## Contents

### Part I  Macroergonomic Systems

**The Usage of Simulation Technology for Macroergonomic Industrial Systems Improvement**
Leszek Pacholski and Pawel Pawlewski  
3

**3D Laser Models for the Ergonomic Assessment of the Working Environment**
Marcin Butlewski, Małgorzata Sławińska and Mateusz Niedźwiecki  
15

**A Multi-Criterial Hardware Assessment of the Psychophysical Capacity of Workers in the Investigation of Fatigue**
Grzegorz Dahlke, Milena Drzewiecka, Marcin Butlewski and Leszek Pacholski  
25

**The Maintenance Management in the Macro-Ergonomics Context**
Malgorzata Jasiulewicz-Kaczmarek, Anna Saniuk and Tadeusz Nowicki  
35

**Agreement for Safety in the Building Sector as a Good Practice to Improve Safety in the Work Environment**
Jozef Fras, Ilona Olsztynska and Sebastian Scholz  
47

**A Process-Oriented Design Knowledge Management Method**
Biju Yin and Yan Xiong  
57

### Part II  Social and Occupational Innovation

**Caregiver Centered Transfer Aid Designed for Home Care Needs**
Kao-Hua Liu and Chien-Hsu Chen  
69

**Employment Opportunities for Mature Age People in the Electrical Sector in Lodz Voivodeship in Poland**
Aleksandra Polak-Sopińska  
79
A Future Framework of Knowledge-Based Ergonomics Assessment System at Workplace in Automotive Assembly Plant .......................... 93
Fazilah Abdul Aziz, Zakri Ghazalli, Nik Mohd Zuki Nik Mohamed and Amri Isfar

Quality Management in Toy and Children’s Furniture Manufacturing ................................................................. 107
Mieczysław Rajkiewicz, Anna Walaszczyk and Zbigniew Wisniewski

Modelling Formation of Attitudes to Change .................................................. 117
Zbigniew Wisniewski, Aleksandra Polak-Sopinska, Mieczyslaw Rajkiewicz, Małgorzata Wisniewska and Piotr Sopinski

Employment of Persons with Disabilities in Poland:
What Do Small and Micro Enterprise Employers Know? ............. 129
Aleksandra Polak-Sopinska, Zbigniew Wisniewski and Marta Jedraszek-Wisniewska

Part III Modeling and Systems in Occupational Ergonomics

Proposing a Conceptual Model for Examining the Influence of Individual and Work-Related Factors on Work Ability ............. 145
Jacky Y.K. Ng and Alan H.S. Chan

The Participatory Ergonomics in the Design of Safety Systems in Complex Work Systems ...................................................... 153
William German Barón Santoyo

Elements of Workforce Diversity in Japanese Nursing Workplace .... 167
Yasuyuki Yamada, Motoki Mizuno, Teruko Shimizu, Yuji Asano, Takumi Iwaasa and Takeshi Ebara

Research on Urban Rail Driver’s Mental Workload Based on Extentics ............................................................... 177
Lan-peng Li, Zhi-gang Liu, Hai-yan Zhu and Lin Zhu

Analyzing the Impact that Lack of Supervision Has on Safety Culture and Accident Rates as a Proactive Approach to Curbing the South African Railway Industry’s High Incident Occurrence Rate ........ 189
Sethunya Tau

Part IV Job Satisfaction, Workload and Musculoskeletal Disorders

Video Gaming and Its Implications on the Epidemiology of Office Work Related Upper Limb Disorders ......................... 201
Shao-Sean Yap and Gunther Paul

