



THE AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

The San Diego Section Presents:



# AIAA Reception and Tour Allied Aerospace Low Speed Wind Tunnel With David Sanford



Allied Aerospace Industries (formerly Micro Craft), continues the operation of the Low Speed Wind Tunnel (LSWT) in San Diego. Consolidated Vultee (Convair) began groundbreaking on the facility in October 1944 and operated the LSWT until 1961, at which time Convair became a part of the General Dynamics Corporation. General Dynamics Convair Division (and later Lockheed) operated the facility until Micro Craft took over operation in January of 1994. Micro Craft was subsequently sold in 1999 and the facility is now operated by Allied Aerospace Industries.

The first wind tunnel test performed was in 1947 on a 1/5 scale semispan model of a horizontal tail of a flying boat. To date, the facility has conducted nearly 100,000 hours of testing and has been used extensively for the development of the F106, B58, F-111, F-16, A-12, as well as the Tomahawk and Advanced Cruise Missile programs. In addition, the facility has been used for low speed flutter testing on Boeing commercial aircraft from the 707 to the 777. Recent test programs have included: the Joint Strike Fighter, X31, and X37 for Boeing; several business jets for Cessna; the Global Hawk, MALD, and MALI for Northrop Grumman Ryan Aeronautical Systems; several missile programs for Raytheon; and the T-50 trainer for Korea Aerospace Industries.

The LSWT is a closed-return atmospheric wind tunnel capable of testing at Mach numbers up to 0.35. The test section is 8 feet high and 12 feet wide and 15 feet long with 18-inch fillets in each corner housing florescent light banks. A 106-inch diameter steel turntable is mounted in the test section floor. Power is provided by a 2,250-horsepower synchronous electric motor, which drives a 20-foot diameter, six-bladed wooden propeller at RPMs up to 850.

**David Sanford** has been the Wind Tunnel Engineering Manager for Allied Aerospace Low Speed Wind Tunnel since November. He is responsible for the daily operation of the wind tunnel. From June 1886 until November 1992 he worked as the Senior Engineer in the Model Test Department for the General Dynamics Fort Worth Division. There he functioned as the lead on wind tunnel test projects including National Aerospace Plane, Advanced Tactical Fighter, and numerous Special Projects. David Sanford received a BS in Aerospace Engineering from Mississippi State University in May 1986.

**Where:** Allied Aerospace Industries (refer to directions and map on reverse side)  
**When:** Friday, 3 May 2002  
**Time:** 6:00 p.m. – 7:00 p.m.      **Cost:** \$3.00

Mail Reservation Slip by April 27<sup>th</sup> to: Chris Root, 5426 Wellesley Street East, La Mesa CA 91942. Make Checks Payable to **AIAA San Diego Section**. You can also email your reservations to Chris Root at [rootcb@navair.navy.mil](mailto:rootcb@navair.navy.mil) and pay at the door.

**Special Happy Hour Invitation:**

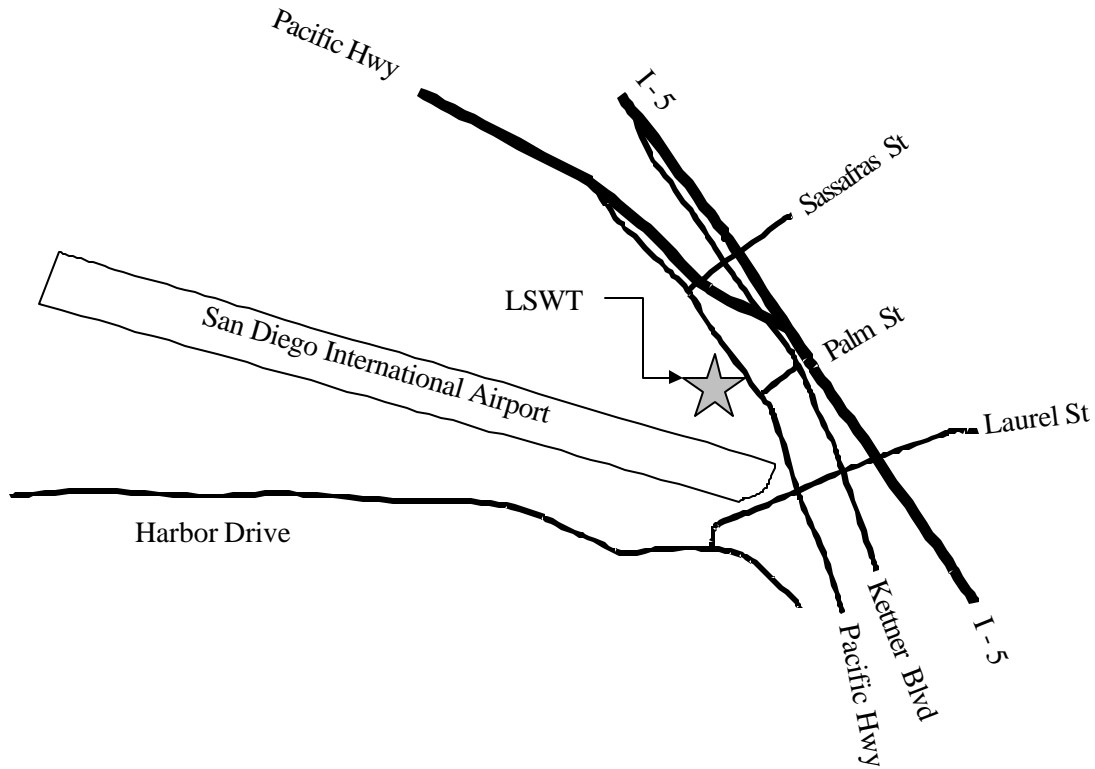
Consider meeting with your colleagues ahead of time at 4:30 p.m. for a *no-host happy hour* at the nearby **AeroClub Bar** located at 3365 India Street (take Sassafras exit off the I-5 heading North)

ALLIED AEROSPACE INDUSTRIES WINDTUNNEL TOUR - 3 May 2002

Name(s): \_\_\_\_\_ Member Status \_\_\_\_\_ Professional Affiliation: \_\_\_\_\_  
Phone #: \_\_\_\_\_ Number Attending: \_\_\_\_\_ Amount Enclosed \$ \_\_\_\_\_

**Address and Allied Aerospace Industries Point of Contact**

Allied Aerospace Industries San Diego Low Speed Wind Tunnel 3050 Pacific Highway San Diego, CA 92101-1127	David Sanford Wind Tunnel Engineering Manager (619) 683-8900 x102 dsanford@microcraft.com
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**Directions to Allied Aerospace LSWT**

From the North:	From the Airport:
<ul style="list-style-type: none"> <li>• Exit south-bound Interstate 5 at Sassafras Street. You are now on Kettner Blvd.</li> <li>• Turn right at light onto Sassafras Street</li> <li>• Turn left at light onto Pacific Highway</li> <li>• Turn right into the LSWT through open gate (there is a "Do Not Enter" sign).</li> <li>• Park in visitor spaces, straight ahead or behind the building.</li> <li>• If turn through gate is missed, turn right at the next light and drive back through Jim's Air parking lot to get to gate</li> </ul>	<ul style="list-style-type: none"> <li>• Exit airport and proceed east onto Harbor Drive (toward downtown)</li> <li>• Turn left at light onto Laurel Street (at approximately 1 mile)</li> <li>• Turn left at light onto Pacific Highway</li> <li>• Turn left at Palm Street light into Jim's Air parking lot</li> <li>• Drive right through parking lot and turn left through open gate</li> <li>• Park in visitor spaces, straight ahead or behind the building</li> </ul>