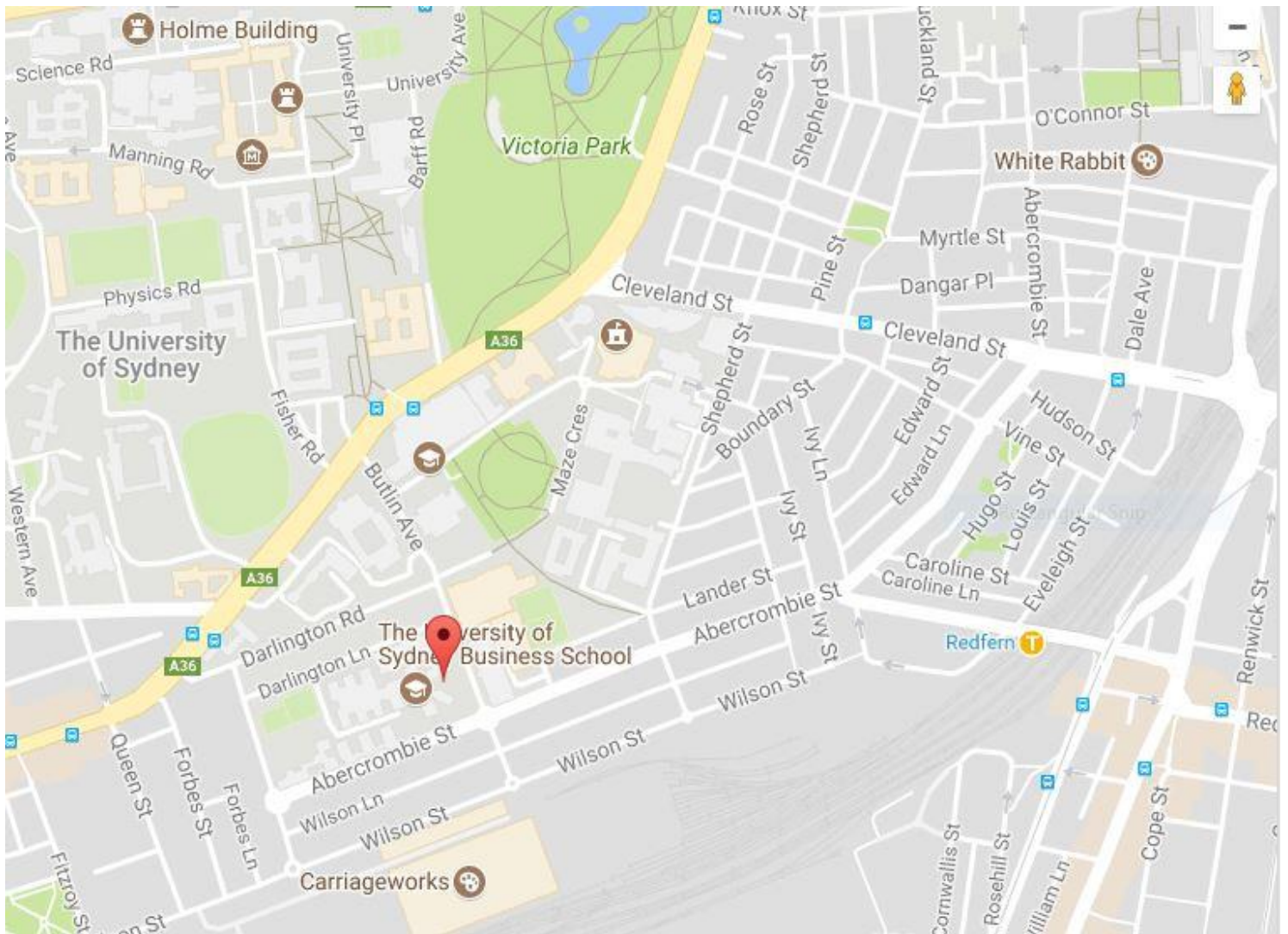
Col. Melroy is the recipient of the Air Force Meritorious Service Medal, First Oak Leaf Cluster; Air Medal, First Oak Leaf Cluster; Aerial Achievement Medal, First Oak Leaf Cluster and Expeditionary Medal, First Oak Leaf Cluster, the NASA Distinguished Service Medal and the NASA Outstanding Leadership Medal.



Fred Watson comes from a long line of Freds, but was the first in his family to become a scientist. Known for pioneering the use of fibre optics in astronomy during the 1980s, he has been an astronomer at the Australian Astronomical Observatory since 1995. Fred is best known for his radio and TV broadcasts, talks, and other outreach programs, which earned him the 2006 Eureka Prize for Promoting Understanding of Science. He has written a number of popular astronomy books, and has both a science-themed CD and an award-winning symphony libretto to his name. Fred holds adjunct professorial positions at five Australian universities, and was made a Member of the Order of Australia in 2010 for his contributions to astronomy and space science. He has an asteroid named after him (5691 Fredwatson), but says that if it hits the Earth, it won't be his fault.

