

## **STEPHEN M. ARNDT - TECHNICAL PUBLICATIONS**

### **Aviation Safety & Aircrew Protection**

Coltman, Joseph W., Arndt, Stephen M., and Domzalski, Leon, "Evaluation of the Crash Environment and Injury-Causing Hazards in U.S. Navy Helicopters." Paper presented at the 23<sup>rd</sup> Annual SAFE Symposium, Las Vegas, Nevada, December 2-4, 1985.\*

Coltman, Joseph W., Domzalski, Leon, and Arndt, Stephen M., "Evaluation of the Crash Environment for U.S. Navy Helicopters...The Hazards and Navy Response." Paper presented at the 1986 American Helicopter Society National Specialist's Meeting on Crashworthy Design of Rotorcraft, Atlanta, Georgia, April 7-9, 1986.\*

Arndt, Stephen M., et al., Weight Reduction for an Advanced Crashworthy Crewseat. Final Report, TR-86424, Simula Inc., Phoenix, Arizona; U.S. Army Aviation and Technology Activity (AVSCOM), Fort Eustis, Virginia, August 5, 1986.\*

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Arndt, Stephen M., Armor Performance and Threat Analysis for Support of E-Systems Programs, TR-86436, Simula Inc., Phoenix, Arizona; E-Systems, Greenville, Texas, December 15, 1986.

Arndt, Stephen M., et al., Evaluation of Elastomeric Matrix Materials for Use in Aircraft Primary Structures, TR-87437, Simula Inc., Phoenix, Arizona; Aviation Applied Technology Directorate, U.S. Army Aviation Research and Technology Activity, Fort Eustis, Virginia, July 1987.\*

Arndt, Stephen M., et al., "Evaluation of Toughened Matrix Materials for Use in Primary Aircraft Structures." Paper presented at the 19<sup>th</sup> SAMPE International Technical Conference, Crystal City, Virginia, October 15, 1987.\*

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Arndt, Stephen M., Summary of Armor Data Used to Evaluate Armor Systems for Application in the Containment of Turbine Fan Blades, TI-89422, Simula Inc., Phoenix, Arizona; Advanced Structures Technology, Inc., Phoenix, Arizona, April 7, 1989.

Arndt, Stephen M. and Coltman, Joseph W., Investigation of Fiber-Reinforced Thermoplastic Materials for Use in Energy-Absorbing Subfloor Structures, TR-89440, Simula Inc., Phoenix, Arizona; Aviation Applied Technology Directorate, U.S. Army Aviation Research and Technology Activity, Fort Eustis, Virginia, June 16, 1989.\*

Arndt, Stephen M., et al., The Effects of Resin Content on Kevlar Armor Systems, Simula Inc., Phoenix, Arizona, July 5, 1990.\*

Arndt, Stephen M. and Coltman, Joseph W., "Design Trade-offs for Ceramic/Composite Armor Materials." Paper presented at the 22<sup>nd</sup> International SAMPE Technical Conference, Boston, Massachusetts, November 7, 1990.\*

Van Ingen-Dunn, Caroline and Arndt, Stephen M., Development of Composite Manikin Segments to Improve Kinematic Response, Interim Report, TI-90461, Simula, Inc. Phoenix, Arizona, Armstrong Aerospace Medical Research Laboratory, Human Systems Division, Wright-Patterson AFB, Ohio, November 20, 1990.\*

Arndt, Stephen M., "Evaluation of Thermoplastic Matrix Composites for Use in Energy-Absorbing Helicopter Subfloors." Published in the proceedings of the 47<sup>th</sup> Annual American Helicopter Society Forum and Technology Display, Phoenix, Arizona, May 6-8, 1991.

