

John D. Pratt, Ph.D., P.E. Curriculum Vitae

Professional Summary

Argos Engineering provides new product development consulting for the Aerospace Fastener and Aircraft Interiors industries, as well as litigation consulting in the areas of mechanisms, latches and fasteners.

Before retiring as an aerospace industry executive in 2005, Dr. Pratt co-invented and led the development of the post-9/11 secure (terrorist-proof) cockpit door decompression latches now installed on half the world's fleet of aircraft. Previously Dr. Pratt invented and commercialized the first viable blind fastening system for laminated composites. After 24 years, that system (Monogram Aerospace Fasteners' Composi-Lok©) remains one of the most-used structural blind fasteners for composite airframe assembly. Recent litigation consulting projects have included aircraft engine cylinder head bolt failure analysis, aircraft hanger wind-induced anchorage loss, and motor home retractable bunk mechanism analysis.

Expertise

- Fasteners
- Latching Mechanisms
- Accident Reconstruction
- Aircraft Rapid Decompression
- Engineering, Structural
- Failure Analysis
- Kinematics Analysis
- Mechanisms
- Products Liability
- Wind Analysis

Education

<u>Year</u>	<u>College or University</u>	<u>Degree</u>
2001	University of California, Irvine	Ph.D. - Civil Engineering—Structural Mechanics (Airframe Joint Behavior)
1998	California State University, Fullerton	M.S.M.E.
1996	California State University, Fullerton	B.S.M.E.

Litigation Support Experience

Comprehensive list available upon request

Professional Experience

From: June 2005
To: Present
Organization: Argos Engineering, Laguna Niguel, CA
Title: Principal
Summary: Argos Engineering provides litigation consulting, deposition and trial testimony, expert reports and failure analysis. Argos engineering has relationships with local laboratories for in-depth mechanical testing and metallurgical analysis. Argos Engineering offers litigation consulting and expert witness services in the following areas:

- Fasteners and mechanically-fastened joint failures.
- Latching mechanisms and latched joint failures, particularly aircraft structural latches.
- Wind-induced building damage.
- Aircraft rapid decompression.
- Mechanism kinematics and failure analysis.
- Metal forming (hot and cold forging) and processing (heat treatment, finishing).

From: August 2000
To: June 2005
Organization: Hartwell Corporation, Placentia, CA
Title: Vice President, Engineering
Summary: Oversaw all new product development and engineering, including development of engine nacelle latches for the Airbus A380 and A318,, A400M, B787 and RJ700/900 Series aircraft. Also co-invented and led the development of the post-9/11 secure cockpit door decompression mechanisms presently in use on half of the world's fleet of commercial transport aircraft.

From: March 1988
To: August 2000
Organization: Textron Aerospace Fasteners, Santa Ana, CA
Title: Vice President, Research and Development (Started as Director R&D)
Summary: Led the development of various solid shank and blind fastener systems. Founded Textron Sports Technology operation within TAF in 1995 and led that group until its relocation to a commercial Textron division in 1999.

From: February 1979
To: March 1988
Organization: Monogram Aerospace Fasteners, Los Angeles, CA
Title: Engineering Manager
Summary: Led the product development and standardization efforts. Invented Composi-Lok (I & II), Visu-Lok II and other product lines, accounting for sales in excess of \$250 million since 1983. Represented company at MIL-HDBK-5, NASC and other standardization activities.

Professional Experience (Continued)

From: August 1969
To: February 1979
Organization: Olympic Fastening Systems, Downey, CA
Title: Sr. Project Engineer, R&D (Started as Drafter Trainee)
Summary: Product development and manufacturing engineering activities, including fastener installation tooling and progressive header tooling. Designed hydraulic-pneumatic installation tools for Olympic's and competitor's product lines.

Professional Affiliations, Achievements & Awards

- Professional Engineering License (Mechanical Engineering), CA, 1979
- National Academy of Forensic Engineers (NAFE)
- National Society of Professional Engineers (NSPE/CSPE)
- American Society of Mechanical Engineers (ASME)
- American Society of Civil Engineers (ASCE)
- American Society of Metals (ASM)
- Society of Forensic Engineers and Scientists (SFES-Candidate)
- Current Chairman of the finite element analysis working group (FEAWG) of FAA/DoD MMPDS--the handbook used by aircraft designers for allowable materials and joint properties.

Patents & Publications

Patents

4,376,604	4,548,533	4,747,204	5,046,348	5,131,107	5,378,098	5,938,384	6,261,062
4,451,189	4,659,271	4,752,169	5,052,870	5,152,648	5,620,287	5,941,539	6,866,226
4,457,652	4,659,272	4,767,248	5,056,973	5,333,980	5,692,865	5,957,642	6,866,227
4,537,542	4,681,494	4,967,463	5,066,179	5,354,160	5,884,923	6,171,038	7,131,672

Several other patents are presently pending before the United States Patent and Trademark Office

Publications:

1. "Fastening of Advanced Composites", NASA conference, 1983, Seattle, WA.
2. "Testing and Analysis of Mechanically-Fastened Lap Joints", Ph.D. Dissertation, John D. Pratt (2001)
3. "Analytical Modeling of Bolted Lap Joint Load-Elongation Behavior", *Journal of Aerospace Engineering*, January 2002 (ASCE)
4. "Comparative Load-Elongation Behavior of Single-Bolted and Dual-Bolted Lap Joints", *Journal of Aerospace Engineering*, April 2002 (ASCE)
5. "The Influence of Conical Head Geometry on the Slip Resistance of Bolted Joints", *Journal of Aerospace Engineering*, October 2002 (ASCE)

Another peer-reviewed paper titled "Rapid Decompression of Pressurized Aircraft" has been approved for publication in the December 2006 issue of ASM's *Journal of Failure Analysis and Prevention*.

Recent Seminars

Forensic Engineering Seminars

- July 10-11, 2005: NAFE, Chicago, IL
- October 15-16, 2005: SFES, Concord, CA
- January 21-23, 2006: NAFE, Washington, DC
- January 28-29, 2006: SFES, Santa Monica, CA
- February 20-24, 2006: AAFS, Seattle, WA
- March 25-26, 2006 SFES, Yosemite, CA
- October 7-8, 2006 SFES, Incline Village, NV