RSVP: Whilst attendance is free - registration for the evening **is required**. Please register by clicking on/copying and pasting into your URL this link: <https://astrostoriessyd.eventbrite.com.au> Your registration will be confirmed by email with an attached ticket. **Please print the ticket and present the ticket at the door.** Any member who does not have access to the internet can send a letter to Mr Jeff Lock, 4 Hillcrest Place, North Manly NSW 2100 with your name (plus names of accompanying persons), membership number or state 'Friend' if you are a Friend of the Branch, and phone number.

Venue map (copy and paste address into your browser): <http://sydney.edu.au/maps/campuses/?area=CAMDAR>
Scroll down the 'Building Bar' on the left hand side to: **Abercrombie Building H70** and click.



Parking: is available in the Shepherd Street multi-story car park, located on the corner of Cleveland St and Shepherd St. The rate is \$2 per hour (up to \$6 maximum), but note that only gold coins are accepted in some machines. Parking is also available in University of Sydney On-Campus Parking for \$2 per hour (up to \$6 maximum). Additionally, free parking is available in surrounding streets. Please

observe parking restrictions and allow time to drive to the University of Sydney, park, and walk to the venue.

Public Transport: The closest train station is Redfern station, which is a 10 minute walk away from the venue. From Railway Square near central station any 42X bus (e.g. 422, 426...) and the M30 will take you to the University of Sydney (on City Road). Please allow time to travel by public transport, including waiting time, and time to walk to the venue. Please refer for further details: <http://www.sydneybuses.info/routes/timetables-route-maps>

Membership Information: Annual memberships commence at only \$145 or \$28 for Students (but free for the first year). Being a member helps us sustain a vibrant activities programme and opens the way to access restricted 'member-only' events. For further details refer: <https://www.raes.org.au/index.php/membership/2014-11-02-00-22-30/become-a-member>

Closed Member Only Group on Facebook: Sydney branch is trialling a live video streaming service of monthly branch lectures. Watch lectures live or at a later time, at the "Royal Aeronautical Society - Sydney Branch - Members Only" group within Facebook. Please note that this service is only available to financial members of the Royal Aeronautical Society.

Aerospace Websites: www.57rescuecanada.com : Follow Capt. Karl Kjarsgaard's adventures to recover Halifax bomber LW170 which is resting beneath 5000ft of water off the Irish coast;
www.adastron.com/707/updates/updates.htm : Diary of Boeing 707-138B XBA formally Qantas EBA.
www.airshow.com.au www.atsb.gov.au
www.aviationmuseum.com.au - Temora Aviation Museum;
<http://boxkite2014.org/book/book.htm> : The Boxkite project.
https://en.wikipedia.org/wiki/Rolls-Royce_Trent
<http://hars.org.au/> Historical Aircraft Restoration Society
<https://herox.com/SpacePoop> The Space Poop Challenge
www.powerhousemuseum.com/whatson
<https://qfom.com.au/> Qantas Founders Museum, Longreach, Qld
<http://www.singaporeairshow.com/>



2017 Diary: Sept 25-29: The 68th International Astronautical Congress – *Unlocking imagination, fostering innovation and strengthening security*-- is being held in Adelaide. Thousands of scientists, including some 200 astronauts, will participate in the international space congress. The global economy and security of many nations depends on assured and secure access to satellites that provide communications, timing and navigation services and remote sensing data. Refer details at: iac2017.org/

Sept 28-29: The UNSW School of Aviation is presenting a two day short course for year 10 to 12 students interested in a career in the aviation industry – 28-29 September. **Registration and payment of \$20 must be completed by 27th Sept.** Refer details: www.trybooking.com/272033

Oct 6-7: Christine Negroni will be promoting her book, [The Crash Detectives](#) in Sydney as follows: **GleeBooks**, 18:30 hours October 6 · 49 Glebe Point Road. *Free with advance registration required +61 (02) 9660 2333 or events@gleebooks.com.au* and the **Powerhouse Museum** 14:00 hours October 7 · 500 Harris Street Ultimo. *Free with advance registration required <https://maas.museum/whats-on/#/>* These events will include lively discussion and your input would certainly add to the conversation.

Oct 18: 59th Sir Charles Kingsford Smith Memorial Lecture to be delivered by Jayne Hrdlicka, Chief Executive Officer, Jetstar. Venue Powerhouse Museum, Ultimo.

Oct 18: Women in Aviation/Aerospace Australia **Victoria** Summit. Refer details: www.aviationaerospace.org.au

Nov 14-16: 5th International Conference on Aerospace Science & Engineering (ICASE). Refer details: www.ist.edu.pk/icase

Nov 20-01 Dec: The UNSW is running an accident investigators short course which is a two week course that will provide an introduction into aircraft accident investigation as well as counting towards

one of the UNSW post graduate programs. **The closing date for applications is 15 October, 2017.** For further details please contact: Sasha Robinson, Course Coordinator, Email: aviationshortcourse@unsw.edu.au Tel: + 61 2 9385 6767

Nov 29: To be confirmed.

Sept 9-14, 2018: 31st Congress of the International Council of the Aeronautical Sciences, Belo Horizonte, Brazil. Call for papers (abstracts only) close 15th July, 2017. Refer details: <http://icas.org/media/ICAS2018CallforPapers.pdf>

Feb 9, 2019: The fiftieth anniversary of the first Boeing 747 flight.

July 20, 2019: The fiftieth anniversary of the first men walking on the moon.

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