Van Ingen-Dunn, Caroline and Arndt, Stephen M., Development of Composite Manikin Segments to Improve Kinematic Response, Final Report, TR-91091, Simula Inc., Phoenix, Arizona; Armstrong Laboratory (ASSC), Biodynamics and Biocommunications Division, Wright-Patterson AFB, Ohio, November 26, 1991.\*

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Arndt, Stephen M., et al., Crash Impact Characteristics and Cost Analysis of Thermoplastic Subfloor Structure, Final Report, TR-92038, Simula Inc., Phoenix, Arizona; Aviation Applied Technology Directorate, U.S. Army Aviation Systems Command, Fort Eustis, Virginia, July 31, 1992.\*

### **Automotive Crashworthiness**

Arndt, Stephen M., Mowry Gregory A., and Arndt, Mark W., "Characterization of Automotive Seat Belt Buckle Inertial Release," Published in the Proceedings of the 37<sup>th</sup> Conference of the Association for the Advancement of Automotive Medicine, San Antonio, Texas, November 4-6, 1993.\*

Arndt, Mark W., Dickerson, Charles P., Mowry, Gregory A., and Arndt, Stephen M., "Evaluation of Experimental Restraints in Rollover Conditions." SAE Paper No. 952712.

Presented at the 39<sup>th</sup> Stapp Car Crash Conference, San Diego, California, November 8-10, 1995.\*

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### **Automotive Accident Reconstruction**

Dickerson, Charles P., Arndt, Mark W., Arndt, Stephen M., and Mowry, Gregory A., "Evaluation of Vehicle Velocity Predictions Using the Critical Speed Formula," Published in The Engineering Society for Advancing Mobility Land Sea Air and Space International. SAE Paper No. 950137. Presented at the Society of Automotive Engineers, Inc., Detroit, Michigan, February 27-March 2, 1995.\*

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### **Automotive Tire Tread Separations**

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Arndt, Stephen M., and Arndt, Mark W., "The Influence of a Rear Tire Tread Separation on a Vehicle's Stability and Control." Published in the Proceedings of the 17<sup>th</sup> International Technical Conference on the Enhanced Safety of Vehicles, Amsterdam, The Netherlands, June 4-7, 2001.\*

Arndt, Mark W, Rosenfield, Michael J., Arndt, Stephen M., and Stevens, Donald C., "Force Response during Tire Tread Detachment Event." SAE Paper No. 2004-01-1075. Presented at the 2004 SAE International Congress and Exposition, Detroit, Michigan, March 8-11, 2004.\*

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## **Automotive Vehicle Dynamics**

Dickerson, Charles P., Arndt, Stephen M., Mowry, Gregory A., and Arndt, Mark W., "Effects of Outrigger Design on Vehicle Dynamics," Published in The Engineering Society for Advancing Mobility Land Sea Air and Space International. SAE Paper No. 940226. Presented at the Society of Automotive Engineers, Inc., Detroit, Michigan, February 28-March 3, 1994.\*

Arndt, Mark W., Dickerson, Charles P., Mowry, Gregory A., Arndt, Stephen M., and Shapiro, Steven, "Motor Vehicle Mass Property Envelopes," Published in The Engineering Society for Advancing Mobility Land Sea Air and Space International. SAE Paper No. 951065. February 27-March 2, 1995.\*

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Arndt, Stephen M., Arndt, Mark W., and Metz, L. Daniel, "The Importance of Dynamic Testing in Determining the Yaw Stability of Vehicles." Published and presented at the 18<sup>th</sup> International Technical Conference on the Enhanced Safety of Vehicles (ESV), Nagoya, Japan, May 19-22, 2003.\*

Arndt, Mark W. and Arndt, Stephen M., "Tests Documenting Vehicle Handling with a Temporary-Use Rear Tire and a Run-Flat Rear Tire." SAE Paper No. 2006-01-0905. Presented at the 2006 SAE International Congress and Exposition, Detroit, Michigan, April 4-7, 2006.\*

Arndt, Mark W., Rosenfield, Michael J., and Arndt, Stephen M., "How Tires Change a SUV's Performance in Fishhook and Sine-with-Dwell Testing." Published at the 21<sup>st</sup> International Technical Conference on the Enhanced Safety of Vehicles (ESV), Stuttgart, Germany, June 15-18, 2009.\*

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