46th Annual Human Factors and Ergonomics Society of Australia Conference 2010

Queensland, Australia 31 October – 3 November 2010

Editors:

Robin Burgess-Limerick

ISBN: 978-1-61839-137-7

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© (2010) by the Human Factors and Ergonomics Society of Australia Inc. (HFESA) All rights reserved.

Printed by Curran Associates, Inc. (2011)

For permission requests, please contact the Human Factors and Ergonomics Society of Australia Inc. (HFESA) at the address below.

Human Factors and Ergonomics Society of Australia Inc. (HFESA) Suite 18, Hills Corporate Centre 11 Brookhollow Avenue Baulkham Hills NSW 2153

Phone: (02) 9680-9026 Fax: (02) 9680-9027

secretariat@ergonomics.org.au

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





Burgess-Limerick, R. (Ed.). (2010). Safer and more productive workplaces: Proceedings of the 46th Annual Conference of the Human Factors and Ergonomics Society of Australia. Sydney: HFESA Inc.

TABLE OF CONTENTS

Paper	Page
Keynote Presentation Translating Injury Prevention Research into Workplace Practice James W. Collins & Jennifer L. Bell	2
Keynote Presentation Use of Design Equations Improves Design Innovation <i>Martin J. Helander</i>	12
Participative Ergonomics as an Organisational Manual Task Risk Management Process in QR Infrastructure Services Lindsay Shorley & Gary Dennis	20
Musculoskeletal Disorders (MSD) in NSW Mines: Overview of a Mail Survey Christine Aickin, Marcia Lusted, Rebecca Mitchell & Louise Whitby	33
Acceptance of Participatory Ergonomics in a Healthcare Setting Jennifer Long, Robin Burgess-Limerick & Fiona Stapleton	43
Measurement of Affect during Simulation-based Training Jennifer Tichon, Geoffrey Watson, Guy Wallis, Jasmine Banks, & Timothy Mavin	53
The Operability and Maintainability Analysis Technique: A new approach to improve Prevention through Design across the life cycle of mobile equipment used in mining Tristan Cooke & Tim Horberry	65
Workforce engagement: A model for improving performance and efficiency Sue Leveritt	79
Usability Evaluation of Affective Needs Analysis System Using Task Based Scenarios Halitahtun M. Khalid & Jenthi K. Radha	93
New technology adoption: risky business for the railways Elise Crawford, Yvonne Toft, & Ryan Kift	105
Exploring the Human Factors Challenges of Automated Mining Equipment	115