

51st Annual SAFE Symposium 2013

**Reno, Nevada, USA
14-16 October 2013**

ISBN: 978-1-62993-582-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2013) by the Safe Association
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact the Safe Association
at the address below.

Safe Association
P.O. Box 130
Creswell, Oregon 97426-0130

Phone: (541) 895-3012
Fax: (541) 895-3014

safe@peak.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

| | |
|---|-----|
| Discovery Channel Plane Crash | 1 |
| <i>Thomas Barth</i> | |
| Inflatable Life Rafts 5 Decades On: What Next? | 42 |
| <i>Mark Gruber</i> | |
| Cold Weather Clothing Systems | 64 |
| <i>Paul Oliver</i> | |
| JSF F-35 Pilot Cooling Unit Development & Verification Update | 93 |
| <i>Les Wilcock</i> | |
| ACES 5 Ejection Safety Features | 106 |
| <i>John Hampton, Jeremy Ochs, Jim Tulloch</i> | |
| A Human Systems Integration Analysis of Helmet Mounted Displays | 127 |
| <i>Jeffrey Parr, Michael Miller, John Colombi</i> | |
| Leader's Initiative: Advancing Safety by Minimizing Human Error | 161 |
| <i>Tim Autrey</i> | |
| Development of Lumbar Injury Tolerance Criteria | 187 |
| <i>Joseph Pelletiere, Stanley Desjardins, Jim Tulloch</i> | |
| Probabilistic Head/Brain/Spine Pain And Injury Prediction Model To Assist Life Support Equipment Design | 194 |
| <i>Barry S. Shender</i> | |
| A New Method for the Analysis of Design-Induced Pilot Error on the Flight Decks | 221 |
| <i>Zongmin Wei, Damin Zhuang, Jie Bai, Kun Yang</i> | |
| Sensors, Bandwidth & DAS Considerations for Blast & High Rate Testing | 257 |
| <i>Mike Beckage</i> | |
| Reusable Energy Attenuating Lab (REAL) Seat | 293 |
| <i>Michael Knott</i> | |
| The Effects of Body-Borne Gear on the Risk of Spinal Injury in Helicopter Mishaps | 308 |
| <i>Roger Podob</i> | |
| Enhancing Safety by Challenging Human Error A Fresh Approach | 326 |
| <i>Tim Autrey</i> | |
| Correlates of Continued Visual Flight Rules (VFR) into Instrument Meteorological Conditions (IMC) General Aviation Accidents | 335 |
| <i>David Ison</i> | |
| Crew Resource Management-Last Chance for an Industry in Crisis | 370 |
| <i>Randy Mains</i> | |
| Closed Circuit Emergency Respirators - Technology and Regulatory Compliance | 391 |
| <i>Russ Jacobsmeyer</i> | |
| Reinforced Vest for Aviation Maintainers | 413 |
| <i>Sharon Joines, Jeffrey Hoyle</i> | |
| Aegisound Briefing | 434 |
| <i>Jeff Hammel, Michael Goforth</i> | |
| Future Noise Protection Technologies for Military Aircrew | 451 |
| <i>Susan James</i> | |
| Colour Display Night Vision Goggles - Human Vision Implications for System Design | 470 |
| <i>Eric Liggins, William Serle</i> | |
| Influencing Procurement of Powered Hand Tools to Improve Safety and Productivity while Eliminating HAVS | 497 |
| <i>Mark Geiger, John Ster</i> | |
| Reducing Vibration and Repetitive Impact Exposure in DoD Vehicles | 529 |
| <i>Elliot Salmon</i> | |
| Author Index | |