Occupational Stresses on Employees in Lean Production Systems .... 215
Uwe Dombrowski, Anne Reimer and Stefan Ernst
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer-Related Stressors and Effects on Burnout: A Study in Turkey</td>
<td>227</td>
</tr>
<tr>
<td>Serpil Aytac and Mustafa Aytac</td>
<td></td>
</tr>
<tr>
<td>Using Axiomatic Design to Identify the Elements That Affect the Evaluation of Comfort/Discomfort Perception</td>
<td>235</td>
</tr>
<tr>
<td>Nicola Cappetti, Alessandro Naddeo, Rosaria Califano and Mariarosaria Vallone</td>
<td></td>
</tr>
<tr>
<td>A Model of Improving Individual Satisfaction in Group Conversation Based on Estimation of Group Status</td>
<td>249</td>
</tr>
<tr>
<td>Susumu Kono and Kenro Aihara</td>
<td></td>
</tr>
<tr>
<td>The Place of Health Design for Health Promotion: The Pediatrics Design Process Focus in Humanization at Santa Casa’s Hospital Montes Claros—Brazil</td>
<td>261</td>
</tr>
<tr>
<td>Janice Gomes Zumba</td>
<td></td>
</tr>
<tr>
<td>Prevalence of Work Related Musculoskeletal Disorders Among the Iranian Working Population in Different Sectors of Industries</td>
<td>271</td>
</tr>
<tr>
<td>HA Yousefi, Ehsan Habibi and Hideyuki Tanaka</td>
<td></td>
</tr>
<tr>
<td>Causes of Workplace Stress in Textile Industry of Developing Countries: A Case Study from Pakistan</td>
<td>283</td>
</tr>
<tr>
<td>Aftab Ahmad, Amjad Hussain, Qasar Wasique Ahmad and Badar Ul Islam</td>
<td></td>
</tr>
<tr>
<td>Quality of Work Life, Depression and Anxiety in Administrative Staff of an Institution of Higher Education</td>
<td>295</td>
</tr>
<tr>
<td>Raquel Gonzalez-Baltazar, Brenda J. Hidalgo-González, Vanessa I. Rivas-Díaz de Sandi, Silvia G. León-Cortés, Mónica I. Contreras-Estrada, María G. Aldrete-Rodríguez and Gustavo Hidalgo-Santacruz</td>
<td></td>
</tr>
<tr>
<td>Part V Accidents and Safety</td>
<td></td>
</tr>
<tr>
<td>Stimulation of Voluntary Motivation Toward Safety Management Activities: Activity Inactivation by Mannerism</td>
<td>307</td>
</tr>
<tr>
<td>Keijiro Katayama and Miwa Nakanishi</td>
<td></td>
</tr>
<tr>
<td>Development of a Taxonomy of Human Error Causation of Accidents Involving Injuries to Hands in the Harnesses Industry</td>
<td>317</td>
</tr>
<tr>
<td>Rosa Maria Reyes Martinez, Jorge de la Riva Rodriguez, Rodolfo de la O Escapita, Arturo Wookay and Araceli Maldonado Macias</td>
<td></td>
</tr>
</tbody>
</table>
Material Handling .................................................. 325
Alessio Silvetti, Elio Munafò, Alberto Ranavolo, Sergio Iavicoli
and Francesco Draicchio

Ergonomic Risk Assessment of Sea Fishermen Part II:
Upper Limb Repetitive Movements .......................... 333
Alessio Silvetti, Elio Munafò, Alberto Ranavolo, Sergio Iavicoli
and Francesco Draicchio

A Novel to Approach to Quantify the Risk Probabilities
for a Risk Analysis Methodology ......................... 341
N. Firat Ozkan and Berna H. Uluta

Methodology of Risk Analysis to Health and Occupational Safety
Integrated for the Principles of Lean Manufacturing .... 349
Eduardo Ferro dos Santos and Leticia dos Santos Nunes

Machine-Man-Task System Approach and Regulatory Standard NR
17—Ergonomics .................................................. 355
Norma de Melo Pinto, Maria Manuela Quaresma
and Kazuo Hatakeyama

Mobbing as a Psycho-social Risk at Work: A Study in Turkey ... 369
Serpil Aytac, Salih Dursun and Ahmet Gokce

Ergonomic Hazards Mapping System (EHMS) for Musculoskeletal
Disorders Detection ........................................... 377
M.I. Delgado-Bahena, R.A Barrios-Perez, M.R. Contreras-Valenzuela
and R. Lopez-Sesenes

Redesign of Workstation to Reduce the Risk of Wrist Lesion
to Improve Work Conditions in an Industry Focused
on the Assembly of Spark Plug Wire ....................... 387
D. Gomez-Garcia, R. López-Sesenes, M.R. Contreras-Valenzuela,
A. Martinez-Oropeza and Viridiana Leon-Hernández

Part VI Social and Organizational Factors in Industry
The Relationship Between Sustained Attention and Mindfulness
Among U.S. Active Duty Service Members and Veterans .... 397
Valerie J. Rice and Baoxia Liu

Human and Economic Factors of Long-Distance Commuting
Technology: Analysis of Arctic Practices .................... 409
A. Kozlov, S. Gutman, E. Rytova and I. Zaychenko
Contents

Analysis of Organizational and Human Factors in the Local Production Arrangement of the Hotel Chain to Avoid Social and Environmental Impacts, Case Study of Maragogi, Alagoas, Brazil .......................... 421
Eduardo Menezes, Salvador Filho and Edmara Drigo

The Way to Use the Guidelines for Supporting Resilience Enhancement: From Verifying Effectiveness Using Before-After Comparison Test Design of Two Fitness Centers ................. 435
Naoto Shoji, Takumi Iwaasa, Yutaka Nakajima and Motoki Mizuno

The Effects of a Trust Violation and Trust Repair in a Distributed Team Decision-Making Task: Exploring the Affective Component of Trust .......................................................... 447
Corey K. Fallon, April Rose Panganiban, Peter Chiu and Gerald Matthews

Applying Triangulation Method to Strengthen Validity of Integrated Balanced Scorecard’s Performance Measurement Model for Supply Chain’s Actors and Regulators .................. 461
Elisa Kusrini, Subagyo and Nur Aini Masruroh
Advances in Social & Occupational Ergonomics
Goossens, R.H.M. (Ed.)
2017, XIII, 466 p. 115 illus., 50 illus. in color., Softcover
ISBN: 978-3-319-41687-8