

## Fall 2004 - Senior Design Project Candidates

NOTE: New projects are being developed continuously and will be listed as they become available. Check back often for web site updates.

(<http://www.boeing.com/companyoffices/aboutus/community/wichita/024.html>)

Project No.	Project Name	Boeing Contact	Contact Phone
<i>Mechanical/Aero</i>			
02-MA01	<b>Rivet Gun for Blind Fastener Application</b>	Gary Cassatt	(316) 526-1658
02-MA07	<b>Aircraft Explosive Resistant Container</b>	Larry Hole	(316) 526-6343
02-MA08	<b>Low Weight Floor Beam</b>	Gary Cassatt	(316) 526-1658
02-MA09	<b>Autonomous Aerial Refueling boom System</b>	Larry Hole	(316) 526-6343
02-MA10	<b>Aerial Refueling Basket</b>	Larry Hole	(316) 526-6343
02-MA12	<b>Remotely Operated Refueling Boom Video Enhancement</b>	Larry Hole	(316) 526-6343
02-MA13	<b>ISO-GRID Concept for Fuselage Structures</b>	Gary Cassatt	(316) 526-1658
03-MA01	<b>Crack Growth at Edge Cutout (Aircraft Structures)</b>	Hafiz Wardak	(316) 523-3230
04-MA01	<b>The Effects Chemical Finishing has on Fatigue Performance of Bare and Clad Aluminum Sheet Metal</b>	Mark Ofsthun	(316) 523-1389

<i>Manufacturing/Industrial</i>			
02-MI04	<b>Industrial Engineering Business Analysis of Pre-Cut Kits</b>	Ming Liu	(316) 526-4230
04-MI06	<b>Modern Airport Service/Maintenance Requirements</b>	Larry Hole	(316) 526-6343
	As the traffic volume grows in many (small and medium) airports and different new models of airplanes come into service, airports are faced with new challenges. Possibly, many of the current maintenance and operational services may have to be changed and enhanced. For example, fuel and water services may have to be underground to reduce aircraft damage from ground vehicles. Studies in this area, which should include design plans, cost estimates, and schedules will benefit most of the airports in the world.		

<b><i>Manufacturing/Industrial (continued)</i></b>			
04-MI07	<b>Measurement Uncertainty Evaluations in Metrology</b>	Marion Foster	(316) 526-3120
	<p>A standardized statistical technique and program is required for the uniform evaluation of metrological statistics. A standardized process for the statistical evaluation of measurement uncertainties and measurement capability guidelines for most measurement devices will be required in the near future. Software imbedded with this standard statistical process will be used as a guideline for compliance. This software should support four basic statistical categories (1) Tolerance Ratio, (2) Error Ratio, Conservative, (3) Error Ratio, Standard and (4) Uncertainty Ratio. These four statistical categories will be used as guidelines also promote the creation of measurement uncertainty evaluations in accordance sound metrological and statistical practice.</p>		
04-MI08	<b>777 Strut moving line study</b>	Ming Liu	(316) 526-4230
	<p>This is a Line Balancing and Line-of-Balance study to optimize the process plan and just-in-time practices. It requires process time data collection and analysis, facility layout analysis, moving line speed, job grouping, etc.</p>		

<b><i>Electrical/Electronic</i></b>			
04-EE01	<b>Radio/Data Communication</b>	Bruce Lamb	(316) 526-8082
	<p>Radio waves can be used for computer-to-computer communication. This technology benefits in many areas. For instance, flight status data can be transmitted and tracked automatically, or engine data, fuel usage, and other automobile health-related data can be tracked by a computer in another location. Advancement in this technology will be very valuable to Boeing and many other industries.</p>		