

Advances in
The Ergonomics in Manufacturing:
Managing the Enterprise of the
Future

Advances in Human Factors and Ergonomics 2014

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Table of Contents

Section 1: Human Aspects of Knowledge Based Enterprises

The role of ergonomics in the knowledge based enterprises K. Hankiewicz, Poland	3
Designing and producing services in knowledge enterprises J. Kantola and H. Vanharanta, Finland, and W. Karwowski, USA	10
The changes of information technology structure in condition of adaptation the enterprises' management systems into knowledge based economy requirements J. Kalkowska, Poland	19
Human aspect and risk in quality management systems P. Krolas, Poland	26
Size of an enterprise and organizational innovations E. Pawlowski, Poland	33
The market conditions based taxonomy of modern manufacturing practices K. Pawłowski, Poland	41
Entrepreneurship in SMEs J. Trzcielinska, Poland	51
Strategic focus on agility S. Trzcielinski, Poland	62
The changes of human capital structure in condition of adaptation the enterprises' management systems into knowledge based economy requirements H. Wlodarkiewicz-Klimek, Poland	70
Methods of staffing process in agile enterprises A. Branowska, Poland	82
Understanding and supporting decision makers in quality management of production networks R. Philipsen, P. Brauner, S. Stiller, S. Runge, R. Schmitt and M. Ziefle, Germany	94
Evaluating ICT-Tools for Knowledge Sharing and Assembly Support A. Fast-Berglund and E. Blom, Sweden	106

Section 2: Applied Ergonomics in Manufacturing I

A comparison of the usability of a locally-produced and commercially-acquired telemedicine device for Filipino health workers L. Grepo and B. Custodio, Philippines	117
Designing an arm support model to minimize UECTD risk among Filipino electronic technicians using QFD, KANO model, TRIZ and anthropometry A. Indardaya and A. Matias, Philippines	126
Development and assessment of work systems for elder employees in industrial manufacturing N. Feller and U. Muller, Germany	140
Yet another platform? Motivational factors for using online communities in business contexts A.-K. Locker, D. Erasme, E.-M. Jakobs, A. K. Schaar, A. Calero Valdez and M. Ziefle, Germany	152
Analysis of shift work system influence on visual inspection effectiveness A. Kujawińska, K. Vogt and A. Hamrol, Poland	164
Demographic factors affecting perceived fatigue levels among CNC lathe operators J. Arellano, J. Perez, A. Macias and J. Alcaraz, Mexico	174
A study on the human factors for an advanced picking station E. Y. Lee, M. K. Kim, M. Y. Yang and Y. S. Chang, Korea	182
Human aspects of the measurement system analysis M. Diering and A. Kujawińska, Poland	194
Capability, profit or waste ? Organizational and economic dilemmas criteria for measuring the effectiveness of enterprises J. Rymaniak, Poland	203
Quantitative techniques integration for allocation of workers G. Montoya, Colombia	214

Section 3: Ergonomics in Industrial Quality and Safety

Usability study of auditory CAPTCHA C.-H. Lee and Y.-L. Lee, Taiwan	227
The effects of auditory feedback on websites: Users perception S.-H. Li and S.-L. Hwang, Taiwan Hwang	230

A latent human error model in aviation maintenance tasks J.-Y. Tu, J.-L. Yong and S.-L. Hwang, Taiwan	236
A modified failure mode and effects analysis for in-vehicle speech interaction systems H.-C. Chen and S.-L. Hwang, Taiwan	242
Effects of display technique, image content, and environment on user performance of auto-stereoscopic mobile phones P.-H. Lin and H.-S. Jhang, Taiwan	247
The learning effect of hand dexterity between old and young people Y.-C. Shih and I.-L. Cheng, Taiwan	253
Auditory Interface Improvement of In-Vehicle Speech Interaction System H.-N. Hu and S.-L. Hwang, Taiwan	258

Section 4: Ergonomic Design of Future Production Systems

Anthropomorphic design of human-robot interaction in assembly cells S. Kuz, M. Faber, J. Butzler, M. Mayer and C. Schlick, Germany	265
Flexible and adaptive planning for human-robot interaction in self-optimizing assembly cells M. Faber, H. Petruck, S. Kuz, J. Butzler, M. Mayer and C. Schlick, Germany	273
Human-oriented design of a cognitive control unit for self-optimizing robotic assembly cells N. Susanto, M. Mayer, R. Djalois, J. Butzler and C. Schlick, Germany	284
Younger beginners, older retirees: Head-mounted displays and demographic change S. Theis, T. Alexander, M. Wille, A. Mertens and C. Schlick, Germany	295
Database for capability-appropriate workplace design in manufacturing industry D. Muglich, A. Sinn-Behrendt, K. Schaub and R. Bruder, Germany	303
Evaluation of different feedback conditions on worker's performance in an augmented reality-based support system for carbon fiber reinforced plastic manufacturing P. Brauner, L. Bremen, L. Atorf, M. Rast, M. Ziefle and J. Rossmann, Germany	312

Interactive analysis and evaluation of production control G. Schuh, T. Potente, C. Thomas and M. Luckert, Germany	322
Ergotyping® -Tools providing computer-based support for ergonomic evaluation processes of human-machine-interfaces E. Scherstjanoi, C. Kamusella, D. Groellich and K. Buerkle, Germany	333
Design and technical construction of virtual-reality-supported learning elements for manual assembly L. Goldhahn and C. Thumer, Germany	344
Ergonomic design of working time models P. Stock and B. Deml, Germany	357
Application of performance measurement in the context of ergonomic workplace design R. Heller, M. Sauter and R. Bruder, Germany	368
Human centered assistance applications for production J. Schmidtler, C. Holzel, V. Knott and K. Bengler, Germany	380
Influence of instructional methods on learning sensorimotor tasks F. Meyer, T. Jeske, S. Duckwitz and C. Schlick, Germany	392

Preface

Contemporary manufacturing enterprises aim to deliver a great number of consumer products and systems through friendly and satisfying working environments for people who are involved in manufacturing services. Human-centered design factors, which strongly affect manufacturing process, as well as the potential end-users are also crucial for achieving continuing progress in this respect. Researchers around the world attempt to improve the quality of consumer products and working environments. This book presents the results of their work. We believe that such findings can either inspire or support others in the field of manufacturing to advance their designs and implement them in the practice. Therefore, this book is addressed to both researchers and practitioners.

The papers presented in this book have been arranged into four sections. The first section covers a variety of topics that refer to human-centered organizations. This section starts with a general viewpoint of socio-technical systems, including organizational innovativeness and enterprise agility, followed by issues related to designing human-centered production systems. Such systems take into consideration workforce diversity, high-wage countries, work-related occupational safety, work environment factors, ICT, and demographic features. The last thematic part of this section is focused on assembly planning and production inventories management. The second section of the book presents the effects of applied ergonomics in manufacturing and work study concerning improvement of human skills, as well as quality and effectiveness of workforce. The presented chapters depict the influence of worker experience and the technology used to improve work effectiveness. Next, the comparison of non-expert and expert work is studied to find patterns that can be used to improve the technique of performing different tasks by less skilled employees. The third section deals with some outcomes ergonomics in industrial quality and safety, while the fourth and final section of this book is focused on ergonomic design of future production systems.

The contents of this book required the dedicated effort of many people. We would like to thank the authors, whose research and development efforts are published here. Finally, we also wish to thank the following Editorial Board members for their diligence and expertise in selecting and reviewing the presented papers:

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