

# SAE Mid-Cal Engineering Technical Meeting Announcement

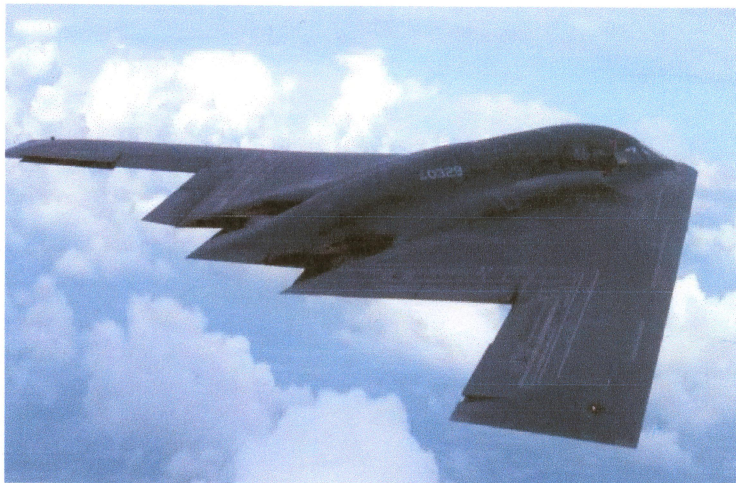
Wednesday, April 17, 2013, 6:00 to 9:00 PM

SJSU Students & Faculty, SAE and AIAA Members, and their Guests  
No Attendance Charge - Pizza and Sodas provided by SAE Mid-Cal Section

**Location:** San Jose State University, Engineering Bldg. Room 285/287  
7<sup>th</sup> & San Fernando Streets – San Jose, CA 95192

**Topic:** *History and Technology of Flying Wings:  
How Did We Get To The B-2A Bomber?*

**Presenter:** Larry Rinek, Senior Technology Consultant, Frost & Sullivan



USAF/Northrop Grumman B-2A Spirit Bomber

Flying wings, an unusual blend of wing and fuselage with no vertical airframe structures (like tail fins), have earned a special place in aviation history and aero technology. Noted for, high airframe efficiency, low drag, and inherently low observability (LO, or stealth). Having had an interesting, rocky development history, they promise of a bright unmanned aerial vehicle (UAV) future.

Beginning with the origin of flying wings in the 1920s, Mr. Rinek will bring the story into the present, and look toward the future. Engineers and developers overcame major technical obstacles along the way, including inherently poor yaw stability, as well as manufacturing difficulties. He will walk through key historical milestones of flying wing aircraft development in USA – Northrop, and Germany – the Horten brothers, outlining successful technical solutions. In conclusion, he will show breathtaking video clips of historical and modern flying wings in action. You will not want to miss this exciting multimedia presentation. See a scale model B-2A, key research books and reference materials.

SAE & AIAA Members: Please RSVP, No Later Than, Friday April 12th  
Send email message to [johnorrell@comcast.net](mailto:johnorrell@comcast.net). Please indicate number of guests.

SJSU Parking Garage located at 10th & San Fernando Streets. Take Engineering Bldg stairway at southwest corner of building to second floor. Exit stairway to the Left and go to Right at first hallway. Room E285/287 is a few doors down hallway on the